



EVALUATION REPORT

FLORIDA BUILDING CODE, 9TH EDITION (2026)

Manufacturer: KINGSPAN ROOFING+WATERPROOFING
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Manufacturing Plants: Scottsboro, AL

Quality Assurance: UL LLC (QUA9625)

SCOPE

Category: Roofing
Subcategory: Single Ply Roof System
Code Edition: Florida Building Code, 9th Edition (2026) Non-HVHZ
Code Sections: 1504.3.1, 1504.6, 1504.7, 1507.12
Properties: Wind Resistance, Physical Properties, Impact Resistance

PRODUCT DESCRIPTION

Products	Specification	Description
Kingspan TPO 045	ASTM D 6878 TAS 110	Nominal 45-mil thick thermoplastic polyolefin, heat-weldable, single-ply roof membrane with polyester scrim reinforcement
Kingspan TPO 060	ASTM D 6878 TAS 110	Nominal 60-mil thick thermoplastic polyolefin, heat-weldable, single-ply roof membrane with polyester scrim reinforcement
Kingspan TPO 080	ASTM D 6878 TAS 110	Nominal 80-mil thick thermoplastic polyolefin, heat-weldable, single-ply roof membrane with polyester scrim reinforcement
Kingspan TPO FB 115	ASTM D 6878 TAS 110	Nominal 60-mil thick thermoplastic polyolefin, heat-weldable, single-ply roof membrane with polyester scrim reinforcement and polyester fleece backing
Kingspan TPO FB 135	ASTM D 6878 TAS 110	Nominal 80-mil thick thermoplastic polyolefin, heat-weldable, single-ply roof membrane with polyester scrim reinforcement and polyester fleece backing
Kingspan TPO FB 150	ASTM D 6878 TAS 110	Nominal 60-mil thick thermoplastic polyolefin, heat-weldable, single-ply roof membrane with polyester scrim reinforcement and heavy polyester fleece backing
Kingspan TPO - SA	ASTM D 6878 TAS 110	Nominal 60-mil thick thermoplastic polyolefin, heat-weldable, single-ply roof membrane with polyester scrim reinforcement and a self-adhesive backing

REFERENCES

<u>Entity</u>	<u>Report No.</u>	<u>Standard</u>
Atlantic & Caribbean Roof Consulting (TST4671)	ACRC 14-026	FM 4474(B) (2020)
Atlantic & Caribbean Roof Consulting (TST4671)	ACRC 14-027	FM 4474(B) (2020)
Atlantic & Caribbean Roof Consulting (TST4671)	ACRC 14-028	FM 4474(B) (2020)
Atlantic & Caribbean Roof Consulting (TST4671)	ACRC 14-029	FM 4474(B) (2020)
Atlantic & Caribbean Roof Consulting (TST4671)	ACRC 14-030	FM 4474(B) (2020)
Atlantic & Caribbean Roof Consulting (TST4671)	ACRC 14-031	FM 4474(B) (2020)
Atlantic & Caribbean Roof Consulting (TST4671)	ACRC 14-032	FM 4474(B) (2020)
Atlantic & Caribbean Roof Consulting (TST4671)	ACRC 14-033	FM 4474(B) (2020)
Atlantic & Caribbean Roof Consulting (TST4671)	ACRC 14-034	FM 4474(B) (2020)
Atlantic & Caribbean Roof Consulting (TST4671)	ACRC 14-035	FM 4474(B) (2020)
Atlantic & Caribbean Roof Consulting (TST4671)	ACRC 14-036	FM 4474(B) (2020)
Atlantic & Caribbean Roof Consulting (TST4671)	ACRC 14-037	FM 4474(B) (2020)
Atlantic & Caribbean Roof Consulting (TST4671)	ACRC 14-038	FM 4474(B) (2020)
Atlantic & Caribbean Roof Consulting (TST4671)	ACRC 14-039	FM 4474(B) (2020)
Atlantic & Caribbean Roof Consulting (TST4671)	ACRC 14-040	FM 4474(B) (2020)
Atlantic & Caribbean Roof Consulting (TST4671)	ACRC 14-041	FM 4474(B) (2020)
Atlantic & Caribbean Roof Consulting (TST4671)	ACRC 14-042	FM 4474(B) (2020)
Atlantic & Caribbean Roof Consulting (TST4671)	ACRC 14-043	FM 4474(B) (2020)
Atlantic & Caribbean Roof Consulting (TST4671)	ACRC 14-044	FM 4474(B) (2020)
Atlantic & Caribbean Roof Consulting (TST4671)	ACRC 14-045	FM 4474(B) (2020)
Atlantic & Caribbean Roof Consulting (TST4671)	ACRC 14-046	FM 4474(B) (2020)
FM Approvals (TST1867)	3009502	FM 4470 (2022)
FM Approvals (TST1867)	3012321	FM 4470 (2022)
FM Approvals (TST1867)	3014692	FM 4470 (2022)
FM Approvals (TST1867)	3014751	FM 4470 (2022)
FM Approvals (TST1867)	3015444	FM 4470 (2022)
FM Approvals (TST1867)	3016629	FM 4470 (2022)
FM Approvals (TST1867)	3018579	FM 4450 (1989)
FM Approvals (TST1867)	3018807	FM 4470 (2022)
FM Approvals (TST1867)	3025168	FM 4470 (2022)
FM Approvals (TST1867)	3025170	FM 4470 (2022)
FM Approvals (TST1867)	3025245	FM 4470 (2022)
FM Approvals (TST1867)	3025881	FM 4470 (2022)
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FM Approvals (TST1867)	3030259	FM 4470 (2022)
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FM Approvals (TST1867)	3030383	FM 4470 (2022)
FM Approvals (TST1867)	3031670	FM 4470 (2022)
FM Approvals (TST1867)	3032235	FM 4470 (2022)
FM Approvals (TST1867)	3033308	FM 4470 (2022)
FM Approvals (TST1867)	3035191	FM 4470 (2022)
FM Approvals (TST1867)	3035538	FM 4470 (2022)
FM Approvals (TST1867)	3037110	FM 4470 (2022)
FM Approvals (TST1867)	3037540	FM 4450 (1989)
FM Approvals (TST1867)	3039813	FM 4470 (2022)
FM Approvals (TST1867)	3040105	FM 4470 (2022)
FM Approvals (TST1867)	3043824	FM 4470 (2022)
FM Approvals (TST1867)	3044716	FM 4470 (2022)
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FM Approvals (TST1867)	3053026	FM 4470 (2022)
FM Approvals (TST1867)	3055227	FM 4470 (2022)
FM Approvals (TST1867)	3055491	FM 4470 (2022)
FM Approvals (TST1867)	3055845	FM 4470 (2022)
FM Approvals (TST1867)	3056049	FM 4470 (2022)
FM Approvals (TST1867)	3056303	FM 4470 (2022)
FM Approvals (TST1867)	3056677	FM 4470 (2022)
FM Approvals (TST1867)	3058201	FM 4470 (2022)
FM Approvals (TST1867)	3058326	FM 4470 (2022)
FM Approvals (TST1867)	3058374	FM 4470 (2022)
FM Approvals (TST1867)	3059030	FM 4470 (2022)
FM Approvals (TST1867)	3059662	FM 4470 (2022)
FM Approvals (TST1867)	3060138	FM 4470 (2022)

<u>Entity</u>	<u>Report No.</u>	<u>Standard</u>
FM Approvals (TST1867)	3060573	FM 4470 (2022)
FM Approvals (TST1867)	3060614	FM 4470 (2022)
FM Approvals (TST1867)	3061218	FM 4470 (2022)
FM Approvals (TST1867)	3061328	FM 4470 (2022)
FM Approvals (TST1867)	3014692	FM 4470 (2022)
FM Approvals (TST1867)	3062897	FM 4470 (2022)
FM Approvals (TST1867)	3063554	FM 4470 (2022)
FM Approvals (TST1867)	3014692	FM 4470 (2022)
FM Approvals (TST1867)	3018732	FM 4470 (2022)
FM Approvals (TST1867)	3056207	FM 4470 (2022)
FM Approvals (TST1867)	PR449524	FM 4470 (2022)
FM Approvals (TST1867)	PR450753	FM 4470 (2022)
FM Approvals (TST1867)	PR451160	FM 4470 (2022)
FM Approvals (TST1867)	PR451795	FM 4470 (2022)
FM Approvals (TST1867)	PR452385	FM 4470 (2022)
FM Approvals (TST1867)	PR452580	FM 4470 (2022)
FM Approvals (TST1867)	PR453724	FM 4470 (2022)
FM Approvals (TST1867)	PR454134	FM 4470 (2022)
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FM Approvals (TST1867)	PR454135	FM 4470 (2022)
FM Approvals (TST1867)	PR454167	FM 4470 (2022)
FM Approvals (TST1867)	PR454270	FM 4470 (2022)
FM Approvals (TST1867)	PR454361	FM 4470 (2022)
FM Approvals (TST1867)	PR454859	FM 4470 (2022)
FM Approvals (TST1867)	PR454859	FM 4470 (2022)
FM Approvals (TST1867)	PR455344	FM 4470 (2022)
FM Approvals (TST1867)	PR455671	FM 4470 (2022)
FM Approvals (TST1867)	PR455897	FM 4470 (2022)
FM Approvals (TST1867)	PR456300	FM 4470 (2022)
FM Approvals (TST1867)	PR457305	FM 4470 (2022)
FM Approvals (TST1867)	PR459421	FM 4470 (2022)
FM Approvals (TST1867)	PR459758	FM 4470 (2022)
FM Approvals (TST1867)	PR460141	FM 4470 (2022)
FM Approvals (TST1867)	PR460477	FM 4470 (2022)
FM Approvals (TST1867)	PR460648	FM 4470 (2022)
FM Approvals (TST1867)	PR461495	FM 4470 (2022)
FM Approvals (TST1867)	RR226853	FM 4470 (2022)
FM Approvals (TST1867)	RR228005	FM 4470 (2022)
FM Approvals (TST1867)	RR228007	FM 4470 (2022)
FM Approvals (TST1867)	RR228047	FM 4470 (2022)
FM Approvals (TST1867)	RR229340	FM 4470 (2022)
FM Approvals (TST1867)	RR230933	FM 4470 (2022)
FM Approvals (TST1867)	RR231411	FM 4470 (2022)
FM Approvals (TST1867)	RR231517	FM 4470 (2022)
FM Approvals (TST1867)	RR231520	FM 4470 (2022)
FM Approvals (TST1867)	RR232431	FM 4470 (2022)
FM Approvals (TST1867)	RR232571	FM 4470 (2022)
FM Approvals (TST1867)	RR233717	FM 4470 (2022)
FM Approvals (TST1867)	RR234327	FM 4470 (2022)
FM Approvals (TST1867)	RR234750	FM 4470 (2022)
FM Approvals (TST1867)	RR235389	FM 4470 (2022)
FM Approvals (TST1867)	3062025	FM 4470 (2022)
FM Approvals (TST1867)	3058484	FM 4470 (2022)
FM Approvals (TST1867)	PR450575	FM 4470 (2022)
FM Approvals (TST1867)	3063414	FM 4470 (2022)
FM Approvals (TST1867)	RR222695	FM 4470 (2022)
FM Approvals (TST1867)	PR460141	FM 4470 (2022)
FM Approvals (TST1867)	PR226740	FM 4470 (2022)
FM Approvals (TST1867)	RR236704	FM 4470 (2022)
FM Approvals (TST1867)	3036559	FM 4470 (2022)
FM Approvals (TST1867)	PR457312	FM 4470 (2022)
FM Approvals (TST1867)	RR236718	FM 4470 (2022)
FM Approvals (TST1867)	3058300	FM 4470 (2022)
FM Approvals (TST1867)	PR466350	FM 4470 (2022)
FM Approvals (TST1867)	PR455344	FM 4470 (2022)
FM Approvals (TST1867)	PR467396	FM 4470 (2022)

<u>Entity</u>	<u>Report No.</u>	<u>Standard</u>
FM Approvals (TST1867)	RR242215	FM 4470 (2022)
FM Approvals (TST1867)	PR468130	FM 4470 (2022)
FM Approvals (TST1867)	RR244822	FM 4470 (2022)
FM Approvals (TST1867)	RR243978	FM 4470 (2022)
FM Approvals (TST1867)	3053933	FM 4470 (2022)
FM Approvals (TST1867)	3055167	FM 4470 (2022)
FM Approvals (TST1867)	3058058	FM 4470 (2022)
FM Approvals (TST1867)	RR230610	FM 4470 (2022)
FM Approvals (TST1867)	3061510	FM 4470 (2022)
FM Approvals (TST1867)	PR458191	FM 4470 (2022)
FM Approvals (TST1867)	PR453353	FM 4470 (2022)
FM Approvals (TST1867)	PR450261	FM 4470 (2022)
FM Approvals (TST1867)	PR456713	FM 4470 (2022)
FM Approvals (TST1867)	PR470554	FM 4470 (2022)
Intertek – York (ATI) (TST1558)	J0079.01-109-18	FM 4474 (2020); UL 1897 (2015)
Intertek – York (ATI) (TST1558)	J0080.01-109-18	FM 4474 (2020); UL 1897 (2015)
Intertek – York (ATI) (TST1558)	J0082.01-109-18	FM 4474 (2020); UL 1897 (2015)
Intertek – York (ATI) (TST1558)	J0083.01-109-18	FM 4474 (2020); UL 1897 (2015)
Nemo Etc LLC (TST6049)	4a-CEL-22-LSWUS-.01A	FM 4474(B) (2020)
Nemo Etc LLC (TST6049)	4a-JM-23-LSWUS-03.A	FM 4474(D) (2020)
Nemo Etc LLC (TST6049)	4a-JM-23-LSWUS-02.A	UL 1897 (2015)
Nemo Etc LLC (TST6049)	4a-JM-LSWUS-002.A	FM 4474(B) (2020)
Nemo Etc LLC (TST6049)	4a-JM-LSWUS-002.B	FM 4474(B) (2020)
Nemo Etc LLC (TST6049)	4a-JM-LSWUS-002.B.R1	FM 4474(B) (2020)
Nemo Etc LLC (TST6049)	4a-CEL-LSWUS-003.A.R1	UL 1897 (2015)
PRI Construction Materials Technologies (TST5878)	JMC-086-02-01	FM 4474 (2020)
PRI Construction Materials Technologies (TST5878)	JMC-088-02-01	ASTM D 1876 (2008); TAS 117(B) (1995)
PRI Construction Materials Technologies (TST5878)	JMC-088-02-01.12	ASTM D 1876 (2008); TAS 117(A&B) (1995); TAS 114 (2011); FM 4474 (2020)
PRI Construction Materials Technologies (TST5878)	JMC-107-02-01 Rev 4	ASTM D 903 (1998); ASTM D 1876 (2008); ASTM D 5147 (2011a); TAS 117(A&B) (1995); TAS 114(C) (1995)
PRI Construction Materials Technologies (TST5878)	JMC-108-02-01	FM 4474 (2020)
PRI Construction Materials Technologies (TST5878)	JMC-109-02-01	FM 4474 (2020)
PRI Construction Materials Technologies (TST5878)	JMC-114-02-01	FM 4474 (2020)
PRI Construction Materials Technologies (TST5878)	JMC-131-02-01	FM 4474 (2020)
PRI Construction Materials Technologies (TST5878)	JMC-132-02-01	FM 4474 (2020)
PRI Construction Materials Technologies (TST5878)	JMC-132-02-02	FM 4474 (2020)
PRI Construction Materials Technologies (TST5878)	JMC-141-02-01	FM 4474 (2020)
PRI Construction Materials Technologies (TST5878)	JMC-143-02-01	FM 4474 (2020)
PRI Construction Materials Technologies (TST5878)	JMC-162-02-01	FM 4474 (2020)
PRI Construction Materials Technologies (TST5878)	JMC-163-02-01	FM 4474 (2020)
PRI Construction Materials Technologies (TST5878)	JMC-168-02-01	FM 4474 (2020)
PRI Construction Materials Technologies (TST5878)	JMC-193-02-01	FM 4474 (2020)
PRI Construction Materials Technologies (TST5878)	JMC-193-02-01A	FM 4474 (2020)
PRI Construction Materials Technologies (TST5878)	JMC-196-02-01	TAS 117(A&B) (1995)
PRI Construction Materials Technologies (TST5878)	JMC-201-02-01A	FM 4474 (2020)
PRI Construction Materials Technologies (TST5878)	JMC-201-02-01B	FM 4474 (2020)
PRI Construction Materials Technologies (TST5878)	JMC-205-02-01	ASTM D 3746 [(1985)(2022)]
PRI Construction Materials Technologies (TST5878)	JMC-209-02-01	FM 4474 (2020)
PRI Construction Materials Technologies (TST5878)	JMC-216-02-01	ASTM D 6878 (2021)
PRI Construction Materials Technologies (TST5878)	JMC-216-02-03	ASTM D 6878 (2021)
PRI Construction Materials Technologies (TST5878)	JMC-225-02-01	FM 4474 (2020)
PRI Construction Materials Technologies (TST5878)	JMC-226-02-01	ASTM D 6878 (2021)
PRI Construction Materials Technologies (TST5878)	JMC-242-02-01	FM 4474(D) (2020)
PRI Construction Materials Technologies (TST5878)	JMC-245-02-02	FM 4474(B) (2020)
PRI Construction Materials Technologies (TST5878)	JMC-246-02-01	FM 4474(B) (2020)
PRI Construction Materials Technologies (TST5878)	JMC-267-02-02	FM 4474(B) (2020)
PRI Construction Materials Technologies (TST5878)	JMC-277-02-01	FM 4474(B) (2020)
PRI Construction Materials Technologies (TST5878)	JMC-278-02-01A	FM 4474(C) (2020)
PRI Construction Materials Technologies (TST5878)	JMC-278-02-02	FM 4474(D) (2020); UL 1897 (2015)
PRI Construction Materials Technologies (TST5878)	JMC-278-02-03	FM 4474(D) (2020)
PRI Construction Materials Technologies (TST5878)	JMC-303-02-01	FM 4474(D) (2020); UL 1897 (2015)
PRI Construction Materials Technologies (TST5878)	JMC-306-02-01	FM 4474(B) (2020)
PRI Construction Materials Technologies (TST5878)	JMC-306-02-02	FM 4474(D) (2020); UL 1897 (2015)
PRI Construction Materials Technologies (TST5878)	JMC-306-02-03	FM 4474(D) (2020); UL 1897 (2015)

<u>Entity</u>	<u>Report No.</u>	<u>Standard</u>
PRI Construction Materials Technologies (TST5878)	JMC-311-02-01	FM 4474(B) (2020)
PRI Construction Materials Technologies (TST5878)	JMC-319-02-01.1	TAS 110 (2000)
PRI Construction Materials Technologies (TST5878)	JMC-319-02-01A	TAS 110 (2000)
PRI Construction Materials Technologies (TST5878)	JMC-319-02-02.1	TAS 110 (2000)
PRI Construction Materials Technologies (TST5878)	JMC-319-02-02A	TAS 110 (2000)
PRI Construction Materials Technologies (TST5878)	JMC-325-02-01.1	TAS 110 (2000)
PRI Construction Materials Technologies (TST5878)	JMC-339-02-03	ASTM C 1289 (2023a); ASTM E 84 (2024)
PRI Construction Materials Technologies (TST5878)	JMC-339-02-04	ASTM C 1289 (2023a); ASTM E 84 (2024)
PRI Construction Materials Technologies (TST5878)	JMC-343-02-01	FM 4474(D) (2020); UL 1897 (2015)
PRI Construction Materials Technologies (TST5878)	JMC-343-02-01	ASTM D 413 (1998(2017));
		TAS 117(B) (1995)
PRI Construction Materials Technologies (TST5878)	JMC-353-02-01	FM 4474(D) (2020); UL 1897 (2015)
PRI Construction Materials Technologies (TST5878)	JMC-353-02-02	TAS 114(D) (2011)
PRI Construction Materials Technologies (TST5878)	JMC-354-02-01	FM 4474(D) (2020); UL 1897 (2015)
PRI Construction Materials Technologies (TST5878)	JMC-360-02-01	FM 4474(D) (2020); UL 1897 (2015)
PRI Construction Materials Technologies (TST5878)	410T0019	FM 4474(D) (2020); UL 1897 (2015)
PRI Construction Materials Technologies (TST5878)	410T0026	FM 4474(D) (2020); UL 1897 (2015)
PRI Construction Materials Technologies (TST5878)	507T0008	FM 4474(D) (2020); UL 1897 (2015)
PRI Construction Materials Technologies (TST5878)	507T0019	ASTM D 1970/D 1970M (2021)
PRI Construction Materials Technologies (TST5878)	507T0019	ASTM D 2178 [2015a(2021)]
PRI Construction Materials Technologies (TST5878)	507T0009	FM 4474(C) (2020)
PRI Construction Materials Technologies (TST5878)	507T0031	FM 4474(C) (2020)
PRI Construction Materials Technologies (TST5878)	507T0031A.1	FM 4474(C) (2020)
PRI Construction Materials Technologies (TST5878)	507T0036	FM 4474(D) (2020); UL 1897 (2015)
PRI Construction Materials Technologies (TST5878)	507T0036B	FM 4474(D) (2020); UL 1897 (2015)
PRI Construction Materials Technologies (TST5878)	507T0040B	ASTM D 6878 (2021)
PRI Construction Materials Technologies (TST5878)	507T0058	ASTM D 6878 (2021)
PRI Construction Materials Technologies (TST5878)	507T0059	FM 4474(D) (2020)
PRI Construction Materials Technologies (TST5878)	507T0062	FM 4474(D) (2020)
PRI Construction Materials Technologies (TST5878)	507T0141	FM 4474(B) (2020)
PRI Construction Materials Technologies (TST5878)	507T0142	FM 4474(B) (2020)
PRI Construction Materials Technologies (TST5878)	507T0147	FM 4474(B) (2020)
PRI Construction Materials Technologies (TST5878)	507T0163	FM 4474(D) (2020)
PRI Construction Materials Technologies (TST5878)	507T0164	FM 4474(C) (2020)
PRI Construction Materials Technologies (TST5878)	507T0180	FM 4474(C) (2020)
PRI Construction Materials Technologies (TST5878)	507T0182	FM 4474(B) (2020)
PRI Construction Materials Technologies (TST5878)	507T0186	FM 4474(C) (2020)
PRI Construction Materials Technologies (TST5878)	507T0187.2	FM 4470 (2022); TAS 117(A&B) (1995)
PRI Construction Materials Technologies (TST5878)	507T0193	FM 4474(D) (2020)
PRI Construction Materials Technologies (TST5878)	507T0199	FM 4474(B) (2020)
PRI Construction Materials Technologies (TST5878)	507T0218	FM 4474(C) (2020)
PRI Construction Materials Technologies (TST5878)	507T0219A	FM 4474(C) (2020)
PRI Construction Materials Technologies (TST5878)	507T0225	FM 4474(D) (2020)
PRI Construction Materials Technologies (TST5878)	507T0226	FM 4474(B) (2020)
PRI Construction Materials Technologies (TST5878)	507T0226A	FM 4474(B) (2020)
PRI Construction Materials Technologies (TST5878)	507T0229	FM 4474(D) (2020)
PRI Construction Materials Technologies (TST5878)	507T0231	FM 4474(C) (2020)
PRI Construction Materials Technologies (TST5878)	410T0020.1	FM 4474(C) (2020)
PRI Construction Materials Technologies (TST5878)	507T0198.2	FM 4474(B) (2020)
PRI Construction Materials Technologies (TST5878)	507T0009	FM 4474(C) (2020)
PRI Construction Materials Technologies (TST5878)	507T0230	FM 4474(B) (2020)
PRI Construction Materials Technologies (TST5878)	507T0234.1	FM 4474(B) (2020)
PRI Construction Materials Technologies (TST5878)	507T0235	FM 4474(B) (2020)
PRI Construction Materials Technologies (TST5878)	507T0256A	FM 4474(C) (2020)
PRI Construction Materials Technologies (TST5878)	507T0256B	FM 4474(C) (2020)
PRI Construction Materials Technologies (TST5878)	507T0273	FM 4474(C) (2020)
PRI Construction Materials Technologies (TST5878)	507T0277	FM 4474(C) (2020)
PRI Construction Materials Technologies (TST5878)	507T0302	FM 4474(D)(2020)
PRI Construction Materials Technologies (TST5878)	507T0303	FM 4474(D)(2020)
PRI Construction Materials Technologies (TST5878)	507T0306.1	FM 4474(D)(2020)
PRI Construction Materials Technologies (TST5878)	507T0320	FM 4474(C) (2020)
PRI Construction Materials Technologies (TST5878)	507T0326B	FM 4474(B) (2020)
PRI Construction Materials Technologies (TST5878)	507T0327	FM 4474(B) (2020)
PRI Construction Materials Technologies (TST5878)	507T0331	FM 4474(C) (2020)
PRI Construction Materials Technologies (TST5878)	507T0339	FM 4474(D) (2020)
PRI Construction Materials Technologies (TST5878)	507T0355A.1	FM 4474 (D)(2020)

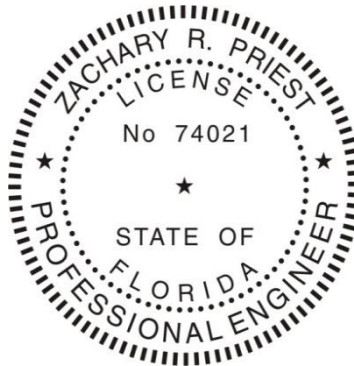
<u>Entity</u>	<u>Report No.</u>	<u>Standard</u>
PRI Construction Materials Technologies (TST5878)	507T0345B.1	FM 4474(B) (2020)
PRI Construction Materials Technologies (TST5878)	507T0345A	FM 4474(B) (2020)
PRI Construction Materials Technologies (TST5878)	507T0355B	FM 4474(D)(2020)
PRI Construction Materials Technologies (TST5878)	507T0379	FM 4474(D) (2020)
PRI Construction Materials Technologies (TST5878)	507T0344	UL 1897 (2015)
PRI Construction Materials Technologies (TST5878)	507T0407B	UL 1897 (2015)
PRI Construction Materials Technologies (TST5878)	507T0270A	FM 4474(D) (2020)
PRI Construction Materials Technologies (TST5878)	507T0406	FM 4474(B) (2020)
PRI Construction Materials Technologies (TST5878)	507T0410.1	FM 4474(C) (2020)
PRI Construction Materials Technologies (TST5878)	507T0411	FM 4474(C) (2020)
PRI Construction Materials Technologies (TST5878)	507T0414	ASTM D 903 (1998)
PRI Construction Materials Technologies (TST5878)	507T0424	FM 4474(B) (2020)
PRI Construction Materials Technologies (TST5878)	507T0426	FM 4474(C) (2020)
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PRI Construction Materials Technologies (TST5878)	507T0443	FM 4474(B) (2020)
PRI Construction Materials Technologies (TST5878)	507T0449A	FM 4474(C) (2020)
PRI Construction Materials Technologies (TST5878)	507T0458	FM 4474(D) (2020)
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PRI Construction Materials Technologies (TST5878)	507T0461	FM 4474(B) (2020)
PRI Construction Materials Technologies (TST5878)	507T0460	UL 1897 (2015)
PRI Construction Materials Technologies (TST5878)	507T0463A	FM 4474(B) (2020)
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PRI Construction Materials Technologies (TST5878)	507T0508A	FM 4474(B) (2020)
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PRI Construction Materials Technologies (TST5878)	507T0511A	FM 4474(B) (2020); ASTM D903 (1998)
PRI Construction Materials Technologies (TST5878)	507T0511B	FM 4474(B) (2020)
PRI Construction Materials Technologies (TST5878)	507T0520A	FM 4474(C) (2020)
PRI Construction Materials Technologies (TST5878)	507T0527	FM 4474(B) (2020)
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PRI Construction Materials Technologies (TST5878)	507T0569	FM 4474(B) (2020)
PRI Construction Materials Technologies (TST5878)	507T0574A.1	FM 4474(C) (2020)
PRI Construction Materials Technologies (TST5878)	507T0575	UL 1897 (2015)
PRI Construction Materials Technologies (TST5878)	507T0579	FM 4474(B) (2020)
Robert J.M. Nieminen, P.E.	Compliance Letter 02/09/2017	TAS 114 (2011)
Trinity ERD (TST6049)	JM-SC11190.03.16	FM 4474 (2020)
Trinity ERD (TST6049)	SC4910	FM 4474 (2020)
Trinity ERD (TST6049)	SFS-SC10010.02.16-R1	FM 4474(D) (2020); UL 1897 (2015)
Trinity ERD (TST6049)	JM-SC13465.04.17	FM 4474 (2020)

EntityTrinity|ERD (TST6049)
Trinity|ERD (TST6049)Report No.JM-SC13465.08.17
J30820.09.10-2StandardFM 4474 (2020)
FM 4474 (2020)**LIMITATIONS**

1. This report is not for use in the HVHZ.
2. Fire classification is not within the scope of this evaluation.
3. Foam plastic insulation shall be separated from the building interior in accordance with the FBC 2603.4 and 2603.6.
4. The roof deck, structural supports, and the roof deck attachment information are provided based on testing. FBC requirements for the rational design of the roof deck, including the attachment, are not within the scope of this evaluation.
5. Installation of the evaluated products shall comply with this report, the FBC, and the manufacturer's published application instructions. Where discrepancies exist between these sources, the more restrictive and FBC compliant installation detail shall prevail.
6. The minimum roof slope shall be 1/4:12 for new construction.
7. For assemblies containing mechanical attachment or adhered in ribbon-applied adhesive, the allowable uplift pressure for the selected assembly shall meet or exceed the minimum design loads as determined in accordance with the FBC Chapter 16. The attachment density may be increased by a qualified design professional, as necessary, to meet the design pressure requirements in the periphery zones. Calculations shall be conducted in compliance with RAS 117, RAS 137, or Section 2.2.10.1 FM LPDS 1-29 (July 2022).
8. Reroofing applications shall be examined in accordance with FBC Section 1511. For mechanically fastened systems, a field withdrawal resistance test (ANSI/SPRI FX-1 or TAS 105) shall be conducted by a qualified professional to ensure the fastener meets the minimum design load requirements of the system. For adhered systems, a field uplift resistance test (ASTM E 907, FM LPDS 1-52, ANSI/SPRI IA-1, or TAS 124) shall be conducted to confirm conformance of the existing to the minimum design loads.
9. For assemblies adhered in ribbon-applied adhesive, the allowable uplift pressure for the selected assembly shall meet or exceed the minimum design loads as determined in accordance with the FBC Chapter 16. The attachment density may be increased by a qualified design professional, as necessary, to meet the design pressure requirements in the periphery zones. Calculations shall be conducted in compliance with Section 2.2.10.1 FM LPDS 1-29 (July 2022).
10. Materials shall conform to FBC Sections 1506 and 1711.
11. FBC Section 1504.3.1.1 is not within the scope of this evaluation.
12. All products listed in this report shall be manufactured under a quality assurance program in compliance with Rule 61G20-3.

COMPLIANCE STATEMENT

This report has been prepared in accordance with F.A.C. Rule 61G20-3.



This item has been digitally signed and sealed by Zachary R. Priest, PE, on 10/6/2026.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Zachary R. Priest, P.E.
Florida Registration No. 74021
Organization No. ANE9641

CERTIFICATION OF INDEPENDENCE

CREEK Technical Services, LLC does not have, nor will it acquire, a financial interest in any company manufacturing or distributing products under this evaluation.

CREEK Technical Services, LLC is not owned, operated, or controlled by any company manufacturing or distributing products under this evaluation.

Zachary R. Priest, P.E. does not have, nor will acquire, a financial interest in any company manufacturing or distributing products under this evaluation.

Zachary R. Priest, P.E. does not have, nor will acquire, a financial interest in any other entity involved in the approval process of the product.

APPENDICES

- 1) [APPENDIX A](#) – Installation (10 pages)
- 2) [APPENDIX B](#) – Nomenclature (6 pages)
- 3) [APPENDIX C](#) – Approved Assemblies for Kingspan TPO Single-Ply Membranes (66 pages)

APPENDIX A - INSTALLATION
INSTALLATION

Note - Refer to the [APPROVED ASSEMBLIES](#) section of this report for specific installation details of a selected assembly.

Unless otherwise specified in this report the following installation details shall be met for the named products:

Component	Product	Installation Detail
Fasteners, Battens, & Plates	Kingspan #12 Fastener	#12 fastener; Min. 3/4-inch penetration through the top rib of the steel deck or wood deck
	Kingspan #15 Fastener	#15 fastener; Min. 3/4-inch penetration through the top rib of the steel deck or wood deck
	Kingspan Barbed Seam Plate	2 3/4-inch diameter; Galvalume steel plate with barbs
	Kingspan Purlin Fastener	Min. 3/4-inch penetration through purlin
	Kingspan Square Insulation Plate	3-inch square; Galvalume steel plate
	Kingspan TPO Induction Welding Plate	Min. 3-inch diameter for TPO membranes; Induction welded in the field of membrane; welds not permitted at lap seams; For use only with min. 60 mil thick bareback membrane
	OMG #12 Standard Roofgrip	#12 fastener; Min. 3/4-inch penetration through the top rib of the steel deck or wood deck
	OMG 2" Barbed Plate	2-inch diameter; Galvalume steel plate with reinforcing ribs and barbs
	OMG 3" Round Metal Plate	3-inch diameter round; Galvalume steel plate; Only for use with the following products: Kingspan ISO GF or Kingspan ISO CG
	OMG 3 in. Ribbed Galvalume Plate (Flat)	3-inch diameter round; Galvalume steel plate
	OMG CR Base Sheet Fastener 1.7	Base sheet fastener with 1.75-inch galvanized steel shank coated with CR-10 and integrated 2.75-inch diameter Galvalume plate.
	OMG CD-10	Concrete deck only; Min. 1-inch penetration into concrete deck
	OMG Eyehook Accuseam Plate	2 3/8-inch diameter; Galvalume steel plate with eyehooks
	OMG Heavy Duty	#14 fasteners; Min. 3/4-inch penetration through the top rib of the steel deck or wood deck; Min. 1-inch penetration into concrete deck
	OMG Polymer Batten Strip	Membrane anchors and plastic strips
	OMG OlyLok Locking Impact Nail	Min. 1.8-inch galvanized steel tube and coated-steel locking staple pre-assembled with 2.7-inch diameter Galvalume steel plate
	OMG XHD	#15 fastener; Min. 3/4-inch penetration through the top rib of the steel deck or wood deck
	SFS Intec Dekfast DF-#12-PH3 Fastener	#12 fasteners; Min. 3/4-inch penetration through the top rib of the steel deck or wood deck
	SFS Intec Dekfast DF-#14-PH3 Fastener	#15 fasteners; Min. 3/4-inch penetration through the top rib of the steel deck or wood deck; Min. 1-inch penetration into concrete deck
	SFS Intec Dekfast DF-#15-PH3 Fastener	#15 fasteners; Min. 3/4-inch penetration through the top rib of the steel deck or wood deck; Min. 1-inch penetration into concrete deck
	SFS Intec Dekfast PLT-H-2-7/8	2-7/8" hexagonal galvalume steel stress plate
	SFS Intec Dekfast PLT-R-3	3-inch diameter round; Galvalume steel plate
	SFS Intec FI-P-6.8-TPO	Min. 3-inch diameter for TPO membranes; Induction welded in the field of membrane; welds not permitted at lap seams; For use only with min. 60 mil thick bareback membrane
	SFS Intec <i>isofast</i> PLT-R-2-3/8-BL	2 3/8-inch diameter; Galvalume steel plate
	Trufast 2.4" Barbed Metal Seam Plate	2.4-inch diameter; Galvalume steel plate
	Trufast 2.4" Barbed Metal Seam Plate (14-Barb)	
	Trufast 2.4" Scoop Seam Plate	
	Trufast 3" Metal Insulation Plate	3-inch diameter round; Galvalume steel plate



APPENDIX A - INSTALLATION

Component	Product	Installation Detail
Fasteners, Battens, & Plates	Trufast #12 Purlin Fastener	Installed into min. 16ga. steel purlins
	Trufast #12 DP Fastener	#12 fasteners; Min. 3/4-inch penetration through the top rib of the steel deck or wood deck
	Trufast #14 HD Fastener	#14 fasteners; Min. 3/4-inch penetration through the top rib of the steel deck or wood deck; Min. 1-inch penetration into concrete deck
	Trufast #15 EHD Fastener	#15 fasteners; Min. 3/4-inch penetration through the top rib of the steel deck or wood deck
	Trufast Fluted Concrete Nails	Concrete deck only; Min. 1-inch penetration into concrete deck
	Trufast Deep Well Batten Bar	Galvalume steel membrane batten with recessed holes
	Trufast Straight Line Batten Bar	Galvalume steel membrane batten for use with Twin-Loc Nail without integrated plate
	Trufast TPO IW Plates	Min. 3-inch diameter for TPO membranes; Induction welded in the field of membrane; welds not permitted at lap seams; For use only with min. 60 mil thick bareback membrane
	Trufast Twin Loc-Nail	Min. 1.4-inch shank; Base sheet fastener with and without integrated 2.7-inch diameter plate
	Trufast VERSA-FAST fastener	Min. 2 1/4-inch length; Min. 3/4-inch penetration through wood deck
Insulation Adhesives	Millennium One Step Foamable Adhesive	Ribbon adhered in 3/4 to 1-inch wide beads
	ICP Adhesives CR-20	
	OMG OlyBond 500	
	Kingspan Low-Rise Foam Adhesive Canister	Ribbon adhered in 3/4 to 1-inch wide beads
	Kingspan Low-Rise Foam Adhesive	
	Millennium PG-1 Pump Grade Adhesive	Ribbon application applied in 3/4 to 1-inch wide beads; Regular spatter application applied at a rate of 0.55 – 0.75 gal/100ft ² ; Heavy spatter application applied at a rate of 0.9 to 1.1 gal/100ft ²
Insulation/Cover Boards	ASTM D 312, Type IV asphalt	Fully adhered within the EVT range at a rate of 25-40 lbs/100 ft ²
	EPS	Min. 1/2-inch, min. 1.8 pcf (HVHZ) or min. 1.5 pcf (non-HVHZ) expanded polystyrene; Adhered boards shall be a maximum 4-ft x 4-ft
	Georgia-Pacific DensDeck	Min. 1/4-inch thick
	Georgia-Pacific DensDeck Prime	
	Georgia-Pacific DensDeck ProFast Prime	Min. 3/8-inch thick
	Georgia-Pacific DensDeck StormX Prime	Min. 5/8-inch thick
	Kingspan ISO GF	Min. 1/2-inch thick; Min. 20 psi; Adhered boards shall be a maximum 4 ft x 4 ft
	Kingspan ISO CG	Min. 1/2-inch thick; Min. 20 psi; Adhered boards shall be a maximum 4 ft x 4 ft
	Kingspan ISO HD CG	1/2-inch thick; Min. 80 psi; Adhered boards shall be a maximum 4 ft x 4 ft
	USG SECUROCK Glass-Mat Roof Board	Min. 1/4-inch thick
	USG SECUROCK Gypsum-Fiber Roof Board	
	National Gypsum DEXcell Cement Roof Board	Min. 7/16-inch thick; Adhered boards shall be a maximum 4 ft x 4 ft
	National Gypsum DEXcell Glass Mat Roof Board	Min. 1/4-inch thick
	National Gypsum DEXcell FA Glass Mat Roof Board	



APPENDIX A - INSTALLATION

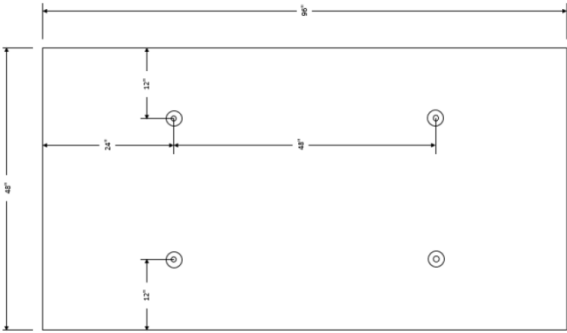
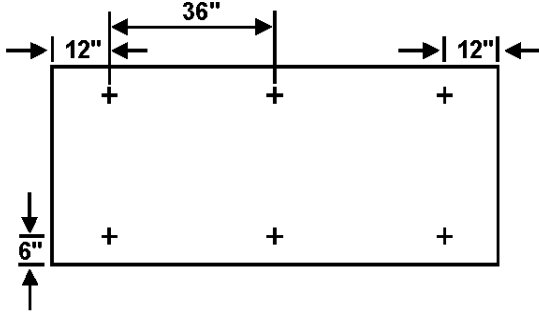
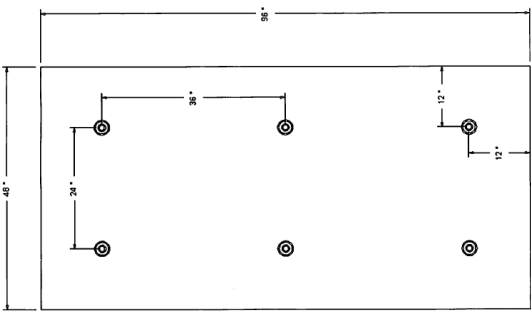
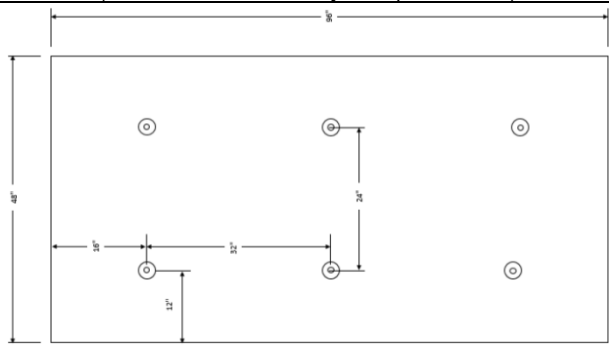
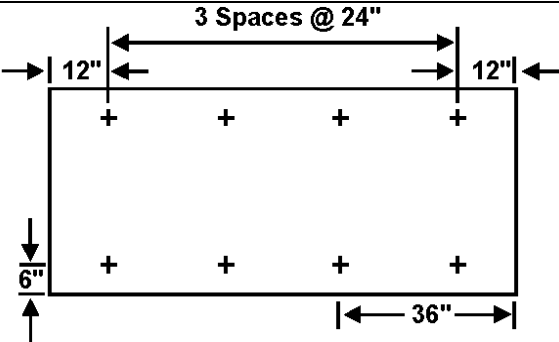
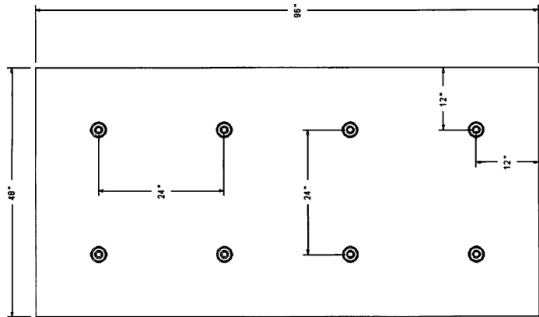
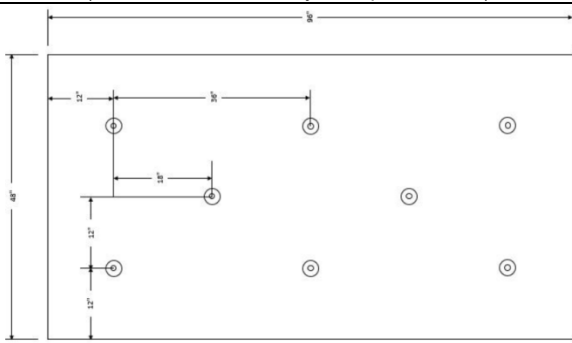
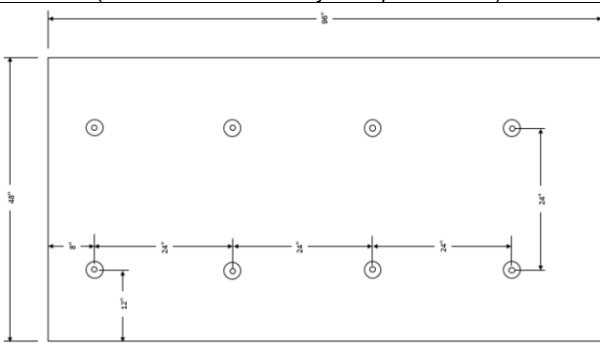
Component	Product	Installation Detail
TPO Membrane Adhesives	ASTM D 312, Type IV asphalt	Fully adhered within the EVT range at a rate of 25-40 lbs/100 ft; For use only with Kingspan TPO FB 150 membranes only
	Kingspan LVOC Sprayable Bonding Adhesive	For Kingspan TPO smooth backed membranes, the adhesive is applied at a total rate of 1,000ft ² /canister; Applied simultaneously to underside of membrane and substrate; For Kingspan TPO fleece backed membranes the adhesive is applied both to the substrate and the underside of the membrane at a rate of 0.21-0.23 gal/100ft ² for a total application rate of 0.41-0.47gal/100ft ²
	Millennium PG-1 Pump Grade Adhesive	Ribbon adhered in 3/4 to 1-inch wide beads; Spatter application applied at 0.55 to 0.75 gal/100ft ² ; For use only with Kingspan TPO Fleece Backed membranes only
	Kingspan TPO Membrane Bonding Adhesive	Fully adhered at rate of 50-90 ft ² /gal(1.1-2.0 gal/100ft ²); Applied simultaneously to underside of membrane and substrate; For use with Kingspan TPO smooth backed membranes only
	Kingspan TPO Membrane Bonding Adhesive LVOC	Fully adhered at rate of 50-90 ft ² /gal(1.1-2.0 gal/100ft ²); Applied simultaneously to underside of membrane and substrate; For use with Kingspan TPO smooth backed membranes only
	Kingspan TPO Membrane Bonding Adhesive LVOC 1168	Fully adhered at rate of 50-90 ft ² /gal(1.1-2.0 gal/100ft ²); Applied simultaneously to underside of membrane and substrate; For use with Kingspan TPO smooth backed membranes only
	Kingspan TPO Water Based Membrane Adhesive	Bareback TPO shall be fully adhered in one or two-sided application at a combined rate of 0.6-0.8 gal/100ft ² ; One-sided application applied to the substrate at a rate of 0.4-0.5 gal/100ft ² is also acceptable, but carries limits on wind uplift (See nomenclature for more information); Fleeceback TPO shall be fully adhered in one-sided application applied to the substrate at a rate of 0.6-0.8 gal/100ft ²
	Kingspan Low-Rise Foam Adhesive Canister	Applied in spatter pattern at a rate of 0.32 gal/100ft ² or ribbon application in 3/4 to 1-inch wide beads; For use only with Kingspan TPO Fleece Backed membranes only
Board Primer	Detec Systems TruGround Conductive Primer	Applied at rate of 250 ft ² /gal
Vapor Barrier	JM DynaBase HW	Min. 3-inch wide side-laps; Min. 6-inch end laps; Torch adhered ; Concrete decks primed prior to torch
	JM DynaWeld Base	
	JM DynaWeld Cap	
	JM DynaBase	Min. 3-inch wide side-laps; Min. 6-inch end laps; Applied with hot or cold <i>approved</i> adhesives
	JM DynaBase PR	
	JM DynaLastic 180	
	JM DynaLastic 180 FR	
	JM DynaLastic 180 S	
	JM DynaLastic 250	
	JM DynaLastic 250 FR	
	JM DynaLastic 250 S	
	JM DynaMax	
	JM DynaMax FR	
	JM DynaFast 180 S	
	JM DynaGrip Base SD/SA	Min. 3-inch wide side-laps; Min. 6-inch end laps; Self-adhered
	JM DynaGrip Base PR SD/SA	
	JM Vapor Barrier SA	Self-adhered to primed steel, wood, gypsum or concrete decks; Min. 3-inch sides laps; Min. 6-inch end laps
	Kingspan Vapor Barrier SAR	
Vapor Barrier Primer	Kingspan LVOC Sprayable Bonding Adhesive	Applied at rate of 500 ft ² /canister
	JM SA Primer Low VOC	Applied at rate of 0.5 gal/100ft ²



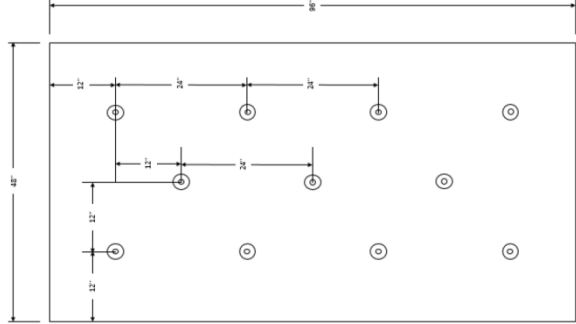
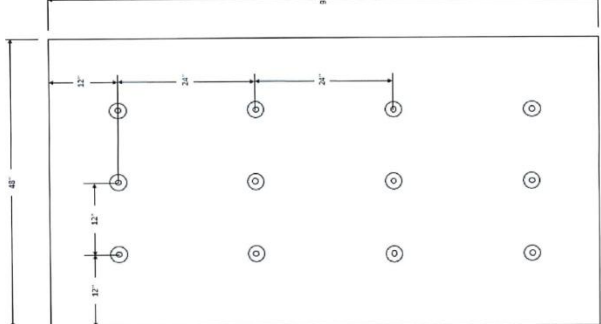
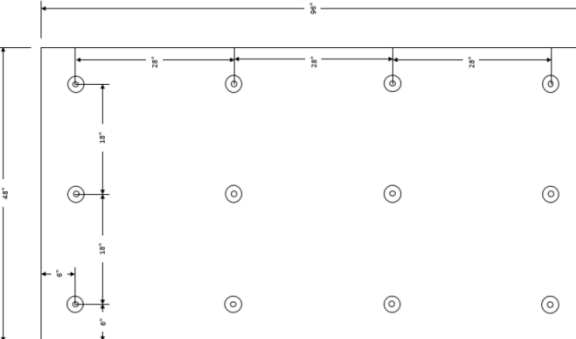
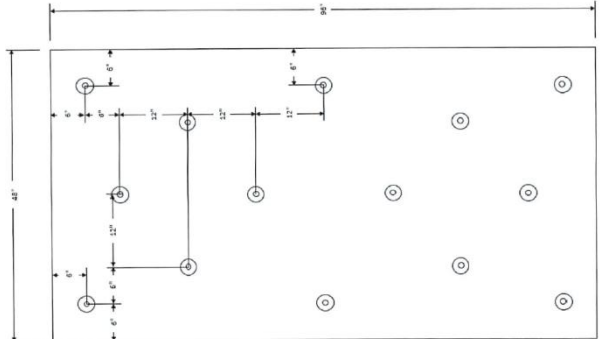
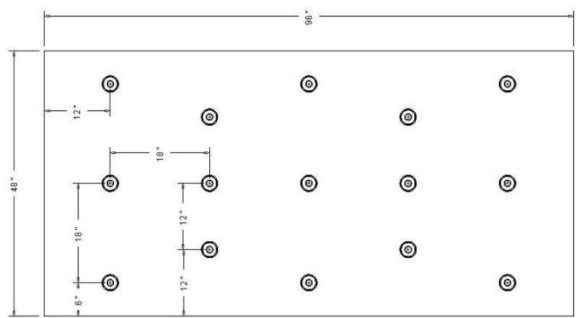
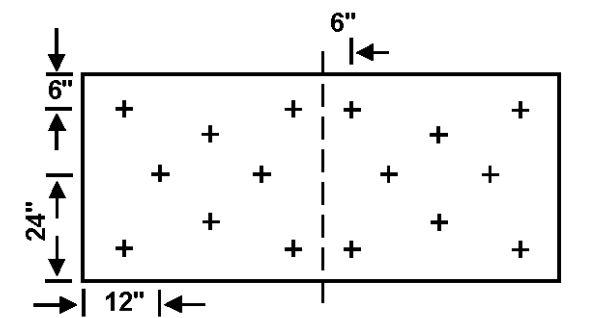
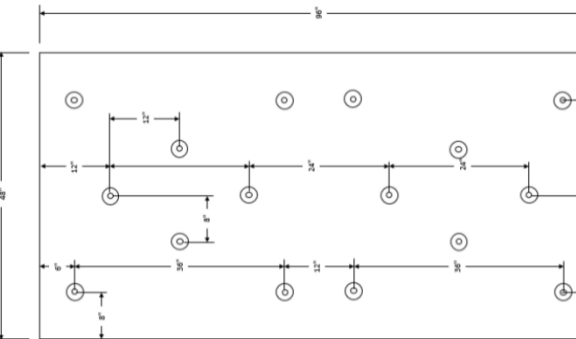
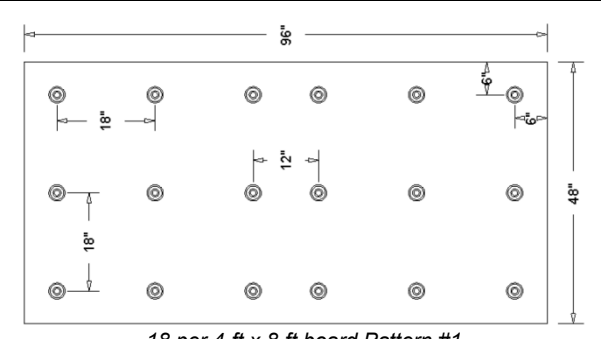
APPENDIX A - INSTALLATION

Component	Product	Installation Detail
Vapor Barrier Primer (Cont'd)	JM SA Primer	Applied 0.75-1.25 gal/100ft ² on porous surfaces and 0.25-0.75 gal/100ft ² on nonporous surfaces
Vapor Barrier Adhesives	DynaSet 1k	Min. 4-inch laps sealed at a rate of 1.5-2.0gal/100ft ² ; Applied to substrate in 0.5-0.75-inch wide continuous ribbons
	DynaSet 2k	
Base/Anchor Sheets	JM DynaBase	Min. 3-inch wide side-laps; Min. 6-inch end laps
	JM DynaLastic 180 S	
	JM GlasBase Plus	
	JM GlasPly IV	
	JM GlasPly Premier	
	JM PermaPly 28	
	JM Ventsulation Felt	
TPO Single-Ply Membranes	Kingspan TPO 045	Min. 2-inch wide side-laps with min. 1.5-inch wide heat weld for adhered systems; In-lap fastened systems shall have min. 6-inch wide side-laps with min. 1.5-inch wide heat weld; Side-laps shall be installed perpendicular to the direction of the steel deck ribs and parallel to the direction of the wood trusses for mechanically attached systems
	Kingspan TPO 060	
	Kingspan TPO 080	
	Kingspan TPO FB 115	
	Kingspan TPO FB 135	
	Kingspan TPO FB 150	
	Kingspan TPO - SA	
Cellular Lightweight Insulating Concrete	Celcore MF with HS Rheology Admixture	Slurry coat min. 1/8-inch thick; 1-inch thick EPS holey board (1 lbs/ft ³); Min. 2-inch thick top coat; Celcore PVA curing compound applied at rate of 300 ft ² /gal
	Celcore S-1	Deck is treated by applying a continuous film with a broom prior to placement of the Celcore lightweight concrete
	Celcore Sanded Bonding Surface (SBS)	Applied at a minimum 1/16-inch thickness
	Mearcrete	Slurry coat min. 1/8-inch thick; 1" thick EPS holey board (1 lbs/ft ³); Min. 2-inch thick top coat
	Elastizell	
	Concrecel	
	Cellular Lightweight Insulating Concrete	

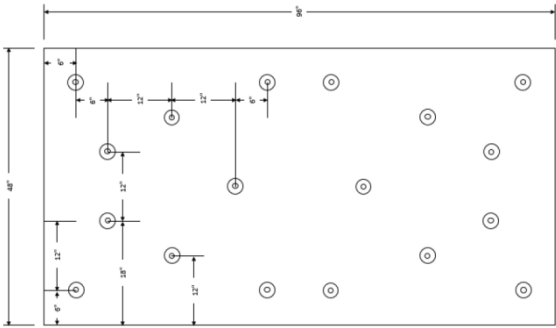
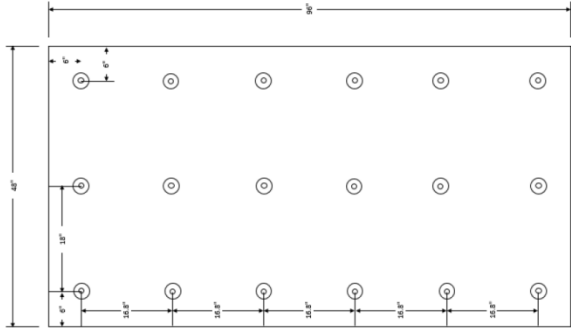
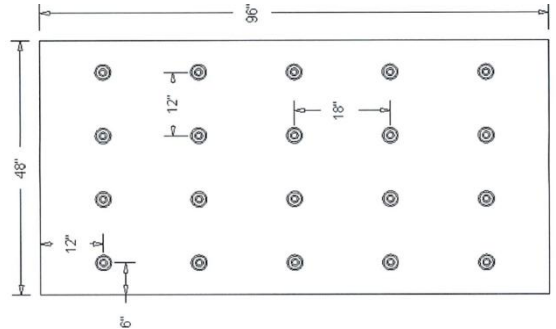
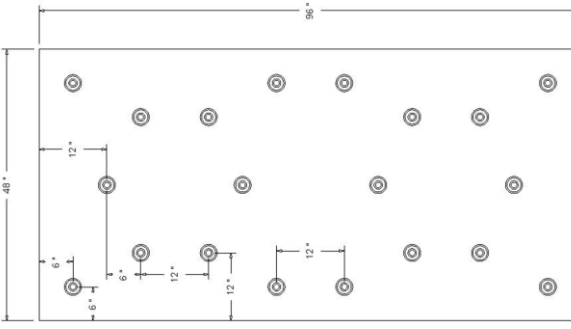
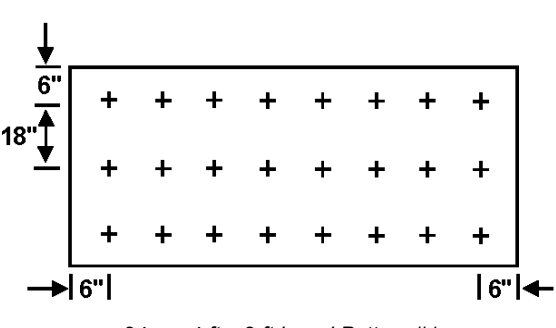
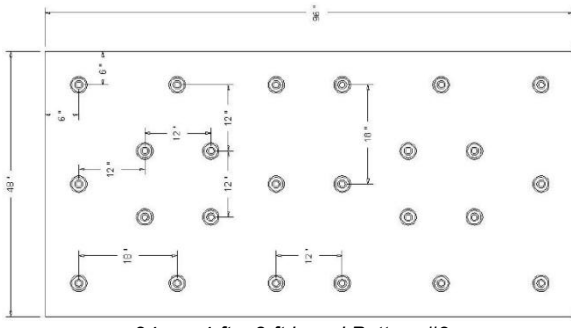
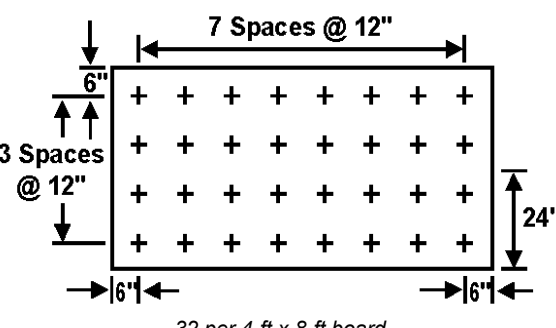
APPENDIX A - INSTALLATION

Insulation/Cover Board Fastening Patterns	
 4 per 4-ft x 8-ft board (Max. 8.0-ft² contributory area per fastener)	 6 per 4-ft x 8-ft board Pattern #1 (Max. 5.33-ft² contributory area per fastener)
 6 per 4-ft x 8-ft board Pattern #2 (Max. 5.33-ft² contributory area per fastener)	 6 per 4-ft x 8-ft Type N (Max. 5.33-ft² contributory area per fastener)
 8 per 4-ft x 8-ft board Pattern #1 (Max. 4.0-ft² contributory area per fastener)	 8 per 4-ft x 8-ft board Pattern #2 (Max. 4.0-ft² contributory area per fastener)
 8 per 4-ft x 8-ft board Pattern #3 (Max. 4.0-ft² contributory area per fastener)	 8 per 4-ft x 8-ft board Type N (Max. 4.0-ft² contributory area per fastener)

APPENDIX A - INSTALLATION

Insulation/Cover Board Fastening Patterns	
 <i>11 per 4-ft x 8-ft board</i> (Max. 2.9-ft² contributory area per fastener)	 <i>12 per 4-ft x 8-ft board Pattern #1</i> (Max. 2.67-ft² contributory area per fastener)
 <i>12 per 4-ft x 8-ft board Pattern #2</i> (Max. 2.67-ft² contributory area per fastener)	 <i>14 per 4-ft x 8-ft board</i> (Max. 2.29-ft² contributory area per fastener)
 <i>15 per 4-ft x 8-ft board</i> (Max. 2.13-ft² contributory area per fastener)	 <i>16 per 4-ft x 8-ft board</i> (Max. 2.0-ft² contributory area per fastener)
 <i>16 per 4-ft x 8-ft board Type N</i> (Max. 2.0-ft² contributory area per fastener)	 <i>18 per 4-ft x 8-ft board Pattern #1</i> (Max. 1.78-ft² contributory area per fastener)

APPENDIX A - INSTALLATION

Insulation/Cover Board Fastening Patterns	
 <i>18 per 4-ft x 8-ft board Pattern #2</i> (Max. 1.78-ft² contributory area per fastener)	 <i>18 per 4-ft x 8-ft board Pattern #3</i> (Max. 1.78-ft² contributory area per fastener)
 <i>20 per 4-ft x 8-ft board Pattern #1</i> (Max. 1.6-ft² contributory area per fastener)	 <i>20 per 4-ft x 8-ft board Pattern #2</i> (Max. 1.6-ft² contributory area per fastener)
 <i>24 per 4-ft x 8-ft board Pattern #1</i> (Max. 1.33-ft² contributory area per fastener)	 <i>24 per 4-ft x 8-ft board Pattern #2</i> (Max. 1.33-ft² contributory area per fastener)
 <i>32 per 4-ft x 8-ft board</i> (Max. 1.0-ft² contributory area per fastener)	



APPENDIX A - INSTALLATION

Alternate Fastener Patterns for Induction Weld Assemblies Only	
Description	Fastening Array Repeated Using the Geometric Grid Shown Below
1.5-ft x 2-ft staggered grid	
2-ft x 2-ft staggered grid	
2-ft x 3-ft staggered grid	

APPENDIX A - INSTALLATION

VERSAs-FAST Metal Plate Fastening Pattern	
Description	Fastening Pattern
2 Fasteners/ Plate	
3 Fasteners/ Plate	Direction of fastener row within lap VERSAs-FAST Fasteners located on the side of the plate that is in closest proximity to the weld seam
4 Fasteners (Wedge)/ Plate	Direction of fastener row within lap VERSAs-FAST Fasteners located on the side of the plate that is in closest proximity to the weld seam

APPENDIX A - INSTALLATION

VERSFA-FAST Metal Plate Fastening Pattern	
Description	Fastening Pattern
4 Fasteners (Trapezoid)/ Plate	 Direction of fastener row within lap VERSFA-FAST Fasteners located on the side of the plate that is in closest proximity to the weld seam

APPENDIX B – NOMENCLATURE
NOMENCLATURE

The following naming conventions are utilized to specify products in the [APPROVED ASSEMBLIES](#) section of this report. Refer to the nomenclature below when deciphering the allowable products for use in the selected assembly. Installation requirements shall be as noted in the [APPROVED ASSEMBLIES](#) section of this report.

Name	Definition
#14 Fasteners & Plates	OMG Heavy Duty, Trufast #14 HD Fastener or OMG CD-10 (concrete only) and OMG 3" Round Metal Plate or Kingspan Square Insulation Plate
#14 Fasteners & Plates (Square)	OMG Heavy Duty, Trufast #14 HD Fastener or OMG CD-10 (concrete only) and Kingspan Square Insulation Plate
#15 Fasteners & 2" Plates	OMG 2" Barbed Plates and Kingspan #15 Fasteners (<i>Wood Deck</i> or <i>Steel Deck</i>)
#15 Fasteners & 2-3/8" Plates	Any one of the following fastener and plate combinations: 1) Kingspan #15 Fasteners (<i>Wood Deck</i> or <i>Steel Deck</i>), Trufast #15 EHD Fasteners (<i>Steel Deck</i>) or OMG Heavy Duty (<i>Concrete Deck</i>) and OMG Eyehook Accuseam Plates 2) Trufast #15 EHD Fasteners (<i>Steel Deck</i>) or Trufast #14 HD Fasteners (<i>Concrete Deck</i>) and 2.4" Scoop Seam Plate, 2.4" Barbed Metal Seam Plate, or 2.4" Barbed Metal Seam Plate (14-Barb) 3) Kingspan #15 Fasteners (<i>Wood Deck</i> or <i>Steel Deck</i>) or Dekfast DF-#14-PH3 (<i>Concrete Deck</i>) and <i>isofast</i> PLT-R-2-3/8-6B-B plates
1168	Kingspan TPO Membrane Bonding Adhesive LVOC 1168
Celcore MF	Celcore MF with HS Rheology Admixture
Celcore SBS	Celcore SBS Sanded Bonding Surface applied at a minimum 1/16-inch thickness
Cover Board	One layer of any of the following products: -Georgia-Pacific DensDeck -Georgia-Pacific DensDeck Prime -Georgia-Pacific DensDeck ProFast Prime -Georgia-Pacific DensDeck StormX Prime -JM ProtectorR HD -JM ProtectorR HD FR -USG SECUROCK Glass-Mat Roof Board -USG SECUROCK Gypsum-Fiber Roof Board -National Gypsum DEXcell FA Glass Mat Roof Board -National Gypsum DEXcell Glass Mat Roof Board -National Gypsum DEXcell Cement Roof Board
Deck Detail	All decks shall be designed by others in accordance with FBC requirements.
	Concrete Deck Min. $f'_c = 2,500$ psi at 28 days
	CWF Deck Min. 2.5-inch thick Tectum I cementitious wood fiber panels
	Steel Deck Min. 22 ga, Wide Rib Deck (Type WR) conforming to ANSI/SDI-RD1.0 & FBC; 0.5% Vented for LWIC applications only. Shall conform with ASTM A653 for S-A-# type assemblies.
	G<#> Min. Grade <#> of Steel Deck
	Wood Deck APA Span-Rated sheathing.
	T<#>O Min. <#>-inch thickness of the OSB sheathing complying with PS 2-18
	T<#>P Min. <#>-inch thickness of the plywood sheathing complying with PS 1-19
	L<#> Max. span of <#> inches
DF	Dekfast DF-#12-PH3 <i>Steel Deck</i> , or <i>Wood Deck</i>), Dekfast DF-#14-PH# (<i>Concrete Deck</i> , <i>Steel Deck</i> , or <i>Wood Deck</i>), or Dekfast DF-#15-PH3 (<i>Steel Deck</i> , or <i>Wood Deck</i>) with Dekfast PLT-R-3

APPENDIX B – NOMENCLATURE

Name	Definition																																																
DensDeck	Min. 1/4-inch Georgia-Pacific DensDeck																																																
DensDeck Prime	Min. 1/4-inch Georgia-Pacific DensDeck Prime; or Georgia-Pacific DensDeck StormX Prime																																																
DEXcell CB	Min. 7/16-inch National Gypsum DEXcell Cement Roof Board																																																
DEXcell FA	Min. 1/4-inch National Gypsum DEXcell FA Glass Mat Roof Board																																																
ISO	Kingspan ISO GF or Kingspan ISO CG																																																
EPS	ASTM C 578 expanded polystyrene insulation board, min. Type IX in HVHZ																																																
FASTENERS	Kingspan #12 Fastener, Trufast #12 DP Fastener, Dekfast DF-#12-PH3, OMG Heavy Duty, Trufast #14 HD Fastener, Dekfast DF-#14-PH3, Kingspan #15 Fastener, Dekfast DF-#15-PH3, or Trufast #15 EHD Fastener																																																
Fasteners & Plates	Choose one of the following fastener and plate combinations for the given conditions:																																																
	<table><tr><th>Board or Base Sheet</th><th>Fastener</th><th>Plate</th><th>Roof Deck</th></tr><tr><td>Any</td><td>OMG Heavy Duty, OMG CD-10, Dekfast DF-#14-PH3, or Trufast #14 HD Fastener</td><td>Kingspan Square Insulation Plate or OMG 3" Round Metal Plate</td><td>Concrete</td></tr><tr><td>Any</td><td>Kingspan #12 Fastener, Trufast #12 DP Fastener, Trufast #14 HD Fastener, Kingspan #15 Fastener, Dekfast DP-#15-PH3, or Trufast #15 EHD Fastener</td><td>Kingspan Square Insulation Plate or OMG 3" Round Metal Plate</td><td>Steel</td></tr><tr><td>Any</td><td>Kingspan #12 Fastener, Trufast #12 DP Fastener, Dekfast DF-#12-PH3, OMG Heavy Duty, Dekfast DF-#14-PH3, Kingspan #15 Fastener, Dekfast DF-#15-PH3, or Trufast #15 EHD Fastener</td><td>Kingspan Square Insulation Plate or OMG 3" Round Metal Plate</td><td>Plywood or OSB</td></tr><tr><td>Any</td><td>Dekfast DF-#14-PH3</td><td>Dekfast PLT-R-3</td><td>Concrete</td></tr><tr><td>Any</td><td>Dekfast DF-#12-PH3 or Dekfast DP-#15-PH3</td><td>Dekfast PLT-R-3</td><td>Steel</td></tr><tr><td>Any</td><td>Dekfast DF-#12-PH3, Dekfast DF-#14-PH#, or Dekfast DF-#15-PH3</td><td>Dekfast PLT-R-3</td><td>Plywood or OSB</td></tr><tr><td>Any</td><td>OMG Heavy Duty, OMG CD-10, or Trufast #14 HD Fastener</td><td>Trufast 3" Metal Insulation Plates</td><td>Concrete</td></tr><tr><td>Kingspan ISO GF, DensDeck Prime, DEXcell FA, or SECUROCK</td><td>Kingspan #12 Fastener or Kingspan #15 Fastener</td><td>Trufast 3" Metal Insulation Plates</td><td>Steel</td></tr><tr><td>Kingspan ISO GF, DensDeck Prime, DEXcell FA, or SECUROCK</td><td>Kingspan #12 Fastener, OMG Heavy Duty or Kingspan #15 Fastener</td><td>Trufast 3" Metal Insulation Plates</td><td>Plywood or OSB</td></tr><tr><td>Any</td><td>Trufast #12 DP Fastener, Trufast #14 HD Fastener, or Trufast #15 EHD Fastener</td><td>Trufast 3" Metal Insulation Plates</td><td>Steel or OSB</td></tr><tr><td>Any</td><td>Trufast #12 DP Fastener or Trufast #15 EHD Fastener</td><td>Trufast 3" Metal Insulation Plates</td><td>Plywood</td></tr></table>	Board or Base Sheet	Fastener	Plate	Roof Deck	Any	OMG Heavy Duty, OMG CD-10, Dekfast DF-#14-PH3, or Trufast #14 HD Fastener	Kingspan Square Insulation Plate or OMG 3" Round Metal Plate	Concrete	Any	Kingspan #12 Fastener, Trufast #12 DP Fastener, Trufast #14 HD Fastener, Kingspan #15 Fastener, Dekfast DP-#15-PH3, or Trufast #15 EHD Fastener	Kingspan Square Insulation Plate or OMG 3" Round Metal Plate	Steel	Any	Kingspan #12 Fastener, Trufast #12 DP Fastener, Dekfast DF-#12-PH3, OMG Heavy Duty, Dekfast DF-#14-PH3, Kingspan #15 Fastener, Dekfast DF-#15-PH3, or Trufast #15 EHD Fastener	Kingspan Square Insulation Plate or OMG 3" Round Metal Plate	Plywood or OSB	Any	Dekfast DF-#14-PH3	Dekfast PLT-R-3	Concrete	Any	Dekfast DF-#12-PH3 or Dekfast DP-#15-PH3	Dekfast PLT-R-3	Steel	Any	Dekfast DF-#12-PH3, Dekfast DF-#14-PH#, or Dekfast DF-#15-PH3	Dekfast PLT-R-3	Plywood or OSB	Any	OMG Heavy Duty, OMG CD-10, or Trufast #14 HD Fastener	Trufast 3" Metal Insulation Plates	Concrete	Kingspan ISO GF, DensDeck Prime, DEXcell FA, or SECUROCK	Kingspan #12 Fastener or Kingspan #15 Fastener	Trufast 3" Metal Insulation Plates	Steel	Kingspan ISO GF, DensDeck Prime, DEXcell FA, or SECUROCK	Kingspan #12 Fastener, OMG Heavy Duty or Kingspan #15 Fastener	Trufast 3" Metal Insulation Plates	Plywood or OSB	Any	Trufast #12 DP Fastener, Trufast #14 HD Fastener, or Trufast #15 EHD Fastener	Trufast 3" Metal Insulation Plates	Steel or OSB	Any	Trufast #12 DP Fastener or Trufast #15 EHD Fastener	Trufast 3" Metal Insulation Plates	Plywood
	Board or Base Sheet	Fastener	Plate	Roof Deck																																													
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	Any	Kingspan #12 Fastener, Trufast #12 DP Fastener, Trufast #14 HD Fastener, Kingspan #15 Fastener, Dekfast DP-#15-PH3, or Trufast #15 EHD Fastener	Kingspan Square Insulation Plate or OMG 3" Round Metal Plate	Steel																																													
	Any	Kingspan #12 Fastener, Trufast #12 DP Fastener, Dekfast DF-#12-PH3, OMG Heavy Duty, Dekfast DF-#14-PH3, Kingspan #15 Fastener, Dekfast DF-#15-PH3, or Trufast #15 EHD Fastener	Kingspan Square Insulation Plate or OMG 3" Round Metal Plate	Plywood or OSB																																													
	Any	Dekfast DF-#14-PH3	Dekfast PLT-R-3	Concrete																																													
	Any	Dekfast DF-#12-PH3 or Dekfast DP-#15-PH3	Dekfast PLT-R-3	Steel																																													
	Any	Dekfast DF-#12-PH3, Dekfast DF-#14-PH#, or Dekfast DF-#15-PH3	Dekfast PLT-R-3	Plywood or OSB																																													
	Any	OMG Heavy Duty, OMG CD-10, or Trufast #14 HD Fastener	Trufast 3" Metal Insulation Plates	Concrete																																													
	Kingspan ISO GF, DensDeck Prime, DEXcell FA, or SECUROCK	Kingspan #12 Fastener or Kingspan #15 Fastener	Trufast 3" Metal Insulation Plates	Steel																																													
	Kingspan ISO GF, DensDeck Prime, DEXcell FA, or SECUROCK	Kingspan #12 Fastener, OMG Heavy Duty or Kingspan #15 Fastener	Trufast 3" Metal Insulation Plates	Plywood or OSB																																													
Any	Trufast #12 DP Fastener, Trufast #14 HD Fastener, or Trufast #15 EHD Fastener	Trufast 3" Metal Insulation Plates	Steel or OSB																																														
Any	Trufast #12 DP Fastener or Trufast #15 EHD Fastener	Trufast 3" Metal Insulation Plates	Plywood																																														
HA	ASTM D 312 Type IV asphalt																																																

APPENDIX B – NOMENCLATURE

Name	Definition
<i>InductionPlates</i>	Any one of the following fastener and plate combinations: 1) Kingspan #15 Fasteners (<i>Steel</i> or <i>Wood Deck</i>), Trufast #15 EHD Fasteners (<i>Steel Deck</i>), or OMG Heavy Duty (<i>Concrete Deck</i>) and Kingspan TPO Induction Welding Plates 2) Trufast #15 EHD Fasteners (<i>Steel Deck</i>), Trufast #14 HD Fasteners (<i>Concrete Deck</i>), or Trufast Fluted Concrete Nails (<i>Concrete Deck</i>) and Trufast TPO IW Plates 3) Kingspan #15 Fasteners (<i>Steel</i> or <i>Wood Deck</i>), OMG Heavy Duty (<i>Concrete Deck</i>), Dekfast DF-#14-PH3 (<i>Concrete Deck</i>) and <i>isoweld</i> FI-P-6.8-TPO plates
<i>INSULATION</i>	One of more layers in any combination of the following products: DensDeck Kingspan ISO HD CG ROXUL MONOBOARD Tapered (unfaced) DensDeck Prime SECUROCK Glass-Mat Roof Board TOPROCK DD (Unfaced) DEXcell Glass Mat Roof Board SECUROCK Gypsum-Fiber Roof Board TOPROCK DD Tapered (Unfaced) DEXcell FA Glass Mat Roof Board SECUROCK Cement Roof Board HARDROCK (DD) Multifix DEXcell Cement Board EPS Kingspan ISO GF MULTIFIX Kingspan ISO CG ROXUL MONOBOARD (Unfaced)
<i>ISOWELD-#15</i>	isoweld FI-P-6.8-TPO plates and DEKFAST DF-#15-PH3 Fasteners
<i>ISOWELD-#12</i>	isoweld FI-P-6.8-TPO plates and DEKFAST DF-#12-PH3 Fasteners
<i>IW</i>	Any one of the following fastener and plate combinations: 1) OMG Heavy Duty, Kingspan #15 Fasteners, OMG CD-10, Dekfast DF-#14-PH3, Dekfast DF-#15-PH3, Trufast #14 HD Fasteners, or Trufast #15 EHD Fasteners and Kingspan TPO Induction Welding Plates 2) Trufast #14 HD Fasteners, Trufast #15 EHD Fasteners or Trufast Fluted Concrete Nails and Trufast TPO IW Plates 3) OMG Heavy Duty, Kingspan #15 Fasteners, Dekfast DF-#14-PH3, Dekfast DF-#15-PH3 and <i>isoweld</i> FI-P-6.8-TPO plates
<i>IW #15</i>	Any one of the following fastener and plate combinations: 1) Kingspan #15 Fasteners, OMG CD-10, Dekfast DF-#15-PH3, or Trufast #15 EHD Fasteners and Kingspan TPO Induction Welding Plates 2) Trufast #15 EHD Fasteners or Trufast Fluted Concrete Nails and Trufast TPO IW Plates 3) Kingspan #15 Fasteners or Dekfast DF-#15-PH3 and <i>isoweld</i> FI-P-6.8-TPO plates
<i>Kingspan Fasteners & Trufast Plates</i>	Kingspan #12 Fasteners (<i>Steel Deck</i> and <i>Wood Deck</i>), Trufast #12 DP Fasteners, OMG Heavy Duty (<i>Concrete Deck</i>), or Trufast #14 HD Fasteners and Trufast 3" Metal Insulation Plates
<i>Kingspan Plates</i>	Kingspan Square Insulation Plate or OMG 3" Round Metal Plate
<i>Kingspan Plates (Square)</i>	Kingspan Square Insulation Plate
<i>KLFA</i>	Kingspan Low-Rise Foam Adhesive or Kingspan Low-Rise Foam Adhesive Canister
<i>KLFA(S)</i>	Kingspan Low-Rise Foam Adhesive or Kingspan Low-Rise Foam Adhesive Canister applied in spatter application at a rate of 3.5-3.9 lbs/100ft ²
<i>KLFA(B)</i>	Kingspan Low-Rise Foam Adhesive or Kingspan Low-Rise Foam Adhesive Canister applied in ribbons spaced a maximum 12-inch o.c.
<i>KS</i>	Kingspan #12 Fasteners (<i>Steel Deck</i> or <i>Wood Deck</i>), OMG Heavy Duty (<i>Concrete Deck</i> , <i>Steel Deck</i> , or <i>Wood Deck</i>), or Kingspan #15 Fasteners (<i>Wood Deck</i> or <i>Steel Deck</i>) with Kingspan Square Insulation Plate or OMG 3" Round Metal Plate
<i>KS (Square)</i>	Kingspan #12 Fasteners (<i>Steel Deck</i> or <i>Wood Deck</i>), OMG Heavy Duty (<i>Concrete Deck</i> , <i>Steel Deck</i> , or <i>Wood Deck</i>), or Kingspan #15 Fasteners (<i>Wood Deck</i> or <i>Steel Deck</i>) with Kingspan Square Insulation Plate
<i>LSBA</i>	Kingspan LVOC Sprayable Bonding Adhesive
<i>LVOC</i>	Kingspan TPO Membrane Bonding Adhesive LVOC
<i>LWIC</i>	Poured-in-place Cellular Lightweight Insulating Concrete with encapsulated insulation board
<i>MBA</i>	Kingspan TPO Membrane Bonding Adhesive
<i>MCRF</i>	Minimum Characteristic Resistance Force as determined by TAS 105 for the named fastener in the selected assembly
<i>MDP</i>	Maximum Design Pressure

APPENDIX B – NOMENCLATURE

Name	Definition
<i>OMG Fasteners & Plates</i>	OMG XHD fasteners and 3 in. Ribbed Galvalume Plates (Flat)
<i>OSFA</i>	Millennium One Step Foamable Adhesive
<i>PG1</i>	Millennium PG-1 Pump Grade Adhesive
<i>PG1(B)</i>	Millennium PG-1 Pump Grade Adhesive applied in ribbons spaced a maximum 12-inch o.c.
<i>PG1(H)</i>	Millennium PG-1 Pump Grade Adhesive applied in heavy spatter
<i>PG1(S)</i>	Millennium PG-1 Pump Grade Adhesive applied in spatter or regular spatter when used to adhere insulation or cover boards
<i>PLT-R-3</i>	Dekfast PLT-R-3 plates
<i>Preliminarily Secured</i>	Fastened at minimum rate of 5 per 4 ft x 8 ft board or 4 per 4 ft x 4 ft board
<i>ProFast</i>	DensDeck ProFast Prime Roof Board
<i>ISO HD</i>	Kingspan ISO HD CG
<i>Recover</i>	Where assemblies are used to recover an existing roof, the existing roof shall consist of only one layer of roofing, i.e. recovering a previously recovered roof is not permitted. Recover roofing shall be conducted in compliance with FBC Section 1511. For mechanically fastened roof assemblies and induction welded assemblies, i.e. systems x-M-# and x-W-#, the insulation layer is optional, or any INSULATION board or slip sheet may be used as separation layer prior to installing the approved roof assembly.
<i>RS Nails & Tin Tags</i>	Min. 0.120-inch x 1.25-inch galvanized ring shank roofing nails and min. 32ga. x 1-5/8-inch diameter galvanized steel tin tags
<i>SA</i>	Self-adhered
<i>SECUROCK</i>	Min. 1/4-inch JM SECUROCK Gypsum-Fiber Roof Board
<i>StormX</i>	DensDeck StormX Prime
<i>TF</i>	Trufast #12 DP Fastener (<i>Steel Deck</i> or <i>Wood Deck</i>), Trufast #14 HD Fastener (<i>Concrete Deck</i> , <i>Steel Deck</i> , or <i>Wood Deck</i>), or Trufast #15 EHD Fasteners (<i>Concrete Deck</i> , <i>Steel Deck</i> or <i>Wood Deck</i>) with Trufast 3" Metal Insulation Plate
<i>TPO</i>	One ply of any one of the following products: Kingspan TPO 045, Kingspan TPO 060, or Kingspan TPO 080
<i>TPO Bonding Adhesives</i>	Any one of the following products: -Kingspan TPO Membrane Bonding Adhesive -Kingspan TPO Membrane Bonding Adhesive LVOC -Kingspan TPO Water Based Membrane Adhesive
<i>TPO FB</i>	One ply of any one of the following products: -Kingspan TPO FB 115 – not for use in hot asphalt applications -Kingspan TPO FB 135 – not for use in hot asphalt applications -Kingspan TPO FB 150 – only for use in hot asphalt applications and <i>PG1(S)</i>
<i>TPO SA</i>	One ply of any one of the following products: Kingspan TPO - SA
<i>Trufast Seam Plates</i>	Trufast 2.4" Scoop Seam Plates and Trufast #15 EHD Fasteners
<i>Trufast IW Plates</i>	Trufast TPO IW Plates and Trufast #15 EHD Fasteners (steel deck only), Trufast #14 HD Fasteners (concrete deck only), or Trufast Fluted Concrete Nails (concrete deck only)
<i>Vapor Barrier</i>	One of the following vapor barriers installed over the deck: -4mil or 6mil Polyethylene, loose laid -Kingspan Vapor Barrier SAR, self-adhered to minimum 0.5-inch thick SECUROCK Gypsum-Fiber Roof Board, DEXcell FA Glass Mat Roof Board, DEXcell Cement Roof Board, or DensDeck Prime Roof Board. The thermal barrier may be primed with Kingspan LVOC Sprayable Bonding Adhesive

APPENDIX B – NOMENCLATURE

Name	Definition				
VB-Concrete	One of the following options may be utilized as allowed by the <i>Approved Assembly</i> . The vapor barrier shall be installed over the concrete deck prior to installation of the roof system components. The <i>MDP</i> shall be limited to the lesser of rating of the <i>Approved Assembly</i> and the <i>MDP</i> for the chosen vapor barrier.				
	Primer	Vapor Barrier	VB Application	Insulation Adhesive	MDP (psf)
	None	DynaBase HW	Torch adhered	OSFA 12-inch o.c.	-172.5
	None	DynaBase HW	Torch adhered	KLFA 12-inch o.c.	-135
	None	DynaBase HW	Torch adhered	PG1 12-inch o.c.	-195
	ASTM D 41	DynaBase HW	Torch adhered	PG1 12 inch o.c.	- 375
	ASTM D 41	DynaBase HW	Torch adhered	HA	-157.5
	None	DynaWeld Cap	Torch adhered	KLFA 12-inch o.c.	-375
	None	DynaWeld Cap	Torch adhered	PG1 12-inch o.c.	-247.5
	ASTM D 41	DynaGrip Base SD/SA	Self-adhered	OSFA 12-inch o.c.	-90
	ASTM D 41	DynaGrip Base SD/SA	Self-adhered	KLFA 12-inch o.c.	-97.5
	ASTM D 41	DynaGrip Base SD/SA	Self-adhered	PG1 12-inch o.c.	-82.5
	ASTM D 41	DynaGrip Base PR SD/SA	Self-adhered	PG1 12-inch o.c.	-202.5
	ASTM D 41	DynaGrip Base PR SD/SA	Self-adhered	KLFA 12-inch o.c.	-262.5
	None	DynaLastic 180 S, DynaLastic 250 S, DynaFast 180 S, or DynaBase PR; Laps sealed with DynaSet 1k	DynaSet 1k 12-inch o.c.	OSFA, KLFA, or PG1 12-inch o.c.	-232.5
	None	DynaLastic 180 S, DynaLastic 250 S, DynaFast 180 S, or DynaBase PR; Laps sealed with DynaSet 1k	DynaSet 1k 12-inch o.c.	HA	-337.5
	None	DynaLastic 180, DynaLastic 180 FR, DynaLastic 250, DynaLastic 250 FR, DynaMax, or DynaMax FR; Laps sealed with DynaSet 1k	DynaSet 1k 12-inch o.c.	OSFA, KLFA, or PG1 12-inch o.c.	-232.5
	None	DynaLastic 180 S, DynaLastic 250 S, DynaFast 180 S, or DynaBase PR; Laps sealed with DynaSet 2k	DynaSet 2k 12-inch o.c.	OSFA, KLFA, or PG1 12-inch o.c.	-97.5
	None	DynaLastic 180 S, DynaLastic 250 S, DynaFast 180 S, or DynaBase PR; Laps sealed with DynaSet 2k	DynaSet 2k 12-inch o.c.	HA	-75
	None	DynaBase PR; Laps sealed with DynaSet 1k	DynaSet1k applied at 50-70ft ² /gal	PG1 12-inch o.c.	-300
	ASTM D 41	DynaWeld Base	Torch adhered	OSFA 12-inch o.c.	-150
	ASTM D 41	DynaWeld Base	Torch adhered	KLFA 12-inch o.c.	-120
	ASTM D 41	DynaWeld Base	Torch adhered	PG1 12-inch o.c.	-285
	JM SA Primer Low VOC or SA Primer	JM Vapor Barrier SA or SAR	Self-adhered	OSFA or PG1 12-inch o.c.	-135
	JM SA Primer Low VOC or SA Primer	JM Vapor Barrier SA	Self-adhered	KLFA 12-inch o.c.	-82.5
	JM SA Primer Low VOC	Kingspan Vapor Barrier SAR	Self-adhered	KLFA 12-inch o.c.	-175

APPENDIX B – NOMENCLATURE

Name	Definition						
VB-CWF	One of the following options may be utilized as allowed by the <i>Approved Assembly</i> . The <i>MDP</i> shall be limited to the lesser of rating of the <i>Approved Assembly</i> and the <i>MDP</i> for the chosen vapor barrier.						
	Thermal Barrier	TB Adhesive	Primer	Vapor Barrier	VB Application	Insulation Adhesive	MDP (psf)
	SECUROCK	PG1 12-inch o.c.	ASTM D 41	DynaWeld Cap	Torch adhered	PG1 12-inch o.c.	-250
VB-LWIC	One of the following options may be utilized as allowed by the <i>Approved Assembly</i> . The vapor barrier shall be installed over the concrete deck prior to placement of the <i>LWIC</i> . The <i>MDP</i> shall be limited to the lesser of rating of the <i>Approved Assembly</i> and the <i>MDP</i> for the chosen vapor barrier. The compressive strength for the <i>LWIC</i> shall be taken as the higher of the vapor barrier requirements below and the <i>Approved Assemblies</i> .						
	Primer	Vapor Barrier		VB Application	LWIC		MDP (psf)
	ASTM D 41	DynaBase HW		Torch adhered	Min. 310 psi <i>Celcore MF</i>		-240
	ASTM D 41	DynaWeld 180 S		Torch adhered	Min. 300 psi <i>Celcore MF</i>		-202.5
	ASTM D 41	DynaWeld Cap 180 FR treated with <i>Celcore S-1</i>		Torch adhered	Min. 300 psi <i>Celcore MF</i>		-305
	None	DynaWeld Base		Torch adhered	Min. 300 psi <i>Celcore MF</i>		-482.5
	None	DynaWeld Cap FR		Torch adhered	Min. 300 psi <i>Celcore MF</i>		-425
	None	DynaWeld Cap FR treated with <i>Celcore S-1</i>		Torch adhered	Min. 300 psi <i>Celcore MF</i>		-382.5
VB-Steel	One of the following options may be utilized as allowed by the <i>Approved Assembly</i> . The vapor barrier shall be installed over the deck prior to installation of the roof system components. The <i>MDP</i> shall be limited to the lesser of rating of the <i>Approved Assembly</i> and the <i>MDP</i> for the chosen vapor barrier.						
	Thermal Barrier	TB Adhesive	Primer	Vapor Barrier	VB Application	Insulation Adhesive	MDP (psf)
	None	None	None	JM Vapor Barrier SA	Self-adhered	KLFA, OSFA, or PG1 12-inch o.c.	-45
	None	None	JM SA Primer Low VOC	Kingspan Vapor Barrier SAR	Self-adhered	KLFA, OSFA, or PG1 12-inch o.c.	-52.5
VERSA-FAST	Trufast VERSA-FAST Plates and VERSA-FAST Fasteners						
WBMA	Kingspan TPO Water Based Membrane Adhesive. When using the one-sided application at a rate of 0.4-0.5 gal/100ft ² , the <i>MDP</i> shall be limited to the lesser of <i>Approved Assembly</i> and the <i>MDP</i> below. One or two-sided application at a combined rate of 0.6-0.8 gal/100ft ² shall be the <i>MDP</i> of the <i>Approved Assembly</i> .						
	Assembly System Type		Substrate				MDP (psf)
	C-A-#, CW-A-#, G-A-#, LC-A-#, R-A-#		Kingspan ISO GF				-165
			Kingspan ISO CG				-142.5
			ISO HD				-187.5
			DensDeck Prime				232.5
			SECUROCK, DEXcell FA, DEXcell CB				-180
	C-AM-#, CW-AM-#, G-AM-#, LC-AM-#, LS-A-#, LS-AM-#, S-A-#, S-AM-#, W-A-#, W-AM-#		Kingspan ISO GF, DEXcell CB				-60
Kingspan ISO CG, ISO HD, DensDeck Prime, SECUROCK, DEXcell FA				-105			

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES**APPROVED ASSEMBLIES FOR KINGSPAN TPO SINGLE-PLY MEMBRANES**

The following notes shall be observed when using the assembly tables below.

1. Allowable pressures were calculated using a 2:1 margin of safety per FBC Section 1504.9.
2. Refer to [LIMITATIONS](#) and [NOMENCLATURE](#) sections of this evaluation when using the table(s) below. Items *italicized* refer to specific nomenclature used in this report.
3. Refer to [INSTALLATION](#) section of this report for installation detail when the information is not explicitly stated for the selected assembly.
4. The on-center (o.c.) spacing given is the maximum allowable attachment spacing for the rated system.
5. Prior to application of the approved assembly an optional vapor barrier may be installed over concrete, steel, or wood decks when the approved assembly contains insulation or the membrane fastened through to the deck.
6. Kingspan ISO GF or Kingspan ISO CGF base insulation attached by ribbon applied adhesives, may be installed in one or more layers.
7. Steel deck utilized in all Lightweight Insulating Concrete and S-A-# systems shall be ASTM A653, G90 galvanized steel.
8. For systems C-AM-#, C-M-#, C-W-#, S-AM-#, S-M-#, and S-W-# it is permissible to install over minimum 200psi, minimum 2-inch FBC approved lightweight insulating concrete applied over the concrete or steel deck. Alternately, for systems C-AM-#, C-M-#, S-AM-#, and S-M-#, it is permissible to substitute loose fill insulation (insulation that is part of the load path) with minimum 200psi, minimum 2-inch FBC approved lightweight insulating concrete applied over the concrete or steel deck. Fasteners shall be installed through the lightweight insulating concrete anchoring into the structural deck.
9. As noted in the assembly tables below, prior to adhering the membrane, TruGround Conductive Primer may be applied to the following board substrates when using the following membrane adhesives up to a *MDP* less than or equal to **-285psf**.
 - a. Kingspan LVOC Sprayable Bonding Adhesive – Kingspan ISO GF, Kingspan ISO CG, Kingspan ISO HD CG, DEXcell FA Glass Mat Roof Board, or DensDeck Prime Roof Board
 - b. Kingspan TPO Membrane Bonding Adhesive LVOC – Kingspan ISO GF, Kingspan ISO CG, Kingspan ISO HD CG, DEXcell FA Glass Mat Roof Board, or DensDeck Prime Roof Board
 - c. Kingspan TPO Membrane Bonding Adhesive– Kingspan ISO GF, Kingspan ISO HD CG, DEXcell FA Glass Mat Roof Board, or DensDeck Prime Roof Board
10. As noted in the assembly tables below, prior to adhering the membrane, TruGround Conductive Primer may be applied up to the to the *MDP* shown for the substrate and adhesive combinations given below.
 - a. **-37.5psf MDP** or less with Kingspan LVOC Sprayable Bonding Adhesive applied to Kingspan ISO GF, Kingspan ISO CG, Kingspan ISO HD CG, DEXcell FA Glass Mat Roof Board, or DensDeck Prime Roof Board
 - b. **-37.5psf MDP** or less with Kingspan TPO Membrane Bonding Adhesive LVOC applied to Kingspan ISO GF, Kingspan ISO CG, Kingspan ISO HD CG, DEXcell FA Glass Mat Roof Board, or DensDeck Prime Roof Board
 - c. **-127.5psf MDP** or less with Kingspan TPO Membrane Bonding Adhesive applied to Kingspan ISO GF, Kingspan ISO HD CG, DEXcell FA Glass Mat Roof Board, or DensDeck Prime Roof Board
11. Reserved.
12. As noted in the tables below, TruGround Conductive Primer may optionally applied to the board surface, existing roof, or deck surface prior to mechanically attaching the membrane.
13. The condition of the existing roof and roof deck is out of scope of this evaluation report. The compatibility of the recover assembly adhesive to the existing substrate shall be examined by others.

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Assembly System Numbers and Definitions	
C-A-#	Adhered Assemblies over <i>Concrete Deck</i> (New or Existing)
C-AM-#	Assemblies with Adhered Membranes over Insulated <i>Concrete Deck</i> (New, Existing, or <i>Recover</i>)
C-M-#	Mechanically Fastened Assemblies over <i>Concrete Deck</i>
C-W-#	Induction Welded Assemblies over <i>Concrete Deck</i>
CW-A-#	Adhered Assemblies over Cementitious Wood Fiber Decks (New or Existing)
CW-AM-#	Assemblies with Adhered Membranes over Cementitious Wood Fiber Decks (New or Existing)
G-A-#	Assemblies with All Layers Adhered over Gypsum Deck (Existing only)
G-AM-#	Assemblies with Adhered Membranes over Insulated Gypsum Deck (New or Existing)
LC-A-#	Adhered Lightweight Insulating Concrete Assemblies over <i>Concrete Deck</i> (New or Existing)
LC-AM-#	Lightweight Insulating Concrete Assemblies with Adhered Membranes over <i>Concrete Deck</i> (New or Existing)
LC-M-#	Mechanically Fastened Lightweight Insulating Concrete Assemblies over <i>Concrete Deck</i> (New, Existing, or <i>Recover</i>)
LC-W-#	Induction Welded Lightweight Insulating Concrete Assemblies over <i>Concrete Deck</i> (New, Existing, or <i>Recover</i>)
LS-A-#	Adhered Lightweight Insulating Concrete Assemblies over <i>Steel Deck</i> (New or Existing)
LS-AM-#	Lightweight Insulating Concrete Assemblies with Adhered Membranes over <i>Steel Deck</i> (New or Existing)
LS-M-#	Mechanically Fastened Lightweight Insulating Concrete Assemblies over <i>Steel Deck</i> (New, Existing, or <i>Recover</i>)
LS-W-#	Induction Welded Lightweight Insulating Concrete Assemblies over <i>Steel Deck</i> (New, Existing, or <i>Recover</i>)
R-A-#	Adhered <i>Recover</i> Assemblies
R-M-#	Mechanically Fastened <i>Recover</i> Assemblies
R-W-#	Induction Welded <i>Recover</i> Assemblies
S-A-#	Adhered Assemblies over <i>Steel Deck</i> (New or Existing)
S-AM-#	Assemblies with Adhered Membranes over Insulated <i>Steel Deck</i> (New, Existing, or <i>Recover</i>)
S-M-#	Mechanically Fastened Assemblies over <i>Steel Deck</i> (New, Existing or <i>Recover</i>)
S-W-#	Induction Welded Assemblies over <i>Steel Deck</i>
W-A-#	Adhered Assemblies over <i>Wood Deck</i> (New or Existing)
W-AM-#	Assemblies with Adhered Membranes over Insulated <i>Wood Deck</i> (New, Existing, or <i>Recover</i>)
W-M-#	Mechanically Fastened Assemblies over <i>Wood Deck</i> (New, Existing, or <i>Recover</i>)
W-W-#	Induction Welded Assemblies over <i>Wood Deck</i> (New, Existing, or <i>Recover</i>)

Adhered Assemblies over Concrete Deck (New or Existing)							
System No.	Vapor Barrier	Base Insulation (Note 6)	Top Insulation or Base Ply	Membrane and Attachment (Note 9)			MDP (psf)
				TPO	TPO FB	TPO SA	
C-A-1	OPTIONAL VB-Concrete	Min. 0.5-inch Kingspan ISO GF in PG1, OSFA or KLFA applied 12-inch o.c.; or PG1(S)	<i>DensDeck Prime</i> or StormX in PG1 applied 12-inch o.c. ; or PG1(S)	-	PG1(B)	-	-45 (Lim. 9)
C-A-2	OPTIONAL VB-Concrete	Min. 0.5-inch ISO in PG1 or KLFA applied 12-inch o.c.; or PG1(S)	OPTIONAL <i>SECUROCK</i> in PG1 or KLFA applied 12-inch o.c.; or PG1(S)	-	PG1(B) or KLFA(S)	--	-67.5 (Lim. 9)
C-A-3	OPTIONAL VB-Concrete	Min. 0.5-inch ISO in PG1 or KLFA applied 12-inch o.c.; or PG1(S)	OPTIONAL <i>SECUROCK</i> or <i>ISO HD</i> in PG1 or KLFA applied 12-inch o.c.; or PG1(S)	-	-	SA	-67.5 (Lim. 9)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Adhered Assemblies over Concrete Deck (New or Existing)							
System No.	Vapor Barrier	Base Insulation (Note 6)	Top Insulation or Base Ply	Membrane and Attachment (Note 9)			MDP (psf)
				TPO	TPO FB	TPO SA	
C-A-4	OPTIONAL VB-Concrete	Min. 0.5-inch Kingspan ISO GF in OSFA or KLFA applied 12-inch o.c.	OPTIONAL ISO HD in KLFA applied 12-inch o.c.	MBA, WBMA, or LSBA	-	-	-105 (Lim. 9)
C-A-5	OPTIONAL VB-Concrete	Min. 0.5-inch Kingspan ISO GF in OSFA or KLFA applied 12-inch o.c.	OPTIONAL ISO HD in KLFA applied 12-inch o.c.	-	-	SA	-105 (Lim. 9)
C-A-6	OPTIONAL VB-Concrete	Min. 0.5-inch ISO in OSFA, PG1 or KLFA applied 12-inch o.c.; or PG1(S)	-	-	-	SA	-105 (Lim. 9)
C-A-7	OPTIONAL VB-Concrete	Min. 0.5-inch ISO in OSFA, PG1 or KLFA applied 12-inch o.c.; or PG1(S)	-	-	PG1 applied 4-inch o.c.; PG1(S) or KLFA(S)	-	-112.5 (Lim. 9)
C-A-8	OPTIONAL VB-Concrete	Min. 0.5-inch Kingspan ISO GF in PG1 or KLFA applied 12-inch o.c.; or PG1(S)	DensDeck Prime or StormX in PG1 applied 12-inch o.c.; or PG1(S)	-	PG1 applied 4-inch o.c. or PG1(S)	-	-135 (Lim. 9)
C-A-9	OPTIONAL VB-Concrete	Min. 0.5-inch Kingspan ISO CG in KLFA applied 12-inch o.c.; or PG1(S)	-	WBMA, LSBA, or MBA	-	-	-142.5 (Lim. 9)
C-A-10	OPTIONAL VB-Concrete	Min. 0.5-inch Kingspan ISO GF in OSFA, PG1 or KLFA; applied 12-inch o.c.; or PG1(S)	-	LSBA or MBA	-	-	-157.5 (Lim. 9)
C-A-11	OPTIONAL VB-Concrete	Min. 0.5-inch Kingspan ISO GF applied in KLFA at 12-inch o.c.	-	WBMA or LSBA	-	-	-165 (Lim. 9)
C-A-12	OPTIONAL VB-Concrete	Min. 0.5-inch ISO in KLFA applied 12-inch o.c.	-	LVOC	-	-	-172.5 (Lim. 9)
C-A-13	OPTIONAL VB-Concrete	OPTIONAL Min. 0.5-inch ISO in KLFA applied 12-inch o.c.	SECUROCK in KLFA applied 12-inch o.c.	WBMA, LSBA, 1168 or MBA	-	-	-180 (Lim. 9)
C-A-14	OPTIONAL VB-Concrete	OPTIONAL Min. 0.5-inch ISO in KLFA applied 12-inch o.c.	DEXcell CB or DEXcell FA in KLFA applied 12-inch o.c.	WBMA or LSBA	-	-	-180 (Lim. 9)
C-A-15	OPTIONAL VB-Concrete	Min. 0.5-inch Kingspan ISO GF in OSFA, PG1 or KLFA; applied 12-inch o.c.; or PG1(S)	ISO HD in OSFA, PG1 or KLFA applied 12-inch o.c.; or PG1(S)	WBMA, LSBA, or MBA	-	-	-187.5 (Lim. 9)
C-A-16	OPTIONAL VB-Concrete	Min. 0.5-inch ISO in KLFA applied 12-inch o.c.	-	-	WBMA	-	-187.5 (Lim. 9)
C-A-17	OPTIONAL VB-Concrete	Min. 0.5-inch ISO in KLFA applied 12-inch o.c.	-	WBMA or LSBA	-	-	-195 (Lim. 9)
C-A-18	DynaWeld Base over deck primed with ASTM D 41 primer	Min. 0.5-inch ISO in KLFA, PG1, or OSFA applied 12-inch o.c.	DensDeck Prime in KLFA, OSFA or PG1 applied 12-inch o.c.	-	KLFA(S)	-	-195 (Lim. 9)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Adhered Assemblies over Concrete Deck (New or Existing)							
System No.	Vapor Barrier	Base Insulation (Note 6)	Top Insulation or Base Ply	Membrane and Attachment (Note 9)			MDP (psf)
				TPO	TPO FB	TPO SA	
C-A-19	OPTIONAL VB-Concrete	Min. 0.5-inch Kingspan ISO GF, in OSFA or PG1 applied 12-inch o.c.; or PG1(S)	ISO HD in OSFA or PG1 applied 12-inch o.c.; or PG1(S)	LVOC or MBA	KLFA(S)	SA	-210 (Lim. 9)
C-A-20	OPTIONAL VB-Concrete	Min. 0.5-inch Kingspan ISO GF in OSFA, PG1 or KLFA; applied 12-inch o.c.; or PG1(S)	DEXcell FA in OSFA or PG1; applied 12-inch o.c.; or PG1(S)	LSBA or WBMA	WBMA	-	-217.5 (Lim. 9)
C-A-21	OPTIONAL VB-Concrete	Min. 0.5-inch Kingspan ISO GF in PG1, OSFA or KLFA applied 12-inch o.c.; or PG1(S)	DensDeck Prime or StormX in PG1 applied 12-inch o.c.; or PG1(S)	-	PG1 applied 4-inch o.c. or PG1(S)	-	-217.5 (Lim. 9)
C-A-22	OPTIONAL VB-Concrete	Min. 0.5-inch Kingspan ISO GF in OSFA, PG1 or KLFA; applied 12-inch o.c.; or PG1(S)	ISO HD in OSFA, PG1 or KLFA; applied 12-inch o.c.; or PG1(S)	LSBA, MBA, or WBMA	WBMA	-	-225 (Lim. 9)
C-A-23	OPTIONAL VB-Concrete	Min. 0.5-inch Kingspan ISO GF in OSFA, PG1 or KLFA; applied 12-inch o.c.; or PG1(S)	DensDeck Prime in OSFA, PG1 or KLFA applied 12-inch o.c.; or PG1(S)	WBMA, 1168 or LSBA	WBMA	-	-232.5 (Lim. 9)
C-A-24	OPTIONAL VB-Concrete	-	SECUROCK in KLFA, OSFA, or PG1 applied 12-inch o.c.; or PG1(S)	WBMA	WBMA	SA	-247.5 (Lim. 9)
C-A-25	DynaWeld Cap over deck primed with ASTM D 41 primer	Min. 0.5-inch ISO in KLFA, PG1, or OSFA applied 12-inch o.c.	DensDeck Prime in KLFA, OSFA or PG1 applied 12-inch o.c.	WBMA	KLFA(S) or WBMA	-	-247.5 (Lim. 9)
C-A-26	OPTIONAL VB-Concrete	Min. 0.5-inch Kingspan ISO CG applied in PG1 or KLFA 12-inch o.c.; or PG1(S)	-	-	WBMA	-	-262.5 (Lim 9)
C-A-27	OPTIONAL VB-Concrete	OPTIONAL Min. 0.5-inch ISO applied in PG1 or KLFA 12-inch o.c.; or PG1(S)	ISO HD, DensDeck Prime or SECUROCK applied in PG1 or KLFA 12-inch o.c.; or PG1(S)	WBMA	WBMA	-	-262.5 (Lim 9)
C-A-28	OPTIONAL VB-Concrete	Min. 0.5-inch ISO applied in PG1 or KLFA 12-inch o.c.; or PG1(S)	-	LSBA or WBMA	WBMA	-	-277.5 (Lim 9)
C-A-29	OPTIONAL VB-Concrete	OPTIONAL Min. 0.5-inch ISO applied in PG1 or KLFA 12-inch o.c.; or PG1(S)	ISO HD, DensDeck Prime or SECUROCK applied in PG1 or KLFA 12-inch o.c.; or PG1(S)	LSBA, LVOC, MBA, or WBMA	KLFA(S) or WBMA	SA	-277.5 (Lim 9)
C-A-30	OPTIONAL VB-Concrete	OPTIONAL Min. 0.5-inch ISO applied in PG1 or KLFA 12-inch o.c.; or PG1(S)	DensDeck Prime or SECUROCK applied in PG1 or KLFA 12-inch o.c.; or PG1(S)	-	HA	-	-277.5 (Lim 9)
C-A-31	OPTIONAL VB-Concrete	Min. 0.5-inch ISO in PG1 or KLFA applied 12-inch o.c.; or PG1(S)	-	LVOC or WBMA	-	-	-315 (Lim. 9)
C-A-32	-	Min. 0.5-inch ISO in KLFA applied 12-inch o.c.	-	MBA	KLFA(S) or WBMA	-	-322.5 (Lim. 9)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Adhered Assemblies over Concrete Deck (New or Existing)							
System No.	Vapor Barrier	Base Insulation (Note 6)	Top Insulation or Base Ply	Membrane and Attachment (Note 9)			MDP (psf)
				TPO	TPO FB	TPO SA	
C-A-33	OPTIONAL VB-Concrete	Min. 0.5-inch Kingspan ISO GF in PG1 or KLFA applied 12-inch o.c.; or PG1(S))	-	MBA or WBMA	KLFA(S) or WBMA	-	-322.5 (Lim. 9)
C-A-34	OPTIONAL VB-Concrete	-	SECUROCK or DensDeck Prime in PG1 or KLFA applied 12-inch o.c.; or PG1(S)	LVOC, MBA, or WBMA	KLFA(S), HA, or WBMA	-	-322.5 (Lim. 9)
C-A-35	OPTIONAL VB-Concrete	-	ISO HD in PG1 or KLFA applied 12-inch o.c.; or PG1(S)	LVOC, MBA, or WBMA	KLFA(S) or WBMA	-	-322.5 (Lim. 9)
C-A-36	-	-	DEXcell CB in KLFA or OlyBond 500 applied 12-inch o.c.	-	WBMA	-	-322.5 (Lim. 9)
C-A-37	OPTIONAL DynaGrip SD/SA over deck primed with ASTM D 41 primer	Min. 1-inch ISO in KLFA, PG1, or OSFA applied 12-inch o.c.	DensDeck Prime in KLFA, OSFA or PG1 applied 12-inch o.c.	LVOC, MBA, or WBMA	KLFA(S) or WBMA	-	-337.5 (Lim. 9)
C-A-38	OPTIONAL DynaGrip SD/SA over deck primed with ASTM D 41 primer	Min. 0.5-inch ISO in KLFA or PG1 applied 12-inch o.c.	DensDeck Prime in KLFA or PG1 applied 12-inch o.c.	LVOC, MBA, or WBMA	KLFA(S) or WBMA	-	-337.5 (Lim. 9)
C-A-39	-	-	SECUROCK in KLFA, OSFA or PG1 applied 12-inch o.c.; or PG1(S)	-	WBMA or KLFA(S)	-	-345 (Lim. 9)
C-A-40	-	-	SECUROCK in KLFA, OSFA or PG1 applied 12-inch o.c.; or PG1(S)	LVOC, MBA, or WBMA	-	-	-360 (Lim. 9)
C-A-41	-	Min. 0.5-inch Kingspan ISO GF in KLFA or PG1 applied 8-inch o.c.	-	MBA or WBMA	-	SA	-367.5 (Lim. 9)
C-A-42	-	-	DEXcell CB or DEXcell FA in KLFA or OlyBond 500 applied 12-inch o.c.	LVOC, WBMA, MBA, or 1168 (DEXcell FA only)	-	-	-390 (Lim. 9)
C-A-43	-	-	DEXcell FA in KLFA or OlyBond 500 applied 12-inch o.c.	LSBA or MBA	WBMA, KLFA(S), or HA	SA	-390 (Lim. 9)
C-A-44	-	Min. 0.5-inch Kingspan ISO GF in PG1(S)	-	MBA or WBMA	-	-	-405 (Lim. 9)
C-A-45	-	-	ISO HD in PG1(S)	LVOC, MBA, or WBMA	-	-	-405 (Lim. 9)
C-A-46	-	-	SECUROCK in PG1(S)	LVOC, MBA, or WBMA	KLFA(S)	-	-405 (Lim. 9)
C-A-47	-	-	DensDeck Prime in PG1(S)	LVOC, MBA, or WBMA	KLFA(S)	-	-405 (Lim. 9)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Adhered Assemblies over Concrete Deck (New or Existing)							
System No.	Vapor Barrier	Base Insulation (Note 6)	Top Insulation or Base Ply	Membrane and Attachment (Note 9)			MDP (psf)
				TPO	TPO FB	TPO SA	
C-A-48	-	-	-	-	KLFA(S)	-	-457.5 (Lim. 9)
C-A-49	-	-	SECUROCK in KLFA, OSFA or PG1 applied 12-inch o.c.; or PG1(S)	WBMA	KLFA(S)	-	-465 (Lim. 9)
C-A-50	-	-	SECUROCK in KLFA, OSFA, or PG1 applied 12-inch o.c.; or PG1(S)	MBA	KLFA(S)	-	-495 (Lim. 9)
C-A-51	-	-	DensDeck Prime in KLFA or OSFA or applied 6-inch o.c.	-	KLFA(S)	-	-495 (Lim. 9)
C-A-52	DynaWeld Base torch adhered over deck primed with ASTM D 41 primer	-	-	-	PG1(S) or KLFA(S)	-	-502.5 (Lim. 9)
C-A-53	-	-	-	-	PG1(B) or PG1(S)	-	-502.5 (Lim. 9)
C-A-54	-	-	-	LSBA, LVOC, or MBA	PG1(S), KLFA(S), LSBA or WBMA	-	-502.5 (Lim. 9)
C-A-55	-	-	DensDeck Prime in PG1 applied 6-inch o.c.	-	KLFA(S)	-	-502.5 (Lim. 9)

Assemblies with Adhered Membranes over Insulated Concrete Deck (New, Existing, or Recover)									
System No.	Thermal/ Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Base Sheet	Top Insulation or Base Sheet Attachment	Membrane and Attachment (Note 10)			MDP (psf)
						TPO	TPO FB	TPO SA	
C-AM-1	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	Min. 0.375-inch SECUROCK	Fasteners & Plates secured 1 fastener per 2.67ft ²	MBA or LSBA	PG1(B), WBMA, LSBA or KLFA(S)	-	-45 (Lim. 7)
C-AM-2	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	Fasteners & Plates secured 1 fastener per 4.0ft ²	MBA, LVOC, WBMA, or LSBA	PG1(B), WBMA, LSBA or KLFA(S)	-	-45 (Lim. 7)
C-AM-3	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 1.5-inch Kingspan ISO GF	#14 Fasteners & Plates secured 1 fastener per 2.0ft ²	MBA, WBMA, LSBA or LVOC	-	-	-45 (Lim. 7)
C-AM-4	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 2-inch Kingspan ISO GF	Fasteners & Plates secured 1 fastener per 2.67ft ²	ISO HD	PG1 or KLFA applied 12-inch o.c.	WBMA, MBA, LVOC or LSBA	PG1(B), KLFA(S) or WBMA	SA	-45 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Concrete Deck (New, Existing, or Recover)									
System No.	Thermal/ Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Base Sheet	Top Insulation or Base Sheet Attachment	Membrane and Attachment (Note 10)			MDP (psf)
						TPO	TPO FB	TPO SA	
C-AM-5	OPTIONAL Vapor Barrier	Min. 1.5-inch ISO	Simultaneously secured with top layer	ISO HD	Fasteners & Plates secured 1 fastener per 4ft ²	WBMA, MBA, LVOC or LSBA	PG1(B), KLFA(S) or WBMA:	SA	-45 (Lim. 9)
C-AM-6	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 2-inch Kingspan ISO GF	#14 Fasteners & Plates secured 1 fastener per 4.0ft ²	SECUROCK	OSFA, PG1 or KLFA applied 12-inch o.c.; or PG1(S)	MBA, LVOC, WBMA, or LSBA	WBMA, LSBA, PG1(B), or KLFA(S)	SA	-45 (Lim. 7)
C-AM-7	OPTIONAL Vapor Barrier	Min. 2-inch ISO	#14 Fasteners & Plates secured 1 fastener per 1ft ²	Min. 1.5-inch Kingspan ISO GF	OSFA, PG1 or KLFA applied 4-inch o.c.	-	WBMA or PG1(B)	-	-45 (Lim. 7)
C-AM-8	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ISO	#14 Fasteners & Plates (Square) secured at a rate of 1 fastener per 4.0ft ²	-	PG1(B)	-	-45 (Lim. 7)
C-AM-9	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	SECUROCK	Fasteners & Plates secured 1 fastener per 1.33ft ²	MBA, LVOC, WBMA, or LSBA	WBMA, LSBA, KLFA(S), or HA	SA	-52.5 (Lim. 7)
C-AM-10	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch Kingspan ISO GF	#14 Fasteners & Plates secured 1 fastener per 1.33ft ²	SECUROCK	OSFA, PG1 or KLFA applied 12-inch o.c.; or PG1(S)	MBA, LVOC, WBMA, or LSBA	WBMA, LSBA, PG1(B), PG1(S), KLFA(S), or HA	SA	-52.5 (Lim. 7)
C-AM-11	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min 1.5-inch Kingspan ISO GF	#14 Fasteners & Plates secured at a rate of 1 fastener per 1.45ft ²	ISO HD	PG1 or KLFA applied 12-inch o.c.; or PG1(S)	-	-	SA	-52.5 (Lim. 7)
C-AM-12	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch Kingspan ISO CG	Fasteners & Plates secured 1 fastener per 2.67ft ²	MBA, WBMA or LSBA	PG1(B) or KLFA(S)	SA	-52.5 (Lim. 7)
C-AM-13	OPTIONAL Vapor Barrier	Min. 2-inch Kingspan ISO CG	Fasteners & Plates secured 1 fastener per 2.67ft ²	Min. 1.5-inch Kingspan ISO CG	OSFA, PG1, or KLFA applied 6-inch o.c.	LSBA, WBMA, MBA or LVOC	-	SA	-52.5 (Lim. 7)
C-AM-14	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 1.5-inch Kingspan ISO CG	Fasteners & Plates secured 1 fastener per 1.78ft ²	MBA or WBMA	-	-	-52.5 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Concrete Deck (New, Existing, or Recover)									
System No.	Thermal/ Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Base Sheet	Top Insulation or Base Sheet Attachment	Membrane and Attachment (Note 10)			MDP (psf)
						TPO	TPO FB	TPO SA	
C-AM-15	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 1.5-inch ISO	#14 Fasteners & Plates secured 1 fastener per 1.78ft ²	LVOC or MBA	HA or KLFA(S)	-	-52.5 (Lim. 7)
C-AM-16	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	ISO HD	Fasteners & Plates secured 1 fastener per 1.78ft ²	WBMA, MBA, LVOC, or LSBA	WBMA or KLFA(S)	SA	-52.5 (Lim. 7)
C-AM-17	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	DensDeck Prime	Fasteners & Plates secured 1 fastener per 1.78ft ²	WBMA, MBA, LVOC, LSBA or 1168	HA, PG1(B), WBMA, LSBA or KLFA(S)	SA	-52.5 (Lim. 7)
C-AM-18	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch Kingspan ISO GF	#14 Fasteners & Plates secured at a rate of 1 fastener per 1.78ft ²	Min 0.5-inch SECUROCK	OSFA, PG1 or KLFA applied 12-inch o.c.; or PG1(S)	MBA, LVOC, WBMA, or LSBA	PG1(B), WBMA, LSBA or LFA(S)	SA	-60 (Lim. 7)
C-AM-19	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	SECUROCK	Fasteners & Plates secured 1 fastener per 1.0ft ²	MBA, LVOC, WBMA, or LSBA	PG1(B), WBMA, LSBA or KLFA(S)	SA	-60 (Lim. 7)
C-AM-20	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 1.5-inch ISO or ISO HD Foam	#14 Fasteners & Plates secured 1 fastener per 1.78ft ²	LVOC	-	-	-60 (Lim. 7)
C-AM-21	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 1.5-inch Kingspan ISO CG	Fasteners & Plates secured 1 fastener per 1.78ft ²	-	-	SA	-60 (Lim. 7)
C-AM-22	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 1.5-inch ISO	Fasteners & Plates secured 1 fastener per 1.78ft ²	-	HA	-	-60 (Lim. 7)
C-AM-23	OPTIONAL Vapor Barrier	Min. 1.5-inch Kingspan ISO CG	Fasteners & Plates secured 1 fastener per 1.78ft ²	Min. 1.5-inch Kingspan ISO CG	OSFA, PG1, or KLFA applied 6-inch o.c.	LSBA, WBMA, MBA or LVOC	-	SA	-60 (Lim. 7)
C-AM-24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	ISO HD	Fasteners & Plates secured 1 fastener per 1.78ft ²	MBA, LVOC, or LSBA	KLFA(S)	SA	-60 (Lim. 7)
C-AM-25	OPTIONAL Vapor Barrier	Min. 2-inch ISO	Fasteners & Plates secured 1 fastener per 1.6ft ²	Min. 1.5-inch ISO	OSFA, PG1, or KLFA applied 6-inch o.c.	-	KLFA(S)	-	-60 (Lim. 7)
C-AM-26	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch Kingspan ISO GF	Fasteners & Plates secured 1 fastener per 1.6ft ²	-	PG1(B) or KLFA(S)	-	-60 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Concrete Deck (New, Existing, or Recover)									
System No.	Thermal/ Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Base Sheet	Top Insulation or Base Sheet Attachment	Membrane and Attachment (Note 10)			MDP (psf)
						TPO	TPO FB	TPO SA	
C-AM-27	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	Fasteners & Plates secured 1 fastener per 2.00ft ²	MBA, LVOC, WBMA, or LSBA	WBMA or HA	-	-60 (Lim. 7)
C-AM-28	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Fasteners & Plates secured 1 fastener per 1ft ²	SECUROCK	PG1 or KLFA applied 6-inch o.c.	MBA, LVOC, WBMA, or LSBA	WBMA, PG1(B) or PG1(S)	SA	-67.5 (Lim. 7)
C-AM-29	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch Kingspan ISO CG	Fasteners & Plates secured 1 fastener per 2.0ft ²	MBA, WBMA or LSBA	-	SA	-67.5 (Lim. 7)
C-AM-30	OPTIONAL Vapor Barrier	Min. 2-inch Kingspan ISO CG	Fasteners & Plates secured 1 fastener per 2.0ft ²	Min. 1.5-inch Kingspan ISO CG	OSFA, PG1, or KLFA applied 6-inch o.c.	LSBA, WBMA, MBA or LVOC	-	SA	-67.5 (Lim. 7)
C-AM-31	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch Kingspan ISO GF	Fasteners & Plates secured 1 fastener per 2ft ²	MBA, LVOC, WBMA or LSBA	-	-	-67.5 (Lim. 7)
C-AM-32	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch Kingspan ISO GF	Fasteners & Plates secured 1 fastener per 2ft ²	-	HA	-	-67.5 (Lim. 7)
C-AM-33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch Kingspan ISO CG	Fasteners & Plates secured 1 fastener per 2.0ft ²	WBMA, LSBA, or MBA	-	-	-67.5 (Lim. 7)
C-AM-34	OPTIONAL Vapor Barrier	Min. 2-inch ISO	Fasteners & Plates secured 1 fastener per 1.6ft ²	Min. 0.5-inch ISO HD, DEXcell FA, or SECUROCK	OSFA, PG1, or KLFA applied 6-inch o.c.	-	PG1(B) 6-inch o.c. or PG1(S)	-	-67.5 (Lim. 7)
C-AM-35	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	Min 0.5-inch DensDeck Prime	Fasteners & Plates secured 1 fastener per 1.78ft ²	WBMA, MBA, LVOC, 1168 or LSBA	WBMA, LSBA, KLFA(S), or HA	SA	-67.5 (Lim. 7)
C-AM-36	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Preliminarily Secured or secured with top layer	ISO HD	Fasteners & Plates at a rate of 1 fastener per 1.33ft ²	WBMA, MBA, LVOC or LSBA	WBMA, LSBA or KLFA(S)	SA	-75 (Lim. 7)
C-AM-37	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ISO	Fasteners & Plates secured 1 fastener per 1.6ft ²	MBA, LVOC, WBMA, or LSBA	-	-	-75 (Lim. 7)
C-AM-38	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ISO	Fasteners & Plates secured 1 fastener per 1.6ft ²	-	HA	-	-75 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Concrete Deck (New, Existing, or Recover)									
System No.	Thermal/ Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Base Sheet	Top Insulation or Base Sheet Attachment	Membrane and Attachment (Note 10)			MDP (psf)
						TPO	TPO FB	TPO SA	
C-AM-39	OPTIONAL Vapor Barrier	Min. 1.5-inch ISO	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	Fasteners & Plates (Square) secured 1 fastener per 1.6ft ²	MBA, LVOC, WBMA, or LSBA	KLFA(S) or HA	SA	-75 (Lim. 7)
C-AM-40	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	Fasteners & Plates (Square) secured 1 fastener per 1.0ft ²	WBMA, LSBA, or MBA	KLFA(S)	SA	-82.5 (Lim. 7)
C-AM-41	OPTIONAL Vapor Barrier	Min. 1-inch ISO	Simultaneously secured with top layer	ISO HD	Fasteners & Plates secured 1 fastener per 1.33ft ²	MBA, LVOC, or LSBA	KLFA(S)	SA	-82.5 (Lim. 7)
C-AM-42	OPTIONAL Vapor Barrier	Min. 2-inch ISO	Fasteners & Plates secured 1 fastener per 1.6ft ²	ISO HD	OSFA, PG1, or KLFA applied 6-inch o.c.	WBMA, MBA, LVOC, or LSBA	KLFA(S)	SA	-82.5 (Lim. 7)
C-AM-43	OPTIONAL Vapor Barrier	Min. 2-inch ISO	AP Fasteners & Plate secured 1 fastener per 1.6ft ²	Min. 0.5-inch DensDeck Prime, DEXcell FA, or SECUROCK	OSFA, PG1, or KLFA applied 6-inch o.c.	LSBA, WBMA, MBA or LVOC	-	SA	-82.5 (Lim. 7)
C-AM-44	OPTIONAL Vapor Barrier	Min. 2-inch ISO	AP Fasteners & Plate secured 1 fastener per 1.6ft ²	Min. 1.5-inch ISO	OSFA, PG1, or KLFA applied 6-inch o.c.	LSBA, WBMA, MBA or LVOC	-	SA	-82.5 (Lim. 7)
C-AM-45	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	Min 0.625-inch DensDeck Prime	Fasteners & Plates secured 1 fastener per 1.33ft ²	WBMA, MBA, LVOC, 1168 or LSBA	WBMA, LSBA, or HA	SA	-90 (Lim. 7)
C-AM-46	OPTIONAL Vapor Barrier	Min. 2-inch ISO	Fasteners & Plates secured 1 fastener per 1ft ²	Min. 1.5-inch Kingspan ISO GF	PG1 or KLFA applied 6-inch o.c.	WBMA, MBA, LVOC, or LSBA	KLFA(S)	-	-90 (Lim. 7)
C-AM-47	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch Kingspan ISO CG	Fasteners & Plates secured 1 fastener per 1.33ft ²	MBA or WBMA	-	SA	-105 (Lim. 7)
C-AM-48	OPTIONAL Vapor Barrier	Min. 1.5-inch ISO	Simultaneously secured with top layer	Min. 0.5-inch DEXcell FA	Fasteners & Plates secured 1 fastener per 1.0ft ²	MBA, LVOC, WBMA, or LSBA	-	-	-105 (Lim. 7)
C-AM-49	OPTIONAL Vapor Barrier	Min. 1.5-inch ISO	Simultaneously secured with top layer	Min. 0.5-inch DensDeck Prime	Fasteners & Plates secured 1 fastener per 1.0ft ²	MBA, LVOC, WBMA, 1168 or LSBA	-	SA	-112.5 (Lim. 7)
C-AM-50	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ISO	Fasteners & Plates secured 1 fastener per 1.0ft ²	MBA, LVOC, or WBMA	-	-	-120 (Lim. 7)
C-AM-51	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ISO	Fasteners & Plates secured 1 fastener per 1.0ft ²	-	-	-	-120 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Concrete Deck (New, Existing, or Recover)									
System No.	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Base Sheet	Top Insulation or Base Sheet Attachment	Membrane and Attachment (Note 10)			MDP (psf)
						TPO	TPO FB	TPO SA	
C-AM-52	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ISO	Fasteners & Plates secured 1 fastener per 1.0ft ²	-	HA	-	-120 (Lim. 7)
C-AM-53	OPTIONAL Vapor Barrier	Min. 2-inch ISO	Fasteners & Plates secured 1 fastener per 1ft ²	Min. 1.5-inch Kingspan ISO GF	OSFA, PG1 or KLFA applied 4-inch o.c.	WBMA, MBA, or LVOC	-	-	-120 (Lim. 7)
C-AM-54	OPTIONAL Vapor Barrier	Min. 2-inch ISO	Fasteners & Plates secured 1 fastener per 1ft ²	ISO HD	OSFA, PG1, or KLFA applied 4-inch o.c.	WBMA, MBA, LVOC, or LSBA	-	-	-120 (Lim. 7)
C-AM-55	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	Min. 0.5-inch DEXcell FA	Fasteners & Plates secured 1 fastener per 1ft ²	-	-	-	-120 (Lim. 7)
C-AM-56	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	Fasteners & Plates secured 1 fastener per 1.0ft ²	-	-	-	-120 (Lim. 7)
C-AM-57	OPTIONAL Vapor Barrier	Min. 2-inch ISO	Fasteners & Plates secured 1 fastener per 1ft ²	Min. 1.5-inch Kingspan ISO GF	OSFA, PG1 or KLFA applied 4-inch o.c.	LSBA or MBA	-	-	-127.5 (Lim. 7)
C-AM-58	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	Min. 0.5-inch DEXcell FA	Fasteners & Plates secured 1 fastener per 1ft ²	-	KLFA(S)	-	-135 (Lim. 7)
C-AM-59	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	Fasteners & Plates secured 1 fastener per 1.0ft ²	WBMA	WBMA	SA	-150 (Lim. 7)

Mechanically Fastened Assemblies over Concrete Deck (New or Existing)							
System No.	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment (Note 12)	MDP (psf)
C-M-1	OPTIONAL INSULATION under min. 1-inch ISO	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	TPO	Attached in-lap 12-inch o.c. with OMG Heavy Duty and Kingspan Barbed Seam Plates; Fastener rows max. 114-inch o.c.	-30 (Lim. 7)
C-M-2	OPTIONAL INSULATION under min. 1.5-inch ISO	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	Kingspan TPO (Min. 60 mil)	Attached in-lap 12-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 138-inch o.c.	-30 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Mechanically Fastened Assemblies over Concrete Deck (New or Existing)							
System No.	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment (Note 12)	MDP (psf)
C-M-3	OPTIONAL INSULATION under min. 1.5-inch ISO	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	Kingspan TPO (Min. 60 mil)	Attached in-lap 12-inch o.c. with <i>Trufast Seam Plates</i> ; Fastener rows max. 90-inch o.c.	-30 (Lim. 7)
C-M-4	OPTIONAL INSULATION under min. 1-inch ISO	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	Kingspan TPO (Min. 60 mil)	Attached in-lap 12-inch o.c. with <i>#15 Fasteners & 2-3/8" Plates</i> ; Fastener rows max. 90-inch o.c.	-37.5 (Lim. 7)
C-M-5	OPTIONAL INSULATION under min. 1.5-inch ISO	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	TPO	Attached in-lap 12-inch o.c. with <i>#15 Fasteners & 2-3/8" Plates</i> ; Fastener rows max. 114-inch o.c.	-37.5 (Lim. 7)
C-M-6	OPTIONAL INSULATION under min. 1.5-inch ISO	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	Kingspan TPO (Min. 60 mil)	Attached in-lap 12-inch o.c. with <i>#15 Fasteners & 2-3/8" Plates</i> ; Fastener rows max. 66-inch .c.	(-45 Lim. 7)
C-M-7	OPTIONAL INSULATION under min. 1-inch ISO	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	TPO	Attached in-lap 12-inch o.c. with OMG Heavy Duty and Kingspan Barbed Seam Plates; Fastener rows max. 90-inch o.c.	-45 (Lim. 7)
C-M-8	OPTIONAL INSULATION under min. 1.5-inch ISO	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	TPO or TPO FB	Attached in-lap 12-inch o.c. with <i>#15 Fasteners & 2-3/8" Plates</i> ; Fastener rows max. 114-inch o.c.	-45 (Lim. 7)
C-M-9	OPTIONAL INSULATION under min. 1.5-inch ISO	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	TPO or TPO FB	Attached in-lap 12-inch o.c. with <i>#15 Fasteners & 2-3/8" Plates</i> ; Fastener rows max. 66-inch o.c.	-45 (Lim. 7)
C-M-10	OPTIONAL INSULATION under min. 1.5-inch ISO	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	TPO or TPO FB	Attached in-lap 6-inch o.c. with <i>#15 Fasteners & 2-3/8" Plates</i> ; Fastener rows max. 114-inch o.c.	-45 (Lim. 7)
C-M-11	OPTIONAL INSULATION under min. 1.5-inch ISO	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	TPO or TPO FB	Attached in-lap 6-inch o.c. with <i>#15 Fasteners & 2-3/8" Plates</i> ; Fastener rows max. 114-inch o.c.	-52.5 (Lim. 7)
C-M-12	OPTIONAL INSULATION under min. 1.5-inch ISO	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	Kingspan TPO (Min. 60 mil)	Attached in-lap 12-inch o.c. with <i>#15 Fasteners & 2-3/8" Plates</i> ; Fastener rows max. 54-inch o.c.	-52.5 (Lim. 7)
C-M-13	OPTIONAL INSULATION under min. 1.5-inch ISO	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	TPO	Attached in-lap 6-inch o.c. with <i>#15 Fasteners & 2-3/8" Plates</i> ; Fastener rows max. 90-inch o.c.	-60 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Mechanically Fastened Assemblies over Concrete Deck (New or Existing)							
System No.	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment (Note 12)	MDP (psf)
C-M-14	OPTIONAL INSULATION under min. 1-inch ISO	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	TPO or TPO FB	Attached in-lap 6-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 114-inch o.c.	-60 (Lim. 7)
C-M-15	OPTIONAL INSULATION under min. 1.5-inch ISO	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	Kingspan TPO (Min. 60 mil)	Attached in-lap 6-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 138-inch o.c.	(-60 Lim. 7)
C-M-16	OPTIONAL INSULATION under min. 1.5-inch ISO	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	Kingspan TPO (Min. 60 mil)	Attached in-lap 6-inch o.c. with Trufast Seam Plates; Fastener rows max. 90-inch o.c.	-60 (Lim. 7)
C-M-17	OPTIONAL INSULATION under min. 1-inch ISO	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	TPO	Attached in-lap 6-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 90-inch o.c.	-75 (Lim. 7)
C-M-18	OPTIONAL INSULATION under min. 1.5-inch ISO	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	TPO or TPO FB	Attached in-lap 6-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 66-inch o.c.	-90 (Lim. 7)
C-M-19	OPTIONAL INSULATION under min. 1-inch ISO	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	TPO or TPO FB	Attached in-lap 6-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 54-inch o.c.	-97.5 (Lim. 7)
C-M-20	OPTIONAL INSULATION under min. 1.5-inch ISO	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	Kingspan TPO (Min. 60 mil)	Attached in-lap 6-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 66-inch o.c.	(-105 Lim. 7)
Induction Welded Assemblies over Concrete Deck (New, Existing, or Recover)							
System No.	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment (Note 12)	MDP (psf)
C-W-1	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Induction Plates at a rate of 8 per 4-ft x 8-ft board Pattern #1 (1 fastener per 4.0-ft ²)	Kingspan TPO (Min. 60 mil)	Induction welded to weld plates	-45 (Lim. 7)
C-W-2	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Induction Plates 12-inch o.c. with rows max. 72-inch o.c.	Kingspan TPO (Min. 60 mil)	Induction welded to weld plates	-45 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Induction Welded Assemblies over Concrete Deck (New, Existing, or Recover)							
System No.	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment (Note 12)	MDP (psf)
C-W-3	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL <i>Cover Board</i>	Attached with <i>ISOWELD-#14</i> or <i>ISOWELD-#15</i> at a rate of 1 fastener per 4.0-ft ²	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-45 (Lim. 7)
C-W-4	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL <i>Cover Board</i>	Attached with <i>ISOWELD-#14</i> or <i>ISOWELD-#15</i> spaced 24-inch o.c. in rows 24-inch o.c.	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-45 (Lim. 7)
C-W-5	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL <i>Cover Board</i>	Attached with <i>ISOWELD-#14</i> or <i>ISOWELD-#15</i> spaced 12-inch o.c. in rows 60" o.c.	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-45 (Lim. 7)
C-W-6	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL <i>Cover Board</i>	Attached with <i>ISOWELD-#14</i> or <i>ISOWELD-#15</i> spaced in a 2-ft x 3-ft staggered grid	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-45 (Lim. 7)
C-W-7	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL <i>Cover Board</i>	<i>Trufast IW Plates</i> attached 1 fastener per 5.33ft ² ; End joints offset 12-inches between board rows	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-45 (Lim. 7)
C-W-8	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL <i>Cover Board</i>	<i>InductionPlates</i> at a rate of 6 per 4-ft x 8-ft board <i>Pattern #2</i> (1 fastener per 5.33-ft ²); Board installed with 6-inch stagger from preceding course	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-52.5 (Lim. 7)
C-W-9	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL <i>Cover Board</i>	<i>Trufast IW Plates</i> attached 1 fastener per 4.0ft ² ; End joints offset 12-inches between board rows	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-52.5 (Lim. 7)
C-W-10	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL <i>Cover Board</i>	Attached with <i>ISOWELD-#14</i> or <i>ISOWELD-#15</i> spaced in a 2-ft x 2-ft staggered grid	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-60 (Lim. 7)
C-W-11	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL <i>Cover Board</i>	<i>InductionPlates</i> at a rate of 8 per 4-ft x 8-ft board <i>Pattern #2</i> (1 fastener per 4.0-ft ²); Board installed with 6-inch stagger from preceding course	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-67.5 (Lim. 7)
C-W-12	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL <i>Cover Board</i>	<i>InductionPlates</i> at a rate of 12 per 4-ft x 8-ft board <i>Pattern #1</i> (1 fastener per 2.67-ft ²)	Kingspan TPO (Min. 60 mil)	Induction welded to weld plates	-75 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Induction Welded Assemblies over Concrete Deck (New, Existing, or Recover)							
System No.	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment (Note 12)	MDP (psf)
C-W-13	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	Attached with <i>ISOWELD-#14</i> or <i>ISOWELD-#15</i> at a rate of 1 fastener per 3.2-ft ²	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-75 (Lim. 7)
C-W-14	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	Attached with <i>ISOWELD-#14</i> or <i>ISOWELD-#15</i> spaced in a 1.5-ft x 2-ft staggered grid	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-82.5 (Lim. 7)
C-W-15	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	<i>InductionPlates</i> in a 24-inch by 16-inch grid pattern	Kingspan TPO (Min. 60 mil)	Induction welded to weld plates	-90 (Lim. 7)
C-W-16	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	<i>InductionPlates</i> at a rate of 15 per 4-ft x 8-ft board (1 fastener per 2.13-ft ²)	Kingspan TPO (Min. 60 mil)	Induction welded to weld plates	-90 (Lim. 7)
C-W-17	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	<i>InductionPlates</i> at a rate of 12 per 4-ft x 8-ft board Pattern #1 (1 fastener per 2.67-ft ²); Board installed with 6-inch stagger from preceding course	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-90 (Lim. 7)
C-W-18	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	<i>Trufast IW Plates</i> attached 6-inch o.c. in rows 60-inch o.c.	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-90 (Lim. 7)
C-W-19	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	Attached with <i>ISOWELD-#14</i> or <i>ISOWELD-#15</i> spaced 18" o.c. in rows 18" o.c.	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-97.5 (Lim. 7)
C-W-20	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	Attached with <i>ISOWELD-#14</i> or <i>ISOWELD-#15</i> spaced 6-inch o.c. in rows 60" o.c.	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-97.5 (Lim. 7)
C-W-21	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	<i>Trufast IW Plates</i> attached 1 fastener per 2.0ft ² ; End joints offset 12-inches between board rows	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-105 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Adhered Assemblies over Cementitious Wood Fiber Deck (New or Existing)									
System No.	Vapor Barrier	Base Insulation (Note 6)	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane and Attachment (Note 9)			MDP (psf)
						TPO	TPO FB	TPO SA	
CW-A-1	OPTIONAL VB-CWF	OPTIONAL Min. 0.5-inch Kingspan ISO GF	OSFA or PG1 applied 12-inch o.c.	ISO HD	OSFA, KLFA, or PG1 applied 12-inch o.c.	-	PG1(B) or WBMA	-	-122.5 (Lim. 9)
CW-A-2	OPTIONAL VB-CWF	Min. 0.5-inch Kingspan ISO GF	PG1 applied 12-inch o.c.	OPTIONAL SECUROCK	PG1, OSFA, or KLFA applied 12-inch o.c.	WBMA, LVOC, LSBA, or MBA	WBMA, LSBA, PG1(B), PG1(S), or KLFA(S)	SA	-135 (Lim. 9)
CW-A-3	-	OPTIONAL Min. 0.5-inch Kingspan ISO GF	OSFA applied 12-inch o.c.	SECUROCK	PG1, OSFA or KLFA applied 12-inch o.c.	LVOC, LSBA, 1168 or MBA	PG1(B) or PG1(S)	SA	-140 (Lim. 9)
CW-A-4	OPTIONAL VB-CWF	Min. 0.5-inch Kingspan ISO GF	PG1 applied 12-inch o.c.	-	-	WBMA, LVOC, LSBA, or MBA	WBMA, LSBA, PG1(B), PG1(S), or KLFA(S)	-	-150 (Lim. 9)
CW-A-5	OPTIONAL VB-CWF	SECUROCK	PG1, OSFA, or KLFA applied 12-inch o.c.	-	-	WBMA LVOC, LSBA, 1168 or MBA	WBMA, LSBA, PG1(B), PG1(S), or KLFA(S)	SA	-157.5 (Lim. 9)
CW-A-6	-	Min. 0.5-inch Kingspan ISO GF	OSFA applied 12-inch o.c.	-	-	WBMA, LVOC, LSBA, or MBA	WBMA, PG1(B), PG1(S), or KLFA(S)	-	-157.5 (Lim. 9)
CW-A-7	OPTIONAL VB-CWF	Min. 0.5-inch Kingspan ISO GF	OSFA or PG1 applied 12-inch o.c.	ProtectorR HD	OSFA or PG1 applied 12-inch o.c.	LVOC, LSBA or MBA	KLFA(S) or WBMA	-	-157.5 (Lim. 9)
CW-A-8	OPTIONAL VB-CWF	Min. 0.5-inch Kingspan ISO GF	OSFA or PG1 applied 12-inch o.c.	DensDeck Prime	OSFA or PG1 applied 12-inch o.c.	WBMA, LSBA, 1168 or MBA	KLFA(S) or WBMA	-	-157.5 (Lim. 9)
CW-A-9	-	Min. 475 psi Celcore MF	Poured-in-place	-	-	-	PG1(B) or PG1(S)	-	-167.5 (Lim. 9)
CW-A-10	-	Min. 475 psi Celcore MF	Poured-in-place	-	-	-	PG1 applied 4-inch o.c. or PG1(S)	-	-197.5 (Lim. 9)
CW-A-11	OPTIONAL VB-CWF	Min. 0.5-inch ISO	PG1 applied 12-inch o.c.	-	-	LSBA, LVOC, MBA, or WBMA	KLFA(S)	-	-255 (Lim. 9)
CW-A-12	OPTIONAL VB-CWF	OPTIONAL Min. 0.5-inch ISO	PG1 applied 12-inch o.c.	DensDeck Prime or SECUROCK.	PG1 applied 12-inch o.c.	LSBA, LVOC, MBA, or WBMA	KLFA(S), HA, or WBMA	SA	-255 (Lim. 9)
CW-A-13	OPTIONAL VB-CWF	OPTIONAL Min. 0.5-inch ISO	PG1 applied 12-inch o.c.	ISO HD	PG1 applied 12-inch o.c.	LSBA, LVOC, MBA, or WBMA	KLFA(S) or WBMA	SA	-255 (Lim. 9)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Cementitious Wood Fiber Deck (New or Existing)								
System No.	Anchor Sheet	Anchor Sheet Attachment	Base Insulation	Top Insulation/ Cover Board	Membrane and Attachment (Note 10)			MDP (psf)
					TPO	TPO FB	TPO SA	
CW-AM-1	DynaBase or Ventsulation Felt	OlyLok Fasteners spaced 9-inch o.c. at the min. 2-inch wide laps and 18-inch o.c. in two staggered rows in the field of the roll	Min. 0.5-inch ISO in KLFA applied 12-inch o.c.	-	WBMA, LVOC, LSBA, or 1168 MBA	PG1(B), PG1(S) or KLFA(S)	SA	-45 (Lim. 7)
CW-AM-2	DynaBase or Ventsulation Felt	OlyLok Fasteners spaced 9-inch o.c. at the min. 2-inch wide laps and 18-inch o.c. in two staggered rows in the field of the roll	Min. 0.5-inch Kingspan ISO GF in KLFA applied 12-inch o.c.	-	-	WBMA	-	-45 (Lim. 7)
CW-AM-3	DynaBase or Ventsulation Felt	OlyLok Fasteners spaced 9-inch o.c. at the min. 2-inch wide laps and 18-inch o.c. in two staggered rows in the field of the roll	OPTIONAL Min. 0.5-inch ISO in KLFA applied 12-inch o.c.	ISO HD, StormX, or DensDeck Prime in KLFA applied 12-inch o.c.	WBMA, LVOC, LSBA, 1168 or MBA	WBMA, PG1(S) or KLFA(S)	-	-45 (Lim. 7)
CW-AM-4	DynaBase or Ventsulation Felt	OlyLok Fasteners spaced 9-inch o.c. at the min. 2-inch wide laps and 18-inch o.c. in two staggered rows in the field of the roll	OPTIONAL Min. 0.5-inch ISO in KLFA applied 12-inch o.c.	SECUROCK in KLFA applied 12-inch o.c.	LSBA	PG1(B), WBMA, PG1(S) or KLFA(S)	-	-45 (Lim. 7)
CW-AM-5	DynaBase or Ventsulation Felt	OlyLok Fasteners spaced 9-inch o.c. at the min. 2-inch wide laps and 18-inch o.c. in two staggered rows in the field of the roll	OPTIONAL Min. 0.5-inch ISO in KLFA applied 12-inch o.c.	DensDeck Prime, StormX, or SECUROCK in KLFA applied 12-inch o.c.	-	HA	-	-45 (Lim. 7)
CW-AM-6	DynaBase or Ventsulation Felt	OlyLok Fasteners spaced 9-inch o.c. at the min. 2-inch wide laps and 18-inch o.c. in two staggered rows in the field of the roll	OPTIONAL Min. 0.5-inch ISO in KLFA applied 12-inch o.c.	DEXcell FA in KLFA applied 12-inch o.c.	-	-	SA	-45 (Lim. 7)

Assemblies with All Layers Adhered over Gypsum Deck (Existing only)								
System No.	Base Sheet or Insulation (Note 6)	Base Sheet or Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane and Attachment (Note 9)			MDP (psf)
					TPO	TPO FB	TPO SA	
G-A-1	OPTIONAL Min. 0.5-inch ISO over OPTIONAL GlasPly IV, GlasPly Premier, PermaPly 28, or DynaBase in HA	KLFA applied 12-inch o.c.	ISO HD	KLFA, PG1 or OSFA applied 12-inch o.c.	WBMA, LVOC, LSBA, or MBA	WBMA, PG1(B), PG1(S), or KLFA(S)	-	-45 (Lim. 9)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Assemblies with All Layers Adhered over Gypsum Deck (Existing only)								
System No.	Base Sheet or Insulation (Note 6)	Base Sheet or Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane and Attachment (Note 9)			MDP (psf)
					TPO	TPO FB	TPO SA	
G-A-2	OPTIONAL Min. 0.5-inch ISO over OPTIONAL GlasPly IV, GlasPly Premier, PermaPly 28, or DynaBase in HA	KLFA applied 12-inch o.c.	ISO HD	KLFA, PG1 or OSFA applied 12-inch o.c.	-	-	SA	-45 (Lim. 9)
G-A-3	Min. 1.5-inch ISO or ISO HD Foam	KLFA applied 12-inch o.c.	-	-	WBMA, LVOC, LSBA, or MBA	WBMA, PG1(B), PG1(S), or KLFA(S)	-	-75 (Lim. 9)
G-A-4	OPTIONAL Min. 1.5-inch ISO	KLFA applied 12-inch o.c.	ISO HD	KLFA applied 12-inch o.c.	MBA or LSBA	-	-	-75 (Lim. 9)
G-A-5	OPTIONAL Min. 1.5-inch ISO	KLFA applied 12-inch o.c.	ISO HD	KLFA applied 12-inch o.c.	-	-	SA	-75 (Lim. 9)
G-A-6	OPTIONAL Min. 1.5-inch ISO	KLFA applied 12-inch o.c.	SECUROCK	PG1 or KLFA applied 12-inch o.c.	WBMA, LVOC, LSBA, 1168 or MBA	WBMA, LSBA, PG1(B), PG1(S), or KLFA(S)	-	-75 (Lim. 9)
G-A-7	OPTIONAL Min. 1.5-inch ISO	KLFA applied 12-inch o.c.	SECUROCK	PG1 or KLFA applied 12-inch o.c.	-	-	SA	-75 (Lim. 9)
G-A-8	Min. 0.5-inch Kingspan ISO GF	OSFA applied 12-inch o.c.	-	-	WBMA, LVOC, LSBA, or MBA	WBMA, PG1(B), PG1(S), or KLFA(S)	-	-77.5 (Lim. 9)
G-A-9	OPTIONAL Min. 0.5-inch Kingspan ISO GF	OSFA applied 12-inch o.c.	ISO HD	OSFA applied 12-inch o.c.	MBA or LSBA	-	-	-77.5 (Lim. 9)
G-A-10	OPTIONAL Min. 0.5-inch Kingspan ISO GF	OSFA applied 12-inch o.c.	ISO HD	OSFA applied 12-inch o.c.	-	-	SA	-77.5 (Lim. 9)
G-A-11	OPTIONAL Min. 0.5-inch Kingspan ISO GF	OSFA applied 12-inch o.c.	SECUROCK	PG1 or OSFA applied 12-inch o.c.	WBMA, LVOC, LSBA, 1168 or MBA	WBMA, LSBA, PG1(B), PG1(S), or KLFA(S)	SA	-77.5 (Lim. 9)
G-A-12	-	-	-	-	-	PG1 applied 12-inch o.c. or PG1(S)	-	-85 (Lim. 9)
G-A-13	Min. 1.5-inch ISO or ISO HD Foam	KLFA applied 12-inch o.c.	-	-	WBMA, LVOC, LSBA, or MBA	WBMA or KLFA(S)	-	-90 (Lim. 9)
G-A-14	Min. 1.5-inch ISO or ISO HD Foam	OSFA applied 12-inch o.c.	-	-	-	WBMA or KLFA(S)	-	-150 (Lim. 9)
G-A-15	Min. 0.5-inch Kingspan ISO GF	OSFA applied 12-inch o.c.	-	-	MBA	-	-	-150 (Lim. 9)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Assemblies with All Layers Adhered over Gypsum Deck (Existing only)								
System No.	Base Sheet or Insulation (Note 6)	Base Sheet or Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane and Attachment (Note 9)			MDP (psf)
					TPO	TPO FB	TPO SA	
G-A-16	OPTIONAL Min. 0.5-inch Kingspan ISO GF	OSFA applied 12-inch o.c.	ISO HD	OSFA applied 12-inch o.c.	WBMA, LVOC, MBA or LSBA	KLFA(S)	SA	-150 (Lim. 9)
G-A-17	OPTIONAL Min. 0.5-inch Kingspan ISO GF	OSFA applied 12-inch o.c.	DensDeck Prime	OSFA applied 12-inch o.c.	WBMA, LVOC, MBA, 1168 or LSBA	KLFA(S) or HA	SA	-150 (Lim. 9)
G-A-18	OPTIONAL Min. 0.5-inch Kingspan ISO GF	OSFA applied 12-inch o.c.	SECUROCK	OSFA applied 12-inch o.c.	WBMA, LVOC, LSBA, 1168 or MBA	WBMA, LSBA, KLFA(S) or HA	SA	-150 (Lim. 9)
G-A-19	OPTIONAL Min. 0.5-inch Kingspan ISO GF	OSFA applied 12-inch o.c.	DEXcell CB	OSFA applied 12-inch o.c.	LVOC, WBMA, MBA or LSBA	WBMA	-	-150 (Lim. 9)
G-A-20	OPTIONAL Min. 0.5-inch Kingspan ISO GF	OSFA applied 12-inch o.c.	DEXcell FA	OSFA applied 12-inch o.c.	LVOC, WBMA, MBA, 1168 or LSBA	WBMA, LSBA, KLFA(S), or HA	SA	-150 (Lim. 9)
G-A-21	-	-	-	-	-	PG1 applied 6-inch o.c. or PG1(S)	-	-155 (Lim. 9)
G-A-22	Min. 1.5-inch ISO or ISO HD Foam	PG1 applied 12-inch o.c.	-	-	-	WBMA or KLFA(S)	-	-187.5 (Lim. 9)
G-A-23	OPTIONAL Min. 0.5-inch Kingspan ISO GF	PG1 applied 12-inch o.c.	ISO HD	PG1 applied 12-inch o.c.	WBMA, LVOC, MBA or LSBA	KLFA(S)	SA	-187.5 (Lim. 9)
G-A-24	OPTIONAL Min. 0.5-inch Kingspan ISO GF	PG1 applied 12-inch o.c.	DensDeck Prime	PG1 applied 12-inch o.c.	WBMA, LVOC, MBA, 1168 or LSBA	KLFA(S) or HA	SA	-210 (Lim. 9)
G-A-25	OPTIONAL Min. 0.5-inch Kingspan ISO GF	PG1 applied 12-inch o.c.	SECUROCK	PG1 applied 12-inch o.c.	WBMA, LVOC, LSBA, 1168 or MBA	WBMA, KLFA(S), or HA	SA	-210 (Lim. 9)
G-A-26	OPTIONAL Min. 0.5-inch Kingspan ISO GF	PG1 applied 12-inch o.c.	DEXcell CB	PG1 applied 12-inch o.c.	LVOC, WBMA, or MBA	WBMA	-	-210 (Lim. 9)
G-A-27	OPTIONAL Min. 0.5-inch Kingspan ISO GF	PG1 applied 12-inch o.c.	DEXcell FA	PG1 applied 12-inch o.c.	LVOC, WBMA, MBA, 1168 or LSBA	WBMA, KLFA(S), or HA	SA	-210 (Lim. 9)
G-A-28	Min. 0.5-inch Kingspan ISO GF	PG1 applied 12-inch o.c.	-	-	MBA	KLFA(S)	-	-210 (Lim. 9)
G-A-29	Min. 0.5-inch Kingspan ISO CG	PG1 applied 8-inch o.c.	-	-	-	WBMA	-	-262.5 (Lim 9)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Assemblies with All Layers Adhered over Gypsum Deck (Existing only)								
System No.	Base Sheet or Insulation (Note 6)	Base Sheet or Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane and Attachment (Note 9)			MDP (psf)
					TPO	TPO FB	TPO SA	
G-A-30	OPTIONAL Min. 0.5-inch ISO	PG1 applied 8-inch o.c.	ISO HD, DensDeck Prime or SECUROCK	PG1 applied 8-inch o.c.	-	WBMA	-	-262.5 (Lim 9)
G-A-31	Min. 0.5-inch ISO	PG1 applied 8-inch o.c.	-	-	LSBA	-	-	-277.5 (Lim. 9)
G-A-32	OPTIONAL Min. 0.5-inch ISO	PG1 applied 8-inch o.c.	ISO HD, DensDeck Prime or SECUROCK	PG1 applied 8-inch o.c.	LSBA, LVOC, MBA, or WBMA	KLFA(S)	SA	-277.5 (Lim 9)
G-A-33	OPTIONAL Min. 0.5-inch ISO	PG1 applied 8-inch o.c.	DensDeck Prime or SECUROCK	PG1 applied 8-inch o.c.	-	HA	-	-277.5 (Lim 9)
G-A-34	OPTIONAL Min. 0.5-inch Kingspan ISO CG	PG1 applied 8-inch o.c.	SECUROCK	PG1 applied 8-inch o.c.	WBMA, LVOC, 1168 or LSBA	WBMA or KLFA(S)	-	-292.5 (Lim. 9)
G-A-35	Min. 0.5-inch Kingspan ISO GF	PG1 applied 8-inch o.c.	-	-	LVOC	-	-	-315 (Lim. 9)
G-A-36	Min. 0.5-inch ISO	PG1 applied 8-inch o.c.	-	-	MBA	KLFA(S)	-	-322.5 (Lim. 9)
G-A-37	Min. 0.5-inch Kingspan ISO GF	PG1 applied 8-inch o.c.	-	-	MBA or WBMA	-	-	-322.5 (Lim. 9)
G-A-38	-	-	SECUROCK, DensDeck Prime, or ISO HD	PG1 applied 8-inch o.c.	LVOC, MBA, or WBMA	KLFA(S)	-	-322.5 (Lim. 9)
G-A-39	-	-	SECUROCK or DensDeck Prime	PG1 applied 8-inch o.c.	-	HA	-	-322.5 (Lim. 9)
G-A-40	Min. 0.5-inch ISO	PG1 applied 8-inch o.c.	DensDeck Prime	PG1 applied 8-inch o.c.	-	KLFA(S)	-	-337.5 (Lim. 9)
G-A-41	-	-	-	-	-	KLFA(S)	-	-405 (Lim. 9)

Assemblies with Adhered Membranes over Insulated Gypsum Deck (New or Existing)								
System No.	Anchor Sheet	Anchor Sheet Attachment	Base Insulation	Top Insulation/ Cover Board	Membrane and Attachment (Note 10)			MDP (psf)
					TPO	TPO FB	TPO SA	
G-AM-1	DynaBase or Ventsulation Felt	OlyLok Fasteners spaced 9-inch o.c. at the min. 2-inch wide laps and 18-inch o.c. in two staggered rows in the field of the roll	Min. 0.5-inch ISO in KLFA applied 12-inch o.c.	-	WBMA, LVOC, LSBA, 1168 or MBA	KLFA(S)	SA	-45 (Lim. 7)
G-AM-2	DynaBase or Ventsulation Felt	OlyLok Fasteners spaced 9-inch o.c. at the min. 2-inch wide laps and 18-inch o.c. in two staggered rows in the field of the roll	Min. 0.5-inch Kingspan ISO GF in KLFA applied 12-inch o.c.	KLFA, applied 12-inch o.c.	-	WBMA	-	-45 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Gypsum Deck (New or Existing)								
System No.	Anchor Sheet	Anchor Sheet Attachment	Base Insulation	Top Insulation/ Cover Board	Membrane and Attachment (Note 10)			MDP (psf)
					TPO	TPO FB	TPO SA	
G-AM-3	DynaBase or Ventsulation Felt	OlyLok Fasteners spaced 9-inch o.c. at the min. 2-inch wide laps and 18-inch o.c. in two staggered rows in the field of the roll	OPTIONAL Min. 0.5-inch ISO in KLFA applied 12-inch o.c.	ISO HD, StormX, or DensDeck Prime in KLFA applied 12-inch o.c.	WBMA, LVOC, LSBA, 1168 or MBA	WBMA	-	-45 (Lim. 7)
G-AM-4	DynaBase or Ventsulation Felt	OlyLok Fasteners spaced 9-inch o.c. at the min. 2-inch wide laps and 18-inch o.c. in two staggered rows in the field of the roll	OPTIONAL Min. 0.5-inch ISO in KLFA applied 12-inch o.c.	SECUROCK in KLFA applied 12-inch o.c.	LSBA	WBMA	-	-45 (Lim. 7)
G-AM-5	DynaBase or Ventsulation Felt	OlyLok Fasteners spaced 9-inch o.c. at the min. 2-inch wide laps and 18-inch o.c. in two staggered rows in the field of the roll	OPTIONAL Min. 0.5-inch ISO in KLFA applied 12-inch o.c.	DensDeck Prime, StormX or SECUROCK in KLFA applied 12-inch o.c.	-	HA	-	-45 (Lim. 7)
G-AM-6	DynaBase or Ventsulation Felt	OlyLok Fasteners spaced 9-inch o.c. at the min. 2-inch wide laps and 18-inch o.c. in two staggered rows in the field of the roll	OPTIONAL Min. 0.5-inch ISO in KLFA applied 12-inch o.c.	DEXcell FA in KLFA applied 12-inch o.c.	-	-	SA	-45 (Lim. 7)
G-AM-7	PermaPly 28	Min, 1.8-inch OMG OlyLok Locking Impact Nail secured 7-inch o.c. at the lap and 7-inch o.c. in two (2) equally spaced and staggered rows in the field	-	-	-	HA	-	-52.5 (Lim. 7)

Adhered Lightweight Insulating Concrete Assemblies over <i>Concrete Deck (New or Existing)</i>									
System No.	Vapor Barrier	LWIC	Anchor Sheet	Base Insulation (Note 6)	Cover Board/ Base Ply	Membrane and Attachment (Note 9)			MDP (psf)
						TPO	TPO FB	TPO SA	
LC-A-1	OPTIONAL VB-LWIC	Min. 350psi <i>Celcore MF</i>	-	OPTIONAL min. 0.5-inch Kingspan ISO GF applied in <i>OSFA</i> or <i>PG1</i> 12-inch o.c.	<i>DensDeck Prime</i> applied in <i>OSFA</i> or <i>PG1</i> 12-inch o.c.	-	WBMA	-	-45 (Lim. 9)
LC-A-2	-	Min 340psi <i>Celcore MF</i>	-	Min. 0.5-inch Kingspan ISO GF applied in <i>PG1</i> applied 12-inch o.c.	-	<i>MBA</i> , <i>WBMA</i> , <i>LVOC</i> or <i>LSBA</i>	<i>WBMA</i> or <i>KLFA(S)</i>	SA	-77.5 (Lim. 9)
LC-A-3	-	Min 340psi <i>Celcore MF</i>	-	OPTIONAL Min. 0.5-inch <i>ISO</i> applied in <i>PG1</i> 12-inch o.c.	<i>SECUROCK</i> applied in <i>PG1</i> 12-inch o.c.	<i>WBMA</i> , <i>LVOC</i> <i>LSBA</i> , 1168 or <i>MBA</i>	<i>WBMA</i> , <i>LSBA</i> , or <i>KLFA(S)</i>	SA	-77.5 (Lim. 9)
LC-A-4	-	Min. 300psi <i>LWIC</i>	-	Min. 0.5-inch Kingspan ISO GF applied in <i>KLFA</i> 12-inch o.c.	-	<i>MBA</i> , <i>WBMA</i> , <i>LVOC</i> or <i>LSBA</i>	<i>WBMA</i> or <i>KLFA(S)</i>	SA	-80 (Lim. 9)

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APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Adhered Lightweight Insulating Concrete Assemblies over Concrete Deck (New or Existing)									
System No.	Vapor Barrier	LWIC	Anchor Sheet	Base Insulation (Note 6)	Cover Board/ Base Ply	Membrane and Attachment (Note 9)			MDP (psf)
						TPO	TPO FB	TPO SA	
LC-A-5	-	Min. 300psi LWIC	-	OPTIONAL Min. 0.5-inch Kingspan ISO GF applied in KLFA 12-inch o.c.	SECUROCK applied in KLFA 12-inch o.c.	WBMA, LVOC, LSBA, 1168 or MBA	WBMA, LSBA, or KLFA(S)	SA	-80 (Lim. 9)
LC-A-6	OPTIONAL VB-LWIC	Min. 350psi Celcore MF	-	OPTIONAL Min. 0.5-inch Kingspan ISO GF applied in OSFA 12-inch o.c.	DEXcell FA, SECUROCK, ISO HD applied in OSFA 12-inch o.c.	-	WBMA	-	-90 (Lim. 9)
LC-A-7	OPTIONAL DynaWeld Cap FR torch applied over deck primed with ASTM D41	Min. 490 psi LWIC or Existing LWIC with MCRF = 164lbf using Trufast VERAS-FAST Fastener	-	OPTIONAL Min. 0.5-inch ISO applied in PG1 12-inch o.c.	ISO HD, DensDeck Prime, DEXcell FA, or SECUROCK applied in PG1 12-inch o.c.	MBA, LVOC, LSBA, or WBMA	KLFA(S) or WBMA	SA	-90 (Lim 9)
LC-A-8	OPTIONAL DynaWeld Cap FR torch applied over deck primed with ASTM D41	Min. 490 psi LWIC or Existing LWIC with MCRF = 164lbf using Trufast VERAS-FAST Fastener	-	OPTIONAL Min. 0.5-inch ISO applied in PG1 12-inch o.c.	DensDeck Prime, DEXcell FA, or SECUROCK applied in PG1 12-inch o.c.	-	HA	-	-90 (Lim 9)
LC-A-9	OPTIONAL DynaWeld Cap FR torch applied over deck primed with ASTM D41	Min. 490 psi LWIC or Existing LWIC with MCRF = 164lbf using Trufast VERAS-FAST Fastener	-	Min. 0.5-inch ISO applied in PG1 12-inch o.c.	-	MBA, LVOC, LSBA, or WBMA	KLFA(S) or WBMA	SA	-90 (Lim 9)
LC-A-10	OPTIONAL VB-LWIC	Min. 350psi Celcore MF	-	OPTIONAL Min. 0.5-inch Kingspan ISO GF applied in OSFA applied 12-inch o.c.	ISO HD, SECUROCK, or StormX applied in OSFA applied 12-inch o.c.	-	KLFA(S)	-	-90 (Lim. 9)
LC-A-11	OPTIONAL VB-LWIC	Min. 350psi Celcore MF	-	OPTIONAL Min. 0.5-inch Kingspan ISO GF applied in OSFA applied 12-inch o.c.	DensDeck Prime applied in OSFA 12-inch o.c.	-	HA	-	-90 (Lim. 9)
LC-A-12	OPTIONAL VB-LWIC	Min. 350psi Celcore MF	-	OPTIONAL Min. 0.5-inch Kingspan ISO GF applied in OSFA applied 12-inch o.c.	DEXcell FA or SECUROCK applied in PG1 12-inch o.c.	-	WBMA	-	-105 (Lim. 9)
LC-A-13	-	Min. 390psi Celcore MF	-	-	-	-	PG1 applied 6-inch o.c. or PG1(S)	-	-112.5 (Lim. 9)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Adhered Lightweight Insulating Concrete Assemblies over Concrete Deck (New or Existing)									
System No.	Vapor Barrier	LWIC	Anchor Sheet	Base Insulation (Note 6)	Cover Board/ Base Ply	Membrane and Attachment (Note 9)			MDP (psf)
						TPO	TPO FB	TPO SA	
LC-A-14	OPTIONAL VB-LWIC	Min. 350psi <i>Celcore MF</i>	-	OPTIONAL Min. 0.5-inch Kingspan ISO GF applied in <i>PG1</i> 12-inch o.c.	<i>ISO HD</i> or <i>SECUROCK</i> applied in <i>PG1</i> 12-inch o.c.	-	<i>KLFA(S)</i>	-	-112.5 (Lim. 9)
LC-A-15	OPTIONAL VB-LWIC	Min. 350psi <i>Celcore MF</i>	-	OPTIONAL Min. 0.5-inch Kingspan ISO GF applied in <i>PG1</i> 12-inch o.c.	<i>DensDeck Prime</i> applied in <i>PG1</i> 12-inch o.c.	-	<i>HA</i>	-	-112.5 (Lim. 9)
LC-A-16	-	Min. 310psi Elastizell with Zell-Crete Fibers	-	Min. 0.5-inch Kingspan ISO GF applied in <i>KLFA</i> 12-inch o.c.	-	<i>MBA</i> , <i>WBMA</i> , <i>LVOC</i> or <i>LSBA</i>	<i>WBMA</i> or <i>KLFA(S)</i>	<i>SA</i>	-130 (Lim. 9)
LC-A-17	-	Min. 310psi Elastizell with Zell-Crete Fibers	-	OPTIONAL Min. 0.5-inch Kingspan ISO GF applied in <i>KLFA</i> 12-inch o.c.	<i>SECUROCK</i> applied in <i>KLFA</i> 12-inch o.c.	<i>WBMA</i> , <i>LVOC</i> , <i>LSBA</i> , 1168 or <i>MBA</i>	<i>WBMA</i> , <i>LSBA</i> , or <i>KLFA(S)</i>	<i>SA</i>	-130 (Lim. 9)
LC-A-18	-	Min. 380psi Concrecel	-	-	-	-	<i>PG1(B)</i> or <i>PG1(S)</i>	-	-147.5 (Lim. 9)
LC-A-19	-	Min. 480psi <i>Celcore MF</i>	-	-	-	-	<i>PG1(B)</i> or <i>PG1(S)</i>	-	-167.5 (Lim. 9)
LC-A-20	-	Min. 380psi Concrecel	-	-	-	-	<i>PG1</i> applied 6-inch o.c. or <i>PG1(S)</i>	-	-172.5 (Lim. 9)
LC-A-21	OPTIONAL VB-LWIC	Min. 350psi <i>Celcore MF</i>	-	OPTIONAL Min. 0.5-inch Kingspan ISO GF applied in <i>PG1</i> 12-inch o.c.	<i>ISO HD</i> applied in <i>PG1</i> 12-inch o.c.	-	<i>WBMA</i>	-	-187.5 (Lim. 9)
LC-A-22	OPTIONAL VB-LWIC	Min. 400 psi <i>Celcore MF</i> or Existing <i>LWIC</i> with <i>MCRF</i> = 139lbf using Trufast FM-90 Base Sheet Fastener; Surfaced with <i>Celcore SBS</i>	-	OPTIONAL Min. 0.5-inch <i>ISO</i> applied in <i>PG1</i> 8-inch o.c.	<i>ISO HD</i> , <i>DEXcell FA</i> , <i>DensDeck Prime</i> or <i>SECUROCK</i> applied in <i>PG1</i> 8-inch o.c.	<i>LSBA</i> , <i>LVOC</i> , <i>MBA</i> , or <i>WBMA</i>	<i>KLFA(S)</i> or <i>WBMA</i>	<i>SA</i>	-200 (Lim. 9)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Adhered Lightweight Insulating Concrete Assemblies over Concrete Deck (New or Existing)									
System No.	Vapor Barrier	LWIC	Anchor Sheet	Base Insulation (Note 6)	Cover Board/ Base Ply	Membrane and Attachment (Note 9)			MDP (psf)
						TPO	TPO FB	TPO SA	
LC-A-23	OPTIONAL VB-LWIC	Min. 400 psi <i>Celcore MF</i> or Existing <i>LWIC</i> with <i>MCRF</i> = 139lbf using Trufast FM-90 Base Sheet Fastener; Surfaced with <i>Celcore SBS</i>	-	Min. 0.5-inch <i>ISO</i> applied in <i>PG1</i> 8-inch o.c.	-	<i>LSBA</i> , <i>LVOC</i> , <i>MBA</i> , or <i>WBMA</i>	<i>KLFA(S)</i> or <i>WBMA</i>	-	-200 (Lim. 9)
LC-A-24	OPTIONAL VB-LWIC	Min. 400 psi <i>Celcore MF</i> or Existing <i>LWIC</i> with <i>MCRF</i> = 139lbf using Trufast FM-90 Base Sheet Fastener; Surfaced with <i>Celcore SBS</i>	-	OPTIONAL Min. 0.5-inch <i>ISO</i> applied in <i>PG1</i> 8-inch o.c.	<i>DEXcell FA</i> , <i>DensDeck Prime</i> or <i>SECUROCK</i> applied in <i>PG1</i> 8-inch o.c.	-	<i>HA</i>	-	-200 (Lim. 9)
LC-A-25	VB-LWIC	Min. 300psi <i>Celcore MF</i>	-	-	-	<i>LSBA</i> , <i>LVOC</i> , or <i>MBA</i>	<i>LSBA</i> or <i>WBMA</i>	-	-202.5 (Lim. 9)
LC-A-26	VB-LWIC	Min. 360psi <i>Celcore MF</i>	-	-	-	-	<i>PG1</i> applied 8-inch o.c. or <i>PG1(S)</i>	-	-202.5 (Lim. 9)
LC-A-27	OPTIONAL VB-LWIC	Min. 400psi <i>Celcore MF</i>	-	-	-	-	<i>KLFA(S)</i> , <i>LSBA</i> , or <i>WBMA</i>	-	-210 (Lim. 9)
LC-A-28	OPTIONAL VB-LWIC	Min. 360psi <i>Celcore MF</i>	-	-	-	<i>LSBA</i> or <i>LVOC</i>	-	-	-222.5 (Lim. 9)
LC-A-29	OPTIONAL VB-LWIC	Min. 350psi <i>Celcore MF</i>	-	OPTIONAL Min. 0.5-inch Kingspan ISO GF applied in <i>PG1</i> 12-inch o.c.	<i>StormX</i> applied in <i>PG1</i> 12-inch o.c.	-	<i>KLFA(S)</i> or <i>WBMA</i>	-	-240 (Lim. 9)
LC-A-30	OPTIONAL DynaWeld Cap FR torch applied over deck primed with ASTM D41	Min. 490 psi <i>LWIC</i> or Existing <i>LWIC</i> with <i>MCRF</i> = 164lbf using Trufast VERAS-FAST Fastener	-	OPTIONAL Min. 0.5-inch <i>ISO</i> applied in <i>KLFA</i> 12-inch o.c.	<i>ISO HD</i> , <i>DensDeck</i> <i>Prime</i> or <i>SECUROCK</i> applied in <i>KLFA</i> 12-inch o.c.	<i>WBMA</i> , <i>MBA</i> or <i>LVOC</i>	-	<i>SA</i>	-240 (Lim 9)
LC-A-31	OPTIONAL DynaWeld Cap FR torch applied over deck primed with ASTM D41	Min. 490 psi <i>LWIC</i> or Existing <i>LWIC</i> with <i>MCRF</i> = 164lbf using Trufast VERAS-FAST Fastener	-	OPTIONAL Min. 0.5-inch <i>ISO</i> applied in <i>KLFA</i> 12-inch o.c.	<i>ISO HD</i> , <i>DensDeck</i> <i>Prime</i> , <i>DEXcell FA</i> , or <i>SECUROCK</i> applied in <i>KLFA</i> 12-inch o.c.	<i>LSBA</i>	<i>KLFA(S)</i> or <i>WBMA</i>	-	-240 (Lim 9)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Adhered Lightweight Insulating Concrete Assemblies over Concrete Deck (New or Existing)									
System No.	Vapor Barrier	LWIC	Anchor Sheet	Base Insulation (Note 6)	Cover Board/ Base Ply	Membrane and Attachment (Note 9)			MDP (psf)
						TPO	TPO FB	TPO SA	
LC-A-32	OPTIONAL DynaWeld Cap FR torch applied over deck primed with ASTM D41	Min. 490 psi LWIC or Existing LWIC with MCRF = 164lbf using Trufast VERAS-FAST Fastener	-	OPTIONAL Min. 0.5-inch ISO applied in KLFA 12-inch o.c.	DensDeck Prime, DEXcell FA, or SECUROCK applied in KLFA 12-inch o.c.	-	HA	-	-240 (Lim 9)
LC-A-33	OPTIONAL DynaWeld Cap FR torch applied over deck primed with ASTM D41	Min. 490 psi LWIC or Existing LWIC with MCRF = 164lbf using Trufast VERAS-FAST Fastener	-	Min. 0.5-inch ISO applied in KLFA 12-inch o.c.	-	WBMA, MBA or LVOC	KLFA(S) or WBMA	-	-240 (Lim 9)
LC-A-34	-	Min. 380psi Concrecel	-	-	-	LVOC or MBA	-	-	-257.5 (Lim. 9)
LC-A-35	-	Min. 480psi Celcore MF	-	-	-	-	PG1 applied 4-inch o.c. or PG1(S)	-	-257.5 (Lim. 9)
LC-A-36	-	Min. 250psi Elastizell with Zell-Crete Fibers (no EPS Board)	-	-	-	-	PG1 applied 6-inch o.c. or PG1(S)	-	-290 (Lim. 9)
LC-A-37	-	Min. 280 psi LWIC with MCRF = 141lbf using Trufast VERAS- FAST Fastener	-	-	-	WBMA	-	-	-292.5 (Lim. 9)
LC-A-38	VB-LWIC	Min. 300psi Celcore MF	-	-	-	LSBA, LVOC, or MBA	LSBA, WBMA, PG1 applied 8-inch o.c. or PG1(S)	-	-305 (Lim. 9)
LC-A-39	OPTIONAL VB-LWIC	Min. 360psi Celcore MF	-	-	-	MBA	-	-	-337.5 (Lim. 9)
LC-A-40	DynaWeld Cap FR torch applied over deck primed with ASTM D41	Min. 490 psi LWIC or Existing LWIC with MCRF = 164lbf using Trufast VERAS-FAST Fastener over	-	-	-	-	KLFA(S)	-	-342.5 (Lim. 9)
LC-A-41	OPTIONAL VB-LWIC	Min. 290psi Celcore MF	-	-	-	-	KLFA(B)	-	-345 (Lim. 9)
LC-A-42	-	Min. 490 psi LWIC or Existing LWIC with MCRF = 164lbf using Trufast VERAS-FAST Fastener	-	-	-	-	KLFA(S)	-	-375 (Lim. 9)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Adhered Lightweight Insulating Concrete Assemblies over Concrete Deck (New or Existing)									
System No.	Vapor Barrier	LWIC	Anchor Sheet	Base Insulation (Note 6)	Cover Board/ Base Ply	Membrane and Attachment (Note 9)			MDP (psf)
						TPO	TPO FB	TPO SA	
LC-A-43	OPTIONAL VB-LWIC	Min. 360psi <i>Celcore MF</i>	-	-	-	-	PG1 applied 8-inch o.c. or PG1(S)	-	-502.5 (Lim. 9)
LC-A-44	OPTIONAL VB-LWIC	Min. 290psi <i>Celcore MF</i>	-	-	-	LSBA, LVOC, or MBA	KLFA(S), LSBA, or WBMA	-	-502.5 (Lim. 9)
LC-A-45	-	Min. 300psi Concrecel; or Existing LWIC with MCRF = 105lbf using Trufast VERAS-FAST Fastener	-	-	-	LSBA, LVOC, or MBA	PG1(S), KLFA(S), LSBA, or WBMA	-	-502.5 (Lim. 9)

Lightweight Concrete Assemblies with Adhered Membranes over Concrete Deck (New or Existing)								
System No.	LWIC	Base or Anchor Sheet	Base Insulation	Top Insulation/ Cover Board	Membrane and Attachment (Note 10)			MDP (psf)
					TPO	TPO FB	TPO SA	
LC-AM-1	Min. 200psi Elastizell with Zell-Crete Fibers	PermaPly 28 secured with OMG CR Base Sheet Fastener 1.7 secured 9-inch o.c. at the lap and 9-inch o.c. in two (2) equally spaced staggered rows in the field	-	-	-	HA	-	-45 (Lim. 7)
LC-AM-2	Min. 350psi Celcore MF	DynaBase, DynaLastic 180 S, GlasBase Plus, or Ventsulation Felt secured with OMG CR Base Sheet Fastener 1.7 secured 7-inch o.c. at the 3-inch side laps and 7-inch o.c. in two (2) equally spaced staggered rows in the field	Min. 0.5-inch ISO adhered in KLFA applied 12-inch o.c.	-	WBMA, MBA, LSBA, 1168 or LVOC	PG1(B) or KLFA(S)	SA	-45 (Lim. 7)
LC-AM-3	Min. 350psi Celcore MF	DynaBase, DynaLastic 180 S, GlasBase Plus, or Ventsulation Felt secured with OMG CR Base Sheet Fastener 1.7 secured 7-inch o.c. at the 3-inch side laps and 7-inch o.c. in two (2) equally spaced staggered rows in the field	-	ISO HD, SECUROCK or DensDeck Prime adhered in KLFA applied 12-inch o.c.	WBMA	-	-	-45 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Lightweight Concrete Assemblies with Adhered Membranes over Concrete Deck (New or Existing)								
System No.	LWIC	Base or Anchor Sheet	Base Insulation	Top Insulation/ Cover Board	Membrane and Attachment (Note 10)			MDP (psf)
					TPO	TPO FB	TPO SA	
LC-AM-4	Min. 350psi <i>Celcore MF</i>	DynaBase, DynaLastic 180 S, GlasBase Plus, or Ventsulation Felt secured with OMG CR Base Sheet Fastener 1.7 secured 7-inch o.c. at the 3-inch side laps and 7-inch o.c. in two (2) equally spaced staggered rows in the field	-	<i>SECUROCK</i> or <i>DensDeck Prime</i> adhered in <i>KLFA</i> applied 12-inch o.c.	-	HA	-	-45 (Lim. 7)
LC-AM-5	Min. 430psi Concrecel; or Existing <i>LWIC</i> with <i>MCRF</i> = 105lbf using Trufast VERAS-FAST Fastener	-	-	Min. 0.5-inch <i>DensDeck Prime</i> attached secured with <i>VERSA-FAST</i> at a rate of 2 Fasteners/Plate and 16 per 4-ft x 8-ft board	WBMA, MBA, LVOC, 1168 or LSBA	PG1(B), WBMA, LSBA, <i>KLFA</i> (S), or HA	SA	-52.5 (Lim. 7)
LC-AM-6	Min. 360psi <i>Celcore MF</i> over deck treated with <i>Celcore S-1</i> ; or Existing <i>LWIC</i> with <i>MCRF</i> = 162lbf using OMG CR Base Sheet Fastener 1.7	DynaBase or DynaLastic 180 S secured with OMG CR Base Sheet Fastener 1.7 secured 7-inch o.c. at the 3-inch side laps and 7-inch o.c. in two (2) equally spaced, staggered rows in the field	-	-	-	<i>KLFA</i> (S)	-	-60 (Lim. 7)
LC-AM-7	Min. 340psi <i>Celcore MF</i> over deck treated with <i>Celcore S-1</i> ; or Existing <i>LWIC</i> with <i>MCRF</i> = 120lbf using Trufast VERAS-FAST Fastener	-	Min. 2-inch <i>ISO</i> secured with min. 4.5-inch <i>VERSA-FAST</i> at a rate of 2 Fasteners/Plate and 16 per 4-ft x 8-ft board	-	MBA, 1168 or LVOC	PG1(B) or <i>KLFA</i> (S)	SA	-60 (Lim. 7)
LC-AM-8	Min. 340psi <i>Celcore MF</i> ; or Existing <i>LWIC</i> with <i>MCRF</i> = 73lbf using min. 1.8-inch Trufast Twin Loc-Nail	PermaPly 28 secured with min. 1.8-inch Trufast Twin Loc-Nails secured 6-inch o.c. at the 4-inch side laps and 6-inch o.c. in two (2) equally spaced rows in the field	-	Min. 0.5-inch <i>DensDeck Prime</i> or <i>SECUROCK</i> adhered in <i>PG1</i> applied over fasteners rows (approx. 10.7-inch o.c.)	WBMA, MBA, LVOC, or LSBA	-	SA	-82.5 (Lim. 7)

Mechanically Fastened Lightweight Concrete Assemblies over Concrete Deck (New, Existing, or Recover)						
System No.	LWIC	Insulation/Cover Board	Insulation/Cover Board Attachment	Membrane	Membrane Attachment	MDP (psf)
LC-M-1	Min. 270psi <i>Celcore MF</i> ; or Existing <i>LWIC</i> with <i>MCRF</i> = 96lbf using Trufast VERAS-FAST Fastener	-	-	Kingspan TPO (Min. 60 mil)	Attached in-lap 6-inch o.c. with <i>VERSA-FAST</i> at a rate of 4 Fasteners (Trapezoid) /Plate; Fastener rows max. 90-inch o.c.	-60 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Mechanically Fastened Lightweight Concrete Assemblies over Concrete Deck (New, Existing, or Recover)						
System No.	LWIC	Insulation/Cover Board	Insulation/Cover Board Attachment	Membrane	Membrane Attachment	MDP (psf)
LC-M-2	Min. 200psi Elastizell with Zell-Crete Fibers	-	-	TPO	Attached in-lap 6-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 90-inch o.c.	-67.5 (Lim. 7)
LC-M-3	Min. 270psi Celcore MF; or Existing LWIC with MCRF = 96lbf using Trufast VERAS-FAST Fastener	-	-	Kingspan TPO (Min. 60 mil)	Attached in-lap 6-inch o.c. with VERSA-FAST at a rate of 4 Fasteners (Trapezoid) /Plate; Fastener rows max. 66-inch o.c.	-67.5 (Lim. 7)
LC-M-4	Min. 270psi Celcore MF; or Existing LWIC with MCRF = 96lbf using Trufast VERAS-FAST Fastener	-	-	TPO	OMG Polymer Batten Strip spaced 30-inch o.c. and secured with Trufast VERAS-FAST fasteners spaced 3-inch o.c.; Battens covered with min. 5-inch wide TPO cover strip	-67.5 (Lim. 7)

Induction Welded Lightweight Concrete Assemblies over Concrete Deck (New or Existing) (New, Existing, or Recover)						
System No.	LWIC	Insulation/Cover Board	Insulation/Cover Board Attachment	Membrane	Membrane Attachment (Note 12)	MDP (psf)
LC-W-1	Min. 200psi Elastizell with Zell-Crete Fibers	-	Kingspan TPO Induction Welding Plates and OMG Heavy Duty secured (into Concrete Deck) 6-inch o.c. in rows spaced 96-inch o.c.	Kingspan TPO (Min. 60 mil)	Induction welded to plates	-60 (Lim. 7)

Adhered Lightweight Concrete Assemblies over Steel Deck (New or Existing)								
System No.	Deck Detail	LWIC	Base Insulation (Note 6)	Top Insulation/ Cover Board	Membrane and Attachment			MDP (psf)
					TPO	TPO FB	TPO SA	
LS-A-1	G33	Min. 700psi cellular lightweight concrete (MCRF = 121lbf with JM Lightweight Concrete (LWC) CR Base Fasteners)	-	-	-	KLFA(S)	-	-52.5 (Lim. 9)
LS-A-2	G33	Min. 420 psi LWIC or Existing LWIC with MCRF = 128lbf using FM-90 Base Sheet Fastener	OPTIONAL Min. 1-inch ISO adhered in PG1 applied 12-inch o.c.	ISO HD, SECUROCK, DensDeck Prime, or DEXcell FA adhered in PG1 applied 12-inch o.c.	LVOC, MBA, LSBA, or WBMA	WBMA or KLFA(S)	SA	-60 (Lim. 9)
LS-A-3	G33	Min. 420 psi LWIC or Existing LWIC with MCRF = 128lbf using FM-90 Base Sheet Fastener	OPTIONAL Min. 1-inch ISO adhered in PG1 applied 12-inch o.c.	SECUROCK, DensDeck Prime, or DEXcell FA adhered in PG1 applied 12-inch o.c.	-	HA	-	-60 (Lim. 9)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Adhered Lightweight Concrete Assemblies over Steel Deck (New or Existing)								
System No.	Deck Detail	LWIC	Base Insulation (Note 6)	Top Insulation/ Cover Board	Membrane and Attachment			MDP (psf)
					TPO	TPO FB	TPO SA	
LS-A-4	G33	Min. 420 psi LWIC or Existing LWIC with MCRF = 128lbf using FM-90 Base Sheet Fastener	Min. 1-inch ISO adhered in PG1 applied 12-inch o.c.	-	LVOC, MBA, LSBA, or WBMA	KLFA(S)	SA	-60 (Lim. 9)
LS-A-5	G33	Min. 470 psi LWIC (MCRF ≥135 lbf with Trufast FM-90 Base Sheet Fastener)	-	Min. 0.5-inch ISO, ISO HD, DensDeck Prime, or SECUROCK applied in PG1(H)	LVOC, MBA, LSBA, or WBMA	WBMA or KLFA(S)	SA	-67.5 (Lim. 9)
LS-A-6	G33	Min. 470 psi LWIC (MCRF ≥135 lbf with Trufast FM-90 Base Sheet Fastener)	-	DensDeck Prime or SECUROCK applied in PG1(H)	-	HA	-	-67.5 (Lim. 9)
LS-A-7	G33	Min. 290psi Celcore MF over deck treated with Celcore S-1	-	-	LSBA, LVOC, or MBA	KLFA(S), LSBA, or WBMA	-	-90 (Lim. 9)
LS-A-8	G80	Min. 250psi Elastizell with Zell-Crete Fibers	-	-	LVOC	PG1 applied 6-inch o.c. or PG1(S)	-	-97.5 (Lim. 9)
LS-A-9	24ga., 15/16-inch HD steel deck	Min. 420psi Celcore MF over deck treated with Celcore S-1	-	-	LSBA, LVOC, or MBA	PG1(S), KLFA(S), LSBA, or WBMA	-	-97.5 (Lim. 9)
LS-A-10	G40	Min. 420psi Celcore MF with Celcore SBS over deck treated with Celcore S-1	-	-	-	KLFA(S)	-	-157.5 (Lim. 9)

Lightweight Insulating Concrete Assemblies with Adhered Membranes over Steel Deck (New or Existing)									
System No.	Deck Detail	LWIC	Base or Anchor Sheet	Base Insulation	Top Insulation/ Cover Board	Membrane and Attachment (Note 10)			MDP (psf)
						TPO	TPO FB	TPO SA	
LS-AM-1	G33	Min. 200psi Elastizell with Zell-Crete Fibers	PermaPly 28 secured with OMG CR Base Sheet Fastener 1.7 secured 9-inch o.c. at the lap and 9-inch o.c. in two (2) equally spaced staggered rows in the field	-	-	-	HA	-	-45 (Lim. 7)
LS-AM-2	G33	Min. 350psi Celcore MF	DynaBase, DynaLastic 180 S, GlasBase Plus, or Ventsulation Felt secured with OMG CR Base Sheet Fastener 1.7 secured 7-inch o.c. at the 3-inch side laps and 7-inch o.c. in two (2) equally spaced staggered rows in the field	Min. 0.5-inch ISO adhered in KLFA applied 12-inch o.c.	-	WBMA, MBA, LSBA, 1168 or LVOC	PG1(B) or KLFA(S)	SA	-45 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Lightweight Insulating Concrete Assemblies with Adhered Membranes over Steel Deck (New or Existing)									
System No.	Deck Detail	LWIC	Base or Anchor Sheet	Base Insulation	Top Insulation/ Cover Board	Membrane and Attachment (Note 10)			MDP (psf)
						TPO	TPO FB	TPO SA	
LS-AM-3	G33	Min. 350psi <i>Celcore MF</i>	DynaBase, DynaLastic 180 S, GlasBase Plus, or Ventsulation Felt secured with OMG CR Base Sheet Fastener 1.7 secured 7-inch o.c. at the 3-inch side laps and 7-inch o.c. in two (2) equally spaced staggered rows in the field	Min. 0.5-inch Kingspan ISO GF adhered in <i>KLFA</i> , <i>OSFA</i> , or <i>PG1</i> applied 12-inch o.c.	-	-	HA	-	-45 (Lim. 7)
LS-AM-4	G33	Min. 350psi <i>Celcore MF</i>	DynaBase, DynaLastic 180 S, GlasBase Plus, or Ventsulation Felt secured with OMG CR Base Sheet Fastener 1.7 secured 7-inch o.c. at the 3-inch side laps and 7-inch o.c. in two (2) equally spaced staggered rows in the field	-	<i>ISO HD</i> , <i>SECUROCK</i> or <i>DensDeck Prime</i> adhered in <i>KLFA</i> applied 12-inch o.c.	WBMA	-	-	-45 (Lim. 7)
LS-AM-5	G33	Min. 350psi <i>Celcore MF</i>	DynaBase, DynaLastic 180 S, GlasBase Plus, or Ventsulation Felt secured with OMG CR Base Sheet Fastener 1.7 secured 7-inch o.c. at the 3-inch side laps and 7-inch o.c. in two (2) equally spaced staggered rows in the field	-	<i>SECUROCK</i> or <i>DensDeck Prime</i> adhered in <i>KLFA</i> applied 12-inch o.c.	-	HA	-	-45 (Lim. 7)
LS-AM-6	G33	Min. 430psi Concrecel; or Existing LWIC with <i>MCRF</i> = 105lbf using Trufast VERAS-FAST Fastener	-	-	Min. 0.5-inch DensDeck Prime attached secured with <i>VERSA-FAST</i> at a rate of 2 Fasteners/Plate and 16 per 4-ft x 8-ft board	WBMA, MBA, LVOC, 1168 or LSBA	<i>PG1(B)</i> , WBMA, LSBA or <i>KLFA(S)</i> , or HA	SA	-52.5 (Lim. 7)
LS-AM-7	G33	Min. 340psi <i>Celcore MF</i> over deck treated with Celcore S-1; or Existing LWIC with <i>MCRF</i> = 120lbf using Trufast VERAS-FAST Fastener	-	Min. 2-inch <i>ISO</i> secured with min. 4.5-inch <i>VERSA-FAST</i> at a rate of 2 Fasteners/Plate and 16 per 4-ft x 8-ft board	-	MBA, 1168 or LVOC	<i>PG1(B)</i> , or <i>KLFA(S)</i>	SA	-60 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Lightweight Insulating Concrete Assemblies with Adhered Membranes over Steel Deck (New or Existing)									
System No.	Deck Detail	LWIC	Base or Anchor Sheet	Base Insulation	Top Insulation/ Cover Board	Membrane and Attachment (Note 10)			MDP (psf)
						TPO	TPO FB	TPO SA	
LS-AM-8	G33	Min. 360psi <i>Celcore MF</i> over deck treated with Celcore S-1; or Existing <i>LWIC</i> with <i>MCRF</i> = 162lbf using OMG CR Base Sheet Fastener 1.7	DynaBase or DynaLastic 180 S secured with OMG CR Base Sheet Fastener 1.7 secured 7-inch o.c. at the 3-inch side laps and 7-inch o.c. in two (2) equally spaced rows in the field	-	-	-	KLFA(S)	-	-60 (Lim. 7)
LS-AM-9	G33	Min. 340psi <i>Celcore MF</i> over deck treated with Celcore S-1; or Existing <i>LWIC</i> with <i>MCRF</i> = 74lbf using 1.8-inch Trufast Twin Loc-Nail	PermaPly 28 secured with min. 1.8-inch Trufast Twin Loc-Nails secured 6-inch o.c. at the 4-inch side laps and 6-inch o.c. in two (2) equally spaced rows in the field	-	Min. 0.5-inch <i>DensDeck Prime</i> or <i>SECUROCK</i> adhered in <i>PG1</i> applied over fasteners rows (approx. 10.7-inch o.c.)	WBMA, MBA, LVOC, or LSBA	-	SA	-82.5 (Lim. 7)
LS-AM-10	G33	Min. 340psi <i>Celcore MF</i> over deck treated with Celcore S-1; or Existing <i>LWIC</i> with <i>MCRF</i> = 74lbf using 1.8-inch Trufast Twin Loc-Nail	PermaPly 28 secured with min. 1.8-inch Trufast Twin Loc-Nails secured 6-inch o.c. at the 4-inch side laps and 6-inch o.c. in two (2) equally spaced rows in the field	-	Min. 0.5-inch <i>SECUROCK</i> adhered in <i>PG1</i> applied over fasteners rows (approx. 10.7-inch o.c.)	-	KLFA(S)	-	-82.5 (Lim. 7)

Mechanically Fastened Lightweight Insulating Concrete Assemblies over Steel Deck (New, Existing, or Recover)							
System No.	Deck Detail	LWIC	Insulation/Cover Board	Insulation/Cover Board Attachment	Membrane	Membrane Attachment (Note 12)	MDP (psf)
LS-M-1	G33	Min. 290psi <i>Celcore MF</i> over deck treated with Celcore S-1; or Existing <i>LWIC</i> with <i>MCRF</i> = 96lbf using Trufast VERAS-FAST Fastener	-	-	Kingspan TPO (Min. 60 mil)	Attached in-lap 6-inch o.c. with <i>VERSA-FAST</i> at a rate of 4 Fasteners (Trapezoid) /Plate; Fastener rows max. 114-inch o.c.	-37.5 (Lim. 7)
LS-M-2	G33	Min. 270psi <i>Celcore MF</i> over deck treated with Celcore S-1; or Existing <i>LWIC</i> with <i>MCRF</i> = 96lbf using Trufast VERAS-FAST Fastener	-	-	Kingspan TPO (Min. 60 mil)	Attached in-lap 6-inch o.c. with <i>VERSA-FAST</i> at a rate of 4 Fasteners (Trapezoid) /Plate; Fastener rows max. 90-inch o.c.	-60 (Lim. 7)
LS-M-3	G33	Min. 200psi Elastizell with Zell-Crete Fibers	-	-	TPO	Attached in-lap 6-inch o.c. with <i>HL Fastener & Plates</i> ; Fastener rows max. 90-inch o.c.	-67.5 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Mechanically Fastened Lightweight Insulating Concrete Assemblies over Steel Deck (New, Existing, or Recover)							
System No.	Deck Detail	LWIC	Insulation/Cover Board	Insulation/Cover Board Attachment	Membrane	Membrane Attachment (Note 12)	MDP (psf)
LS-M-4	G33	Min. 270psi Celcore MF over deck treated with Celcore S-1; or Existing LWIC with MCRF = 96lbf using Trufast VERAS-FAST Fastener	-	-	Kingspan TPO (Min. 60 mil)	Attached in-lap 6-inch o.c. with VERSA-FAST at a rate of 4 Fasteners (Trapezoid) /Plate; Fastener rows max. 66-inch o.c.	-67.5 (Lim. 7)
LS-M-5	G33	Min. 270psi Celcore MF over deck treated with Celcore S-1; or Existing LWIC with MCRF = 96lbf using Trufast VERAS-FAST Fastener	-	-	TPO	OMG Polymer Batten Strip spaced 30-inch o.c. and secured with Trufast VERSA-FAST fasteners spaced 3-inch o.c.; Battens covered with min. 5-inch wide TPO cover strip	-67.5 (Lim. 7)

Induction Welded Lightweight Insulating Concrete Assemblies over Steel Deck (New or Existing) (New, Existing, or Recover)							
System No.	Deck Detail	LWIC	Insulation/Cover Board	Insulation/Cover Board Attachment	Membrane	Membrane Attachment	MDP (psf)
LS-W-1	G33	Min. 200psi Elastizell with Zell-Crete Fibers	-	Kingspan TPO Induction Welding Plates and Kingspan #15 Fasteners (into Steel Deck) secured 6-inch o.c. in rows spaced 96-inch o.c.-	Kingspan TPO (Min. 60 mil)	Induction welded to plates	-60 (Lim. 7)

Adhered Recover Assemblies							
System No.	Existing Roof (Note 13)	Base Insulation (Note 6)	Top Insulation or Base Ply	Membrane and Attachment (Note 9)			MDP (psf)
				TPO	TPO FB	TPO SA	
R-A-1	BUR or Mod-Bit Roofing with mineral surfacing	-	-	-	PG1(B), PG1(S), or KLFA(S)	-	-45 (Lim. 9)
R-A-2	BUR or Granular Mod-Bit Roofing	-	DensDeck Prime in PG1 applied 12-inch o.c.	-	PG1(B) or PG1(S)	-	-45 (Lim. 9)
R-A-3	BUR or Granular Mod-Bit Roofing	OPTIONAL Min. 0.5-inch Kingspan ISO GF in PG1, OSFA or KLFA applied 12-inch o.c.	DensDeck Prime or StormX in PG1 applied 12-inch o.c.	-	PG1(B) or PG1(S)	-	-45 (Lim. 9)
R-A-4	BUR or Granular Mod-Bit Roofing	-	DensDeck Prime in KLFA or PG1 applied 12-inch o.c.	-	KLFA(S)	-	-45 (Lim. 9)
R-A-5	BUR or Smooth SBS Mod-Bit Roofing	-	-	-	PG1(B)	-	-45 (Lim. 9)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Adhered Recover Assemblies							
System No.	Existing Roof (Note 13)	Base Insulation (Note 6)	Top Insulation or Base Ply	Membrane and Attachment (Note 9)			MDP (psf)
				TPO	TPO FB	TPO SA	
R-A-6	BUR or Granular Mod-Bit Roofing	OPTIONAL Min. 0.5-inch Kingspan ISO GF adhered in PG1, KLFA, or OSFA applied 12-inch o.c.	ISO HD adhered in PG1, KLFA, or OSFA applied 12-inch o.c.	MBA, LVOC, LSBA, 1168 or WBMA	WBMA or KLFA(S)	SA	-105 (Lim. 9)
R-A-7	BUR or Granular Mod-Bit Roofing	OPTIONAL Min. 0.5-inch Kingspan ISO GF adhered in PG1, KLFA, or OSFA applied 12-inch o.c.	DEXcell FA adhered in PG1 or OSFA applied 12-inch o.c.	WBMA or LSBA	KLFA(S), WBMA, or HA	-	-105 (Lim. 9)
R-A-8	BUR or Granular Mod-Bit Roofing	OPTIONAL Min. 0.5-inch Kingspan ISO GF adhered in PG1, KLFA, or OSFA applied 12-inch o.c.	SECUROCK or DensDeck Prime adhered in PG1, KLFA, or OSFA applied 12-inch o.c.	WBMA, LVOC, 1168 or LSBA	KLFA(S), WBMA, or HA	SA	-105 (Lim. 9)
R-A-9	BUR	-	-	-	PG1(S)	-	-150 (Lim. 9)
R-A-10	BUR or Granular Mod-Bit Roofing	Min. 1-inch Kingspan ISO GF adhered in PG1, KLFA, or OSFA applied 12-inch o.c.	-	MBA, LVOC, LSBA, 1168 or WBMA	KLFA(S), PG1(B), or PG1(S)	SA	-157.5 (Lim. 9)
R-A-11	BUR or Granular Mod-Bit Roofing	OPTIONAL Min. 0.5-inch Kingspan ISO GF adhered in PG1, KLFA, or OSFA applied 12-inch o.c.	DEXcell FA adhered in PG1 or OSFA applied 12-inch o.c.	WBMA	-	-	-180 (Lim. 9)
R-A-12	BUR or Granular Mod-Bit Roofing	OPTIONAL Min. 0.5-inch Kingspan ISO GF adhered in PG1, KLFA, or OSFA applied 12-inch o.c.	SECUROCK or DensDeck Prime adhered in PG1, KLFA, or OSFA applied 12-inch o.c.	TPO WBMA, LVOC, WBMA, 1168 or LSBA	KLFA(S), WBMA, or HA	SA	-180 (Lim. 9)
R-A-13	BUR or Granular Mod-Bit Roofing	OPTIONAL Min. 0.5-inch Kingspan ISO GF adhered in PG1, KLFA, or OSFA applied 12-inch o.c.	ISO HD adhered in PG1, KLFA, or OSFA applied 12-inch o.c.	WBMA	WBMA	-	-187.5 (Lim. 9)
R-A-14	BUR or Granular Mod-Bit Roofing	OPTIONAL Min. 0.5-inch Kingspan ISO GF adhered in PG1, KLFA, or OSFA applied 12-inch o.c.	ISO HD adhered in PG1, KLFA, or OSFA applied 12-inch o.c.	LVOC	KLFA(S)	SA	-210 (Lim. 9)
R-A-15	BUR	Min. 1.5-inch ISO adhered in KLFA applied 12-inch o.c.	-	-	HA	-	-217.5 (Lim. 9)
R-A-16	BUR or Granular Mod-Bit Roofing	OPTIONAL Min. 0.5-inch Kingspan ISO GF adhered in PG1, KLFA, or OSFA applied 12-inch o.c.	DEXcell FA adhered in PG1 or OSFA applied 12-inch o.c.	LSBA, LVOC, WBMA, 1168 or MBA	KLFA(S), HA, or WBMA	SA	-217.5 (Lim. 9)
R-A-17	BUR or Granular Mod-Bit Roofing	OPTIONAL Min. 0.5-inch Kingspan ISO GF in PG1, OSFA or KLFA applied 12-inch o.c.	DensDeck Prime or StormX in PG1 applied 12-inch o.c.	LSBA, LVOC, MBA, or WBMA	KLFA(S), WBMA, PG1(S), or PG1 applied 4-inch o.c.	SA	-217.5 (Lim. 9)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Adhered Recover Assemblies							
System No.	Existing Roof (Note 13)	Base Insulation (Note 6)	Top Insulation or Base Ply	Membrane and Attachment (Note 9)			MDP (psf)
				TPO	TPO FB	TPO SA	
R-A-18	Granular Mod-Bit Roofing or Granular BUR	Min. 0.5-inch Kingspan ISO GF adhered in PG1 applied 12-inch o.c.	-	MBA	-	-	-210 (Lim. 9)
R-A-19	BUR or Granular Mod-Bit Roofing	OPTIONAL Min. 0.5-inch Kingspan ISO GF adhered in PG1, KLFA, or OSFA applied 12-inch o.c.	ISO HD adhered in PG1, KLFA, or OSFA applied 12-inch o.c.	LSBA, LVOC, MBA, or WBMA	KLFA(S) or WBMA	-	-225 (Lim. 9)
R-A-20	Granular Mod-Bit Roofing or Granular BUR	-	DensDeck Prime adhered in PG1 applied 12-inch o.c.	-	PG1 applied 12-inch o.c.	-	-247.5 (Lim. 9)
R-A-21	Granular Mod-Bit Roofing or Granular BUR	Min. 0.5-inch Kingspan ISO GF in PG1 applied 12-inch o.c.	ISO HD, DensDeck Prime or SECUROCK applied in PG1 applied 12-inch o.c.	-	WBMA	-	-277.5 (Lim. 9)
R-A-22	Granular Mod-Bit Roofing or Granular BUR	Min. 0.5-inch Kingspan ISO GF in PG1 applied 12-inch o.c.	-	LSBA	-	-	-277.5 (Lim. 9)
R-A-23	Granular Mod-Bit Roofing or Granular BUR	Min. 0.5-inch Kingspan ISO GF in PG1 applied 12-inch o.c.	ISO HD, DensDeck Prime or SECUROCK applied in PG1 applied 12-inch o.c.	LSBA, LVOC, MBA, or WBMA	KLFA(S) or WBMA	SA	-277.5 (Lim. 9)
R-A-24	Granular Mod-Bit Roofing or Granular BUR	Min. 0.5-inch Kingspan ISO GF in PG1 applied 12-inch o.c.	DensDeck Prime or SECUROCK applied in PG1 applied 12-inch o.c.	-	HA	-	-277.5 (Lim. 9)
R-A-25	Smooth SBS Mod-Bit Roofing	-	-	-	PG1(S)	-	-330 (Lim. 9)
R-A-26	BUR or Granular Mod-Bit Roofing	-	DensDeck Prime in KLFA applied 12-inch o.c.	LVOC, MBA, or WBMA	KLFA(S) or WBMA	-	-337.5 (Lim. 9)
R-A-27	Granular Mod-Bit Roofing or Granular BUR	-	ISO HD adhered in PG1 applied 12-inch o.c.	MBA or LVOC	KLFA(S)	-	-400 (Lim. 9)
R-A-28	Granular Mod-Bit Roofing or Granular BUR	-	-	-	PG1(B) or PG1(S)	-	-440 (Lim. 9)
R-A-29	Granular Mod-Bit Roofing or Granular BUR	-	-	-	KLFA(S) at 6lbs/100ft ²	-	-502.5 (Lim. 9)

Mechanically Fastened Recover Assemblies								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment (Note 12)	MDP (psf)
R-M-1	Steel Deck (G33) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch ISO or Cover Board (Insulation is OPTIONAL with TPO FB)	Preliminarily Secured	TPO or TPO FB	Attached in-lap 12-inch o.c. with Kingspan #15 Fasteners and Kingspan Barbed Seam Plates for Steel Deck or OMG Heavy Duty and Kingspan Barbed Seam Plates for Concrete Deck; Fastener rows max. 114-inch o.c.	-30 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Mechanically Fastened Recover Assemblies								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment (Note 12)	MDP (psf)
R-M-2	Steel Deck (G33) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch ISO or Cover Board (Insulation is OPTIONAL with TPO FB)	Preliminarily Secured	TPO or TPO FB	Attached in-lap 12-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 114-inch o.c.	-30 (Lim. 7)
R-M-3	Steel Deck (G80) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch ISO or Cover Board	Preliminarily Secured	Kingspan TPO (Min. 60 mil)	Attached in-lap 12-inch o.c. with HL Fastener & Plates; Fastener rows max. 90-inch o.c.	-37.5 (Lim. 7)
R-M-4	Wood Deck (T19/32P)	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch ISO or Cover Board (Insulation is OPTIONAL with TPO FB)	Preliminarily Secured	TPO or TPO FB	Attached in-lap 4-inch o.c. with #15 Fasteners & 2" Plates; Fastener rows max. 114-inch o.c.	-37.5 (Lim. 7)
R-M-5	Existing metal roof having Min. 16 ga. steel purlins	-	-	OPTIONAL INSULATION	Preliminarily Secured	TPO	Attached in-lap 12-inch o.c. with Kingspan Purlin Fasteners and OMG Eyehook Accuseam Plates to structural supports; Fastener rows max. 114-inch o.c.	-37.5 (Lim. 7)
R-M-6	Existing metal roof having Min. 16 ga. steel purlins	Min. 1.5-inch ISO or EPS placed between ribs	Preliminarily Secured or secured with top layer	Min. 1-inch ISO or Cover Board	Preliminarily Secured	TPO or TPO FB	Attached in-lap 12-inch o.c. with Kingspan Purlin Fasteners and OMG Eyehook Accuseam Plates to structural supports; Fastener rows max. 60-inch o.c.	-37.5 (Lim. 7)
R-M-7	Existing metal roof having Min. 14 ga. steel purlins	Min. 1.5-inch ISO or EPS placed between ribs	Preliminarily Secured or secured with top layer	Min. 1-inch ISO or Cover Board	Preliminarily Secured	TPO or TPO FB	Attached in-lap 12-inch o.c. with Kingspan Purlin Fasteners and OMG Eyehook Accuseam Plates to structural supports; Fastener rows max. 60-inch o.c.	-45 (Lim. 7)
R-M-8	Steel Deck (G80) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch ISO or Cover Board	Preliminarily Secured	TPO	Attached in-lap 12-inch o.c. with Kingspan #15 Fasteners and Kingspan Barbed Seam Plates for Steel Deck or OMG Heavy Duty and Kingspan Barbed Seam Plates for Concrete Deck; Fastener rows max. 90-inch o.c.	-45 (Lim. 7)
R-M-9	Steel Deck (G80) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch ISO or Cover Board (Insulation is OPTIONAL with TPO FB)	Preliminarily Secured	TPO or TPO FB	Attached in-lap 6-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 114-inch o.c.	-45 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Mechanically Fastened Recover Assemblies								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment (Note 12)	MDP (psf)
R-M-10	Existing metal roof having Min. 16 ga. steel purlins	-	-	OPTIONAL INSULATION	Preliminarily Secured	TPO	Attached in-lap 6-inch o.c. with Kingspan Purlin Fasteners and OMG Eyehook Accuseam Plates to structural supports; Fastener rows max. 114-inch o.c.	-45 (Lim. 7)
R-M-11	Wood Deck (T19/32P, L24)	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch ISO or Cover Board (Insulation is OPTIONAL with TPO FB)	Preliminarily Secured	TPO or TPO FB	Attached in-lap 6-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 54-inch o.c.	-60 (Lim. 7)
R-M-12	Steel Deck (G80) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch ISO or Cover Board	Preliminarily Secured	TPO	Attached in-lap 6-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 90-inch o.c.	-60 (Lim. 7)
R-M-13	Steel Deck (G33) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch ISO or Cover Board (Insulation is OPTIONAL with TPO FB)	Preliminarily Secured	TPO or TPO FB	Attached in-lap 6-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 114-inch o.c.	-60 (Lim. 7)
R-M-14	Existing metal roof having Min. 16 ga. steel purlins	Min. 1.5-inch ISO or EPS placed between ribs	Preliminarily Secured or secured with top layer	Min. 1-inch ISO or Cover Board	Preliminarily Secured	TPO	Attached in-lap 6-inch o.c. with Kingspan Purlin Fasteners and OMG Eyehook Accuseam Plates to structural supports; Fastener rows max. 114-inch o.c.	-60 (Lim. 7)
R-M-15	Existing metal roof over Min. 16 ga. steel purlins	-	-	OPTIONAL INSULATION	Preliminarily Secured	TPO	Attached in-lap 6-inch o.c. with Kingspan Purlin Fasteners and OMG Eyehook Accuseam Plates to structural supports; Fastener rows max. 90-inch o.c.	-60 (Lim. 7)
R-M-16	Existing metal roof over Min. 16 ga. steel purlins	Min. 1.5-inch ISO or EPS placed between ribs	Preliminarily Secured or secured with top layer	Min. 1-inch ISO or Cover Board	Preliminarily Secured	Kingspan TPO (Min. 60 mil)	Attached in-lap 6-inch o.c. with Kingspan Purlin Fasteners and OMG Eyehook Accuseam Plates to structural supports; Fastener rows max. 138-inch o.c.	-67.5 (Lim. 7)
R-M-17	Steel Deck (G33) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch ISO or Cover Board	Preliminarily Secured	TPO	Attached in-lap 6-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 90-inch o.c.	-75 (Lim. 7)
R-M-18	Existing metal roof over Min. 16 ga. steel purlins	Min. 1.5-inch ISO or EPS placed between ribs	Preliminarily Secured or secured with top layer	Min. 1-inch ISO or Cover Board	Preliminarily Secured	TPO	Attached in-lap 6-inch o.c. with Kingspan Purlin Fasteners and OMG Eyehook Accuseam Plates to structural supports; Fastener rows max. 90-inch o.c.	-75 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Mechanically Fastened Recover Assemblies								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment (Note 12)	MDP (psf)
R-M-19	Existing metal roof over Min. 16 ga. steel purlins	Min. 1.5-inch ISO or EPS placed between ribs	Preliminarily Secured or secured with top layer	Min. 1-inch ISO or Cover Board	Preliminarily Secured	TPO	Attached in-lap 6-inch o.c. with Kingspan Purlin Fasteners and OMG Eyehook Accuseam Plates to structural supports; Fastener rows max. 60-inch o.c.	-82.5 (Lim. 7)
R-M-20	Existing metal roof over Min. 16 ga. steel purlins	Min. 1.5-inch ISO or EPS placed between ribs	Preliminarily Secured or secured with top layer	Min. 1-inch ISO or Cover Board	Preliminarily Secured	TPO	Attached in-lap 6-inch o.c. with Kingspan Purlin Fasteners and OMG Eyehook Accuseam Plates to structural supports; Fastener rows max. 54-inch o.c.	-97.5 (Lim. 7)
R-M-21	Steel Deck (G33) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch ISO or Cover Board (Insulation is OPTIONAL with TPO FB)	Preliminarily Secured	TPO or TPO FB	Attached in-lap 6-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 54-inch o.c.	-97.5 (Lim. 7)
R-M-22	Existing metal roof over Min. 16 ga. steel purlins	Min. 1.5-inch ISO or EPS placed between ribs	Preliminarily Secured or secured with top layer	Min. 1-inch ISO or Cover Board	Preliminarily Secured	Kingspan TPO (Min. 60 mil)	Attached in-lap 6-inch o.c. with Kingspan Purlin Fasteners and OMG Eyehook Accuseam Plates to structural supports; Fastener rows max. 66-inch o.c.	-105 (Lim. 7)

Induction Welded Recover Assemblies								
System No.	Existing Roof	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment (Note 12)	MDP (psf)
R-W-1	Existing metal roof over Min. 16 ga. steel purlins	Min. 1.5-inch ISO or EPS placed between ribs	Preliminarily Secured or secured with top layer	Min. 1-inch ISO or Cover Board	Kingspan Purlin Fasteners and Kingspan TPO Induction Welding Plates secured 18-inch o.c. along the purlins with fastener rows max. 60-inch o.c.	Kingspan TPO (Min. 60 mil)	Induction welded to weld plates	-45 (Lim. 7)
R-W-2	Existing metal roof over Min. 16 ga. steel purlins	Min. 1.5-inch ISO or EPS placed between ribs	Preliminarily Secured or secured with top layer	Min. 1-inch ISO or Cover Board	Kingspan Purlin Fasteners and Kingspan TPO Induction Welding Plates secured 6-inch o.c. along the purlins with fastener rows max. 120-inch o.c.	Kingspan TPO (Min. 60 mil)	Induction welded to weld plates	-45 (Lim. 7)
R-W-3	Existing metal roof over Min. 16 ga. steel purlins	Min. 1.5-inch ISO or EPS placed between ribs	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#12 or ISOWELD-#15 spaced 12-inch o.c. along the purlins with fastener rows max. 60-inch o.c.	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-45 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Induction Welded Recover Assemblies								
System No.	Existing Roof	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment (Note 12)	MDP (psf)
R-W-4	Steel Deck (G33) or Concrete Deck	OPTIONAL Min. 1.5-inch INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch ISO or Cover Board	Attached with Kingspan #15 Fasteners and Kingspan TPO Induction Welding Plates, Trufast TPO IW Plates, or isoweld FI-P-6.8-TPO plates at a rate of 8 per 4-ft x 8-ft board Pattern #1 (1 fastener per 4.0-ft ²)	Kingspan TPO (Min. 60 mil)	Induction welded to weld plates	-45 (Lim. 7)
R-W-5	Existing metal roof over Min. 16 ga. steel purlins	Min. 1.5-inch ISO or EPS placed between ribs	Preliminarily Secured or secured with top layer	Min. 1-inch ISO or Cover Board	Kingspan Purlin Fasteners and Kingspan TPO Induction Welding Plates secured 12-inch o.c. along the purlins with fastener rows max. 72-inch o.c.	Kingspan TPO (Min. 60 mil)	Induction welded to weld plates	-45 (Lim. 7)
R-W-6	Wood Deck (T15/32P, L24)	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch ISO or Cover Board	Min. 2.25-inch OMG Heavy Duty and Kingspan TPO Induction Welding Plates, Trufast TPO IW Plates, or isoweld FI-P-6.8-TPO plates secured max. 24-inch o.c. through sheathing into wood structural supports in rows max. 24-inch o.c.	Kingspan TPO (Min. 60 mil)	Induction welded to weld plates	-52.5 (Lim. 7)
R-W-7	Wood Deck (T15/32P, L24)	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch ISO or Cover Board	Min. 2.25-inch OMG Heavy Duty and Kingspan TPO Induction Welding Plates, Trufast TPO IW Plates, or isoweld FI-P-6.8-TPO plates secured max. 9-inch o.c. through sheathing into wood structural supports in rows max. 48-inch o.c.	Kingspan TPO (Min. 60 mil)	Induction welded to weld plates	-60 (Lim. 7)
R-W-8	Existing metal roof over Min. 16 ga. steel purlins	Min. 1.5-inch ISO or EPS placed between ribs	Preliminarily Secured or secured with top layer	Min. 1-inch ISO or Cover Board	Kingspan Purlin Fasteners and Kingspan TPO Induction Welding Plates secured 12-inch o.c. along the purlins with fastener rows max. 60-inch o.c.	Kingspan TPO (Min. 60 mil)	Induction welded to weld plates	-67.5 (Lim. 7)
R-W-9	Steel Deck (G33) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch ISO or Cover Board	Attached with Kingspan #15 Fasteners and Kingspan TPO Induction Welding Plates, Trufast TPO IW Plates, or isoweld FI-P-6.8-TPO plates at a rate of 12 per 4-ft x 8-ft board Pattern #1 (1 fastener per 2.67-ft ²)	Kingspan TPO (Min. 60 mil)	Induction welded to weld plates	-75 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Induction Welded Recover Assemblies								
System No.	Existing Roof	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment (Note 12)	MDP (psf)
R-W-10	Existing metal roof over Min. 16 ga. steel purlins	Min. 1.5-inch ISO or EPS placed between ribs	<i>Preliminarily Secured or secured with top layer</i>	Min. 1-inch ISO or Cover Board	Kingspan Purlin Fasteners and Kingspan TPO Induction Welding Plates secured 6-inch o.c. along the purlins with fastener rows max. 72-inch o.c.	Kingspan TPO (Min. 60 mil)	Induction welded to weld plates	-82.5 (Lim. 7)
R-W-11	Existing metal roof over Min. 16 ga. steel purlins	Min. 2-inch ISO or EPS placed between ribs	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL INSULATION	Kingspan Purlin Fasteners and Kingspan TPO Induction Welding Plates secured 6-inch o.c. along the purlins with fastener rows max. 120-inch o.c.	Kingspan TPO (Min. 60 mil)	Induction welded to weld plates	-82.5 (Lim. 7)
R-W-12	Steel Deck (G33) or Concrete Deck	OPTIONAL INSULATION	<i>Preliminarily Secured or secured with top layer</i>	Min. 0.5-inch ISO or Cover Board	Attached with Kingspan #15 Fasteners and Kingspan TPO Induction Welding Plates, Trufast TPO IW Plates, or isoweld FI-P-6.8-TPO plates at a rate of 15 per 4-ft x 8-ft board (1 fastener per 2.13-ft ²)	Kingspan TPO (Min. 60 mil)	Induction welded to weld plates	-90 (Lim. 7)
R-W-13	Existing metal roof over Min. 16 ga. steel purlins	Min. 1-inch ISO or EPS placed between ribs	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL INSULATION	Attached with Trufast TPO IW Plates and Trufast #12 Purlin Fasteners spaced 6-inch o.c. along the purlins with fastener rows max. 60-inch o.c.	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-90 (Lim. 7)
R-W-14	Existing metal roof over Min. 16 ga. steel purlins	Min. 1.5-inch ISO or EPS placed between ribs	<i>Preliminarily Secured or secured with top layer</i>	Min. 1-inch ISO or Cover Board	Attached with ISOWELD-#12 or ISOWELD-#15 spaced 6-inch o.c. along the purlins with fastener rows max. 60-inch o.c.	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-97.5 (Lim. 7)
R-W-15	Wood Deck (T15/32P, L24)	OPTIONAL INSULATION	<i>Preliminarily Secured or secured with top layer</i>	Min. 0.5-inch ISO or Cover Board	Min. 2.25-inch OMG Heavy Duty and Kingspan TPO Induction Welding Plates, Trufast TPO IW Plates, or isoweld FI-P-6.8-TPO plates secured max. 6-inch o.c. through sheathing into wood structural supports in rows max. 48-inch o.c.	Kingspan TPO (Min. 60 mil)	Induction welded to weld plates	-112.5 (Lim. 7)
R-W-16	Existing metal roof over Min. 16 ga. steel purlins	Min. 1.5-inch ISO or EPS placed between ribs	<i>Preliminarily Secured or secured with top layer</i>	Min. 1-inch ISO or Cover Board	Kingspan Purlin Fasteners and Kingspan TPO Induction Welding Plates secured 6-inch o.c. along the purlins with fastener rows max. 60-inch o.c.	Kingspan TPO (Min. 60 mil)	Induction welded to weld plates	-120 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Adhered Assemblies over Steel Deck (New or Existing)									
System No.	Deck	Vapor Barrier	Base Insulation (Note 6)	Middle Insulation	Top Insulation/ Cover Board	Membrane and Attachment (Note 10)			MDP (psf)
						TPO	TPO FB	TPO SA	
S-A-1	G33	OPTIONAL VB-Steel	Min. 1.5-inch ISO applied in KLFA or PG1 spaced 12-inch o.c.	OPTIONAL Min. 1-inch ISO applied in KLFA or PG1 spaced 12-inch o.c.	Min. 1-inch Kingspan ISO GF applied in KLFA or PG1 spaced 12-inch o.c.	MBA, LVOC, or LSBA	PG1(B) or KLFA(S)	SA	-45 (Lim. 9)
S-A-2	G33	OPTIONAL VB-Steel	Min. 1.5-inch ISO applied in PG1 spaced 12-inch o.c.	OPTIONAL Min. 1-inch ISO applied in KLFA or PG1 spaced 12-inch o.c.; or PG1(S)	Min. 1-inch Kingspan ISO GF applied in KLFA or PG1 spaced 12-inch o.c.; or PG1(S)	MBA, LVOC, or LSBA	PG1(B) or KLFA(S)	SA	-45 (Lim. 9)
S-A-3	G33	OPTIONAL VB-Steel	OPTIONAL Min. 1.5-inch ISO applied in KLFA or PG1 spaced 12-inch o.c.	-	Min. 1.5-inch Kingspan ISO GF applied in KLFA or PG1 spaced 12-inch o.c.	MBA, LVOC, or LSBA	PG1(B) or KLFA(S)	SA	-45 (Lim. 9)
S-A-4	G33	OPTIONAL VB-Steel	OPTIONAL Min. 1.5-inch ISO applied in PG1 spaced 12-inch o.c.	-	Min. 1.5-inch Kingspan ISO GF applied in KLFA or PG1 spaced 12-inch o.c.	MBA, LVOC, or LSBA	PG1(B) or KLFA(S)	SA	-45 (Lim. 9)
S-A-5	G33	OPTIONAL VB-Steel	Min. 1.5-inch ISO applied in KLFA or PG1 spaced 12-inch o.c.	OPTIONAL Min. 1-inch ISO applied in KLFA or PG1 spaced 12-inch o.c.; or PG1(S)	ISO HD, SECUROCK, or DensDeck Prime applied in KLFA, OSFA, or PG1 spaced 12-inch o.c.; or PG1(S)	MBA, LVOC, or LSBA	KLFA(S)	SA	-45 (Lim. 9)
S-A-6	G33	OPTIONAL VB-Steel	Min. 1.5-inch ISO applied in PG1 spaced 12-inch o.c.	OPTIONAL Min. 1-inch ISO applied in KLFA or PG1 spaced 12-inch o.c.; or PG1(S)	ISO HD, SECUROCK, or DensDeck Prime applied in KLFA, OSFA, or PG1 spaced 12-inch o.c.; or PG1(S)	MBA, LVOC, or LSBA	KLFA(S)	SA	-45 (Lim. 9)
S-A-7	G33	OPTIONAL VB-Steel	-	-	Min. 1.5-inch ISO applied in PG1 spaced 12-inch o.c.	MBA, LVOC, WBMA or LSBA	KLFA(S)	SA	-45 (Lim. 9)
S-A-8	G33	-	-	-	Min. 1.5-inch ISO applied in PG1 spaced 6-inch o.c.	LSBA, WBMA, MBA or LVOC	-	SA	-82.5 (Lim. 9)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)										
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane and Attachment (Note 10)			MDP (psf)
							TPO	TPO FB	TPO SA	
S-AM-1	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Preliminarily Secured or secured with top layer	ISO HD	Fasteners & Plates at a rate of 1 fastener per 2.67ft ²	WBMA, MBA, LVOC, or LSBA	PG1(B), PG1(S), KLFA(S), LSBA or WBMA	SA	-30 (Lim. 7)
S-AM-2	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	DensDeck Prime	Fasteners & Plates secured at a rate of 1 fastener per 3.2ft ²	WBMA, MBA, LVOC, 1168 or LSBA	PG1(B), WBMA, LSBA, KLFA(S), or HA	SA	-30 (Lim. 7)
S-AM-3	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	Min. 0.5-inch DensDeck Prime	Fasteners & Plates secured at a rate of 1 fastener per 5.33ft ²	WBMA, MBA, LVOC, 1168 or LSBA	PG1(B), WBMA, LSBA, KLFA(S), or HA	SA	-30 (Lim. 7)
S-AM-4	G33	Min. 0.5-inch DensDeck Prime secured with #14 Fasteners & Plates at a rate of 1 fastener per 4ft ²	1.5-inch ISO	KLFA applied 12-inch o.c.	DensDeck Prime	KLFA applied 12-inch o.c.	WBMA, MBA, LVOC, 1168 or LSBA	PG1(B), WBMA, LSBA, KLFA(S), or HA	SA	-30 (Lim. 7)
S-AM-5	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	Min. 0.5-inch DensDeck Prime	OMG #12 Standard Roofgrip or Kingspan #12 Fastener and OMG 3 in. Ribbed Galvalume Plate (Flat) or Kingspan Square Insulation Plate secured 8 per 4-ft x 8-ft board Pattern 3	WBMA, MBA, LVOC, 1168 or LSBA	PG1(B), WBMA, LSBA, KLFA(S), or HA	SA	-37.5 (Lim. 7)
S-AM-6	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 2-inch Kingspan ISO GF	Fasteners & Plates at a rate of 1 fastener per 2.67ft ²	ISO HD	PG1 or KLFA applied 12-inch o.c.; or PG1(S)	WBMA, MBA, LVOC, or LSBA	PG1(B), PG1(S), KLFA(S), WBMA, or LSBA	SA	-45 (Lim. 7)
S-AM-7	G33	OPTIONAL Vapor Barrier	Min. 1.5-inch ISO	Simultaneously secured with top layer	ISO HD	Fasteners & Plates secured 1 fastener per 4ft ²	WBMA, MBA, LVOC, or LSBA	PG1(B), PG1(S), KLFA(S), WBMA, or LSBA	SA	-45 (Lim. 7)
S-AM-8	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	Min. 0.375-inch SECUROCK	Fasteners & Plates secured 1 fastener per 2.67ft ²	LSBA, WBMA, MBA, or LSBA	PG1(B), WBMA or LSBA	SA	-45 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)										
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane and Attachment (Note 10)			MDP (psf)
							TPO	TPO FB	TPO SA	
S-AM-9	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	Fasteners & Plates or Kingspan Fasteners & Trufast Plates secured 1 fastener per 4.0ft ²	WBMA, MBA, LVOC, or LSBA	PG1(B), WBMA, LSBA or KLFA(S)	SA	-45 (Lim. 9)
S-AM-10	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 1.5-inch Kingspan ISO GF	Fasteners & Plates secured 1 fastener per 2.0ft ²	MBA, WBMA, LSBA or LVOC	-	SA	-45 (Lim. 7)
S-AM-11	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 2-inch Kingspan ISO GF	Fasteners & Plates secured 1 fastener per 4.0ft ²	SECUROCK	OSFA, PG1 or KLFA applied 12-inch o.c.; or PG1(S)	WBMA, MBA, LVOC, or LSBA	WBMA, LSBA, PG1(B), PG1(S), or KLFA(S)	SA	-45 (Lim. 7)
S-AM-12	22 GA Type N; G80	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ISO	OMG Heavy Duty and Dekfast PLT-H-2-7/8 Plates secured at a rate of 16 per 4-ft x 8-ft board Type N	MBA, LVOC, or LSBA	KLFA(S)	-	-45 (Lim. 7)
S-AM-13	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	StormX	OMG Fasteners & Plates secured 4 per 4-ft x 8-ft board	WBMA, MBA, LVOC, 1168 or LSBA	PG1(B), WBMA, LSBA, KLFA(S), or HA	SA	-45 (Lim. 7)
S-AM-14	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Fasteners & Plates secured 1 fastener per 2.67ft ²	DensDeck Prime or StormX	PG1 applied 12-inch o.c.; or PG1(S)	WBMA, MBA, LVOC, 1168 or LSBA	WBMA, LSBA, PG1(B), PG1(S), or KLFA(S) HA	SA	-45 (Lim. 7)
S-AM-15	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	Min. 0.5-inch DEXcell FA	Fasteners & Plates secured at a rate of 1 fastener per 4ft ²	WBMA, MBA, LVOC, or LSBA	PG1(B), WBMA or KLFA(S)	SA	-45 (Lim. 7)
S-AM-16	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	DEXcell FA	Fasteners & Plates secured at a rate of 1 fastener per 3.2ft ²	WBMA, MBA, LVOC, or LSBA	PG1(B), WBMA or KLFA(S)	SA	-45 (Lim. 7)
S-AM-17	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	DEXcell CB	KS secured at a rate of 1 fastener per 3.2ft ²	WBMA	WBMA	-	-45 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)										
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane and Attachment (Note 10)			MDP (psf)
							TPO	TPO FB	TPO SA	
S-AM-18	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 2-inch Kingspan ISO GF	Fasteners & Plates secured 1 fastener per 4.0ft ²	DEXcell FA	OSFA, PG1 or KLFA applied 12-inch o.c.; or PG1(S)	WBMA, MBA, LVOC, or LSBA	PG1(B), WBMA or KLFA(S)	SA	-45 (Lim. 7)
S-AM-19	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 2-inch Kingspan ISO GF	Fasteners & Plates secured 1 fastener per 4.0ft ²	DEXcell CB	KLFA applied 12-inch o.c.	WBMA	WBMA	-	-45 (Lim. 7)
S-AM-20	G33	Min. 0.5-inch DensDeck Prime secured with DF or TF at 1 fastener per 4ft ² over OPTIONAL Vapor Barrier	Min. 1.5-inch Kingspan ISO GF	KLFA, OSFA, or PG1 applied 12-inch o.c.; or PG1(S)	OPTIONAL ISO HD, SECUROCK, or DensDeck Prime	KLFA, OSFA, or PG1 applied 12-inch o.c.; or PG1(S)	MBA, LVOC, or LSBA	KLFA(S)	-	-45 (Lim. 7)
S-AM-21	G33	Min. 0.5-inch DensDeck Prime secured with DF or TF at 1 fastener per 4ft ² over OPTIONAL Vapor Barrier	Min. 1.5-inch Kingspan ISO GF	KLFA, OSFA, or PG1 applied 12-inch o.c.; or PG1(S)	OPTIONAL ISO HD, DEXcell FA, SECUROCK, or DensDeck Prime	KLFA, OSFA, or PG1 applied 12-inch o.c.; or PG1(S)	-	PG1(B)	SA	-45 (Lim. 7)
S-AM-22	G33	Optional Vapor Barrier	Min. 1.5-inch ISO	Fasteners & Plates secured 1 fastener per 2.67ft ²	Min. 1-inch ISO	KLFA or PG1 applied 12-inch o.c.; or PG1(S)	MBA, LVOC, or LSBA	KLFA(S)	-	-45 (Lim. 7)
S-AM-23	G33	Optional Vapor Barrier	Min. 1.5-inch ISO	Fasteners & Plates secured 1 fastener per 2.67ft ²	Min. 1-inch Kingspan ISO CG	KLFA or PG1 applied 12-inch o.c.; or PG1(S)	-	-	SA	-45 (Lim. 7)
S-AM-24	G33	Optional Vapor Barrier	Min. 2-inch ISO	Fasteners & Plates secured 1 fastener per 4ft ²	Min. 1-inch ISO	KLFA or PG1 applied 12-inch o.c.; or PG1(S)	MBA, LVOC, or LSBA	PG1(B) or KLFA(S)	SA	-45 (Lim. 7)
S-AM-25	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	Min. 0.625-inch DEXcell FA	Fasteners & Plates secured at a rate of 1 fastener per 5.33ft ²	WBMA, MBA, LVOC, or LSBA	PG1(B), WBMA or KLFA(S)	SA	-45 (Lim. 7)
S-AM-26	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	DEXcell CB	Fasteners & Plates secured at a rate of 1 fastener per 5.33ft ²	WBMA	WBMA	-	-45 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)										
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane and Attachment (Note 10)			MDP (psf)
							TPO	TPO FB	TPO SA	
S-AM-27	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ISO	#14 Fasteners & Plates (Square) secured at a rate of 1 fastener per 4.0ft ²	-	PG1(B)	-	-45 (Lim. 7)
S-AM-28	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	Min. 0.5-inch DensDeck Prime	Fasteners & Plates secured at a rate of 1 fastener per 4ft ²	WBMA, MBA, LVOC, 1168 or LSBA	PG1(B), WBMA, LSBA, KLFA(S), or HA	SA	-45 (Lim. 7)
S-AM-29	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	ProFast	Kingspan #15 Fasteners and Kingspan Plates (Square) secured at a rate of 6 per 4-ft x 8-ft board Pattern #2	WBMA, MBA, LVOC, 1168 or LSBA	PG1(B), WBMA, LSBA, KLFA(S), or HA	SA	-45 (Lim. 7)
S-AM-30	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	SECUROCK	DF or Fasteners & Plates secured 1 fastener per 1.33ft ²	MBA, LVOC, WBMA, or LSBA	WBMA, LSBA, KLFA(S), or HA	SA	-52.5 (Lim. 7)
S-AM-31	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch Kingspan ISO GF	Fasteners & Plates secured 1 fastener per 1.33ft ²	SECUROCK	PG1 or KLFA applied 12-inch o.c.; or PG1(S)	MBA, LVOC, WBMA, or LSBA	WBMA, LSBA, PG1(B), PG1(S), KLFA(S), or HA	SA	-52.5 (Lim. 7)
S-AM-32	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch Kingspan ISO GF	Fasteners & Plates secured at a rate of 1 fastener per 1.45ft ²	ISO HD	PG1 or KLFA applied 12-inch o.c.; or PG1(S)	-	-	SA	-52.5 (Lim. 7)
S-AM-33	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 1.5-inch Kingspan ISO CG	Fasteners & Plates secured 1 fastener per 1.78ft ²	MBA, WBMA, or LSBA	-	-	-52.5 (Lim. 7)
S-AM-34	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch Kingspan ISO CG	Fasteners & Plates secured 1 fastener per 2.67ft ²	MBA, WBMA, or LSBA	-	SA	-52.5 (Lim. 7)
S-AM-35	G33	OPTIONAL Vapor Barrier	Min. 2-inch Kingspan ISO CG	Fasteners & Plates secured 1 fastener per 2.67ft ²	Min. 1.5-inch Kingspan ISO CG	OSFA, PG1, or KLFA applied 6-inch o.c.	LSBA, WBMA, MBA or LVOC	-	SA	-52.5 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)										
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane and Attachment (Note 10)			MDP (psf)
							TPO	TPO FB	TPO SA	
S-AM-36	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 1.5-inch ISO	Fasteners & Plates secured 1 fastener per 1.78ft ²	MBA or LVOC	PG1(B), KLFA(S), or HA	-	-52.5 (Lim. 7)
S-AM-37	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	ISO HD	Fasteners & Plates secured 1 fastener per 1.78ft ²	WBMA, MBA, LVOC, or LSBA	WBMA or LSBA	SA	-52.5 (Lim. 7)
S-AM-38	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	DensDeck Prime	Fasteners & Plates or Kingspan Fasteners & Trufast Plates secured 1 fastener per 1.78ft ²	WBMA, MBA, LVOC, 1168 or LSBA	PG1(B), WBMA, LSBA, KLFA(S), or HA	SA	-52.5 (Lim. 7)
S-AM-39	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	StormX	OMG Fasteners & Plates secured 8 per 4-ft x 8-ft board Pattern #3	WBMA, MBA, LVOC, 1168 or LSBA	PG1(B), WBMA, LSBA, KLFA(S), or HA	SA	-52.5 (Lim. 7)
S-AM-40	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch Kingspan ISO GF	Fasteners & Plates secured at a rate of 1 fastener per 1.78ft ²	Min 1/2-inch SECUROCK	OSFA, PG1 or KLFA applied 12-inch o.c.; or PG1(S)	MBA, LVOC, or LSBA	PG1(B), WBMA, LSBA or KLFA(S)	SA	-60 (Lim. 7)
S-AM-41	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	SECUROCK	DF or Fasteners & Plates secured 1 fastener per 1.00ft ²	WBMA, MBA, LVOC, or LSBA	WBMA, LSBA, KLFA(S), or HA	SA	-60 (Lim. 7)
S-AM-42	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 1.5-inch ISO	Fasteners & Plates secured 1 fastener per 1.78ft ²	MBA or LVOC	HA	-	-60 (Lim. 7)
S-AM-43	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 1.5-inch Kingspan ISO CG	Fasteners & Plates secured 1 fastener per 1.78ft ²	-	-	SA	-60 (Lim. 7)
S-AM-44	G33	OPTIONAL Vapor Barrier	Min. 1.5-inch Kingspan ISO CG	Fasteners & Plates secured 1 fastener per 1.78ft ²	Min. 1.5-inch Kingspan ISO CG	OSFA, PG1, or KLFA applied 6-inch o.c.	LSBA, WBMA, MBA or LVOC	-	SA	-60 (Lim. 7)
S-AM-45	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	ISO HD	Fasteners & Plates secured 1 fastener per 1.78ft ²	MBA, LVOC, or LSBA	KLFA(S)	SA	-60 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)										
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane and Attachment (Note 10)			MDP (psf)
							TPO	TPO FB	TPO SA	
S-AM-46	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch Kingspan ISO GF	Fasteners & Plates secured 1 fastener per 1.6ft ²	-	PG1(B) or KLFA(S)	-	-60 (Lim. 7)
S-AM-47	G33	OPTIONAL Vapor Barrier	Min. 2-inch ISO	Kingspan Fasteners & Plate) 1 fastener per 1.6ft ²	Min. 1.5-inch ISO	OSFA, PG1, or KLFA applied 6-inch o.c.	-	KLFA(S)	-	-60 (Lim. 7)
S-AM-48	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	Min 0.5-inch DensDeck Prime	OMG #12 Standard Roofgrip fasteners and OMG 3 in. Ribbed Galvalume Plate (Flat) or Kingspan Square Insulation Plate secured 16 per 4-ft x 8-ft board	WBMA, MBA, LVOC, 1168 or LSBA	PG1(B), WBMA, LSBA or KLFA(S), or HA	SA	-60 (Lim. 7)
S-AM-49	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	ProFast	Kingspan #15 Fasteners and Kingspan Plates (Square) secured 8 per 4-ft x 8-ft board Pattern #3	WBMA, MBA, LVOC, 1168 or LSBA	PG1(B), WBMA, LSBA or KLFA(S), or HA	SA	-60 (Lim. 7)
S-AM-50	G40	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	Fasteners & Plates secured 1 fastener per 2.00ft ²	MBA, LVOC, WBMA, or LSBA	WBMA or HA	SA	-60 (Lim. 7)
S-AM-51	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	KS (Square) secured 1 fastener per 1.33ft ²	Min. 0.5-inch SECUROCK	PG1 or KLFA applied 12-inch o.c.; or PG1(S)	MBA, LVOC, WBMA, or LSBA	WBMA, PG1(B) or PG1(S)	SA	-67.5 (Lim. 7)
S-AM-52	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch Kingspan ISO CG	Fasteners & Plates secured 1 fastener per 2.0ft ²	MBA, WBMA, or LSBA	-	SA	-67.5 (Lim. 7)
S-AM-53	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENERGY 3	Fasteners & Plates secured 1 fastener per 2ft ²	MBA, LVOC, WBMA, or LSBA	HA	-	-67.5 (Lim. 7)
S-AM-54	G33	OPTIONAL Vapor Barrier	Min. 2-inch Kingspan ISO CG	Fasteners & Plates secured 1 fastener per 2.0ft ²	Min. 1.5-inch Kingspan ISO CG	OSFA, PG1, or KLFA applied 6-inch o.c.	MBA, LVOC, WBMA, or LSBA	-	SA	-67.5 (Lim. 7)
S-AM-55	G33	OPTIONAL Vapor Barrier	Min. 2-inch ISO	Kingspan Fasteners & Plate secured 1 fastener per 1.6ft ²	Min. 0.5-inch ISO HD, DEXcell FA, or SECUROCK	OSFA, PG1, or KLFA applied 6-inch o.c.	-	PG1(B) 6-inch o.c.	-	-67.5 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)										
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane and Attachment (Note 10)			MDP (psf)
							TPO	TPO FB	TPO SA	
S-AM-56	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	Min 0.5-inch DensDeck Prime	Fasteners & Plates or Kingspan Fasteners & Trufast Plates secured 1 fastener per 1.78ft ²	WBMA, MBA, LVOC, 1168 or LSBA	WBMA, LSBA, KLFA(S), or HA	SA	-67.5 (Lim. 7)
S-AM-57	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	StormX	OMG Fasteners & Plates secured 12 per 4-ft x 8-ft board	WBMA, MBA, LVOC, 1168 or LSBA	WBMA, LSBA, KLFA(S), or HA	SA	-67.5 (Lim. 7)
S-AM-58	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Preliminarily Secured or secured with top layer	ISO HD	Fasteners & Plates at a rate of 1 fastener per 1.33ft ²	WBMA, MBA, LVOC, or LSBA	WBMA, LSBA or KLFA(S)	SA	-75 (Lim. 7)
S-AM-59	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ISO	Fasteners & Plates secured 1 fastener per 1.6ft ²	WBMA, MBA, LVOC, or LSBA	HA	-	-75 (Lim. 7)
S-AM-60	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ISO	Fasteners & Plates secured 1 fastener per 1.6ft ²	-	HA	-	-75 (Lim. 7)
S-AM-61	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ISO HD Foam	KS (Square) secured 1 fastener per 2.0ft ²	WBMA, MBA, LVOC, or LSBA	WBMA, LSBA or KLFA(S)	SA	-75 (Lim. 7)
S-AM-62	G33	OPTIONAL Vapor Barrier	Min. 1.5-inch ISO	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	Fasteners & Plates or Kingspan Fasteners & Trufast Plates secured 1 fastener per 1.0ft ²	WBMA, MBA, LVOC, or LSBA	HA	-	-75 (Lim. 7)
S-AM-63	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	StormX	OMG Fasteners & Plates secured 14 per 4-ft x 8-ft board	WBMA, MBA, LVOC, 1168 or LSBA	WBMA, LSBA, or HA	SA	-75 (Lim. 7)
S-AM-64	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	Fasteners & Plates secured 1 fastener per 1.6ft ²	MBA, LVOC, WBMA, or LSBA	KLFA(S)	SA	-75 (Lim. 7)
S-AM-65	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	DEXcell CB	KS secured 1 fastener per 1.6ft ²	MBA or LVOC	-	-	-75 (Lim. 7)
S-AM-66	G33	OPTIONAL Vapor Barrier	Min. 1.5-inch ISO	Simultaneously secured with top layer	Min. 0.5-inch DensDeck Prime	Fasteners & Plates or Kingspan Fasteners & Trufast Plates secured 1 fastener per 1.6ft ²	WBMA, MBA, LVOC, 1168 or LSBA	WBMA, LSBA, or HA	SA	-75 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)										
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane and Attachment (Note 10)			MDP (psf)
							TPO	TPO FB	TPO SA	
S-AM-67	G33	OPTIONAL Vapor Barrier	Min. 1.5-inch ISO	Simultaneously secured with top layer	ProFast	Kingspan #15 Fasteners and Kingspan Plates (Square) secured 1 fastener per 2.7ft ²	WBMA, MBA, LVOC, 1168 or LSBA	WBMA, LSBA, or HA	SA	-75 (Lim. 7)
S-AM-68	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	Fasteners & Plates or Kingspan Fasteners & Trufast Plates secured 1 fastener per 1.0ft ²	WBMA, LSBA, or MBA	KLFA(S)	SA	-82.5 (Lim. 7)
S-AM-69	G33	OPTIONAL Vapor Barrier - adhered	Min. 1.5-inch ISO	Simultaneously secured with top layer	Min. 0.5-inch DEXcell FA	Fasteners & Plates secured 1 fastener per 1.0ft ²	MBA, LVOC, WBMA, or LSBA	PG1(B) applied 4-inch o.c., or PG1(S)	-	-82.5 (Lim. 7)
S-AM-70	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ISO	Fasteners & Plates secured 1 fastener per 1.0ft ²	MBA, LVOC, or WBMA	-	-	-82.5 (Lim. 7)
S-AM-71	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ISO	Fasteners & Plates secured 1 fastener per 1.0ft ²	-	HA	-	-82.5 (Lim. 7)
S-AM-72	G33	OPTIONAL Vapor Barrier	Min. 1.5-inch ISO	Simultaneously secured with top layer	Min. 0.5-inch DensDeck Prime	Fasteners & Plates or Kingspan Fasteners & Trufast Plates secured 1 fastener per 1.0ft ²	MBA, LVOC, WBMA, or LSBA	-	SA	-82.5 (Lim. 7)
S-AM-73	G33	OPTIONAL Vapor Barrier	Min. 1.5-inch ISO	Simultaneously secured with top layer	DEXcell CB	KS secured 1 fastener per 1.0ft ²	MBA or LVOC	-	-	-82.5 (Lim. 7)
S-AM-74	G33	OPTIONAL Vapor Barrier	Min. 1-inch ISO	Simultaneously secured with top layer	ISO HD	Fasteners & Plates 1 fastener per 1.33ft ²	MBA, LVOC, or LSBA	KLFA(S)	SA	-82.5 (Lim. 7)
S-AM-75	G33	OPTIONAL Vapor Barrier	Min. 2-inch ISO	Fasteners & Plates secured 1 fastener per 1.6ft ²	ISO HD	OSFA, PG1, or KLFA applied 6-inch o.c.	WBMA, MBA, LVOC, or LSBA	KLFA(S)	SA	-82.5 (Lim. 7)
S-AM-76	G33	OPTIONAL Vapor Barrier	Min. 2-inch ISO	Fasteners & Plates secured 1 fastener per 1.6ft ²	Min. 0.5-inch DensDeck Prime, DEXcell FA, or SECUROCK	OSFA, PG1, or KLFA applied 6-inch o.c.	LSBA, WBMA, MBA or LVOC	-	SA	-82.5 (Lim. 7)
S-AM-77	G33	OPTIONAL Vapor Barrier	Min. 2-inch ISO	Fasteners & Plates secured 1 fastener per 1.6ft ²	Min. 1.5-inch ISO	OSFA, PG1, or KLFA applied 6-inch o.c.	LSBA, WBMA, MBA or LVOC	-	SA	-82.5 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)										
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane and Attachment (Note 10)			MDP (psf)
							TPO	TPO FB	TPO SA	
S-AM-78	G33	OPTIONAL Vapor Barrier	Min. 2-inch ISO	Fasteners & Plates secured 1 fastener per 1ft ²	Min. 1.5-inch Kingspan ISO GF	OSFA, PG1, or KLFA applied 4-inch o.c.	LSBA, WBMA, MBA or LVOC	-	-	-82.5 (Lim. 7)
S-AM-79	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch Kingspan ISO GF	Fasteners & Plates secured 1 fastener per 1.0ft ²	WBMA, MBA, or LVOC	-	-	-82.5 (Lim. 7)
S-AM-80	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ISO	Fasteners & Plates secured 1 fastener per 1.0ft ²	LSBA or MBA	-	-	-82.5 (Lim. 7)
S-AM-81	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	StormX	OMG Fasteners & Plates secured 12 per 4-ft x 8-ft board Pattern #2	WBMA, MBA, LVOC, 1168 or LSBA	WBMA, LSBA, or HA	SA	-82.5 (Lim. 7)
S-AM-82	G80	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	Min 0.625-inch DensDeck Prime	Fasteners & Plates or Kingspan Fasteners & Trufast Plates secured 1 fastener per 1.33ft ²	WBMA, MBA, LVOC, 1168 or LSBA	WBMA, LSBA, or HA	SA	-90 (Lim. 7)
S-AM-83	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ISO	FASTENERS and PLT-R-3 or Kingspan Plates (Square) secured 24 per 4-ft x 8-ft board Pattern #2	MBA, LVOC, or WBMA	-	-	-90 (Lim. 7)
S-AM-84	G33	OPTIONAL Vapor Barrier	Min. 2-inch ISO	Fasteners & Plates secured 1 fastener per 1ft ²	Min. 1.5-inch Kingspan ISO GF	PG1 or KLFA applied 6-inch o.c.	WBMA, MBA, LVOC, 1168 or LSBA	KLFA(S)	-	-90 (Lim. 7)
S-AM-85	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	StormX	OMG Fasteners & Plates secured 18 per 4-ft x 8-ft board Pattern #1	MBA, LVOC, or WBMA	-	SA	-97.5 (Lim. 7)
S-AM-86	G80	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch Kingspan ISO CG	Fasteners & Plates secured 1 fastener per 1.33ft ²	MBA or WBMA	-	SA	-105 (Lim. 7)
S-AM-87	G80	OPTIONAL Vapor Barrier	Min. 1.5-inch ISO	Simultaneously secured with top layer	Min. 0.5-inch DEXcell FA	Fasteners & Plates secured 1 fastener per 1.0ft ²	MBA, LVOC, WBMA, or LSBA	-	-	-105 (Lim. 7)
S-AM-88	G80	OPTIONAL Vapor Barrier	Min. 1.5-inch ISO	Simultaneously secured with top layer	Min. 0.5-inch DensDeck Prime	Fasteners & Plates or Kingspan Fasteners & Trufast Plates secured 1 fastener per 1.0ft ²	MBA, LVOC, WBMA, or LSBA	-	SA	-112.5 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)										
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane and Attachment (Note 10)			MDP (psf)
							TPO	TPO FB	TPO SA	
S-AM-89	G80	OPTIONAL Vapor Barrier	Min. 1.5-inch ISO	Simultaneously secured with top layer	DEXcell CB	KS secured 1 fastener per 1.0ft ²	MBA or LVOC	-	-	-112.5 (Lim. 7)
S-AM-90	G80	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ISO	Fasteners & Plates secured 1 fastener per 1.0ft ²	MBA, LVOC, WBMA, or LSBA	-	-	-112.5 (Lim. 7)
S-AM-91	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	StormX	OMG Fasteners & Plates secured 20 per 4-ft x 8-ft board Pattern #1 or 18 per 4-ft x 8-ft board Pattern #2	MBA, LVOC, WBMA, or LSBA	-	SA	-112.5 (Lim. 7)
S-AM-92	G80	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ISO	Fasteners & Plates secured 1 fastener per 1.0ft ²	MBA, LVOC, or WBMA	-	-	-120 (Lim. 7)
S-AM-93	G80	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ISO	Fasteners & Plates secured 1 fastener per 1.0ft ²	-	HA	-	-120 (Lim. 7)
S-AM-94	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Preliminarily Secured or secured with top layer	ISO HD	Fasteners & Plates at a rate of 1 fastener per 1ft ²	MBA or LSBA	-	-	-120 (Lim. 7)
S-AM-95	G80	OPTIONAL Vapor Barrier	Min. 2-inch ISO	Fasteners & Plates secured 1 fastener per 1ft ²	Min. 1.5-inch Kingspan ISO GF	OSFA, PG1 or KLFA applied 4-inch o.c.	LSBA, WBMA, MBA, or LVOC	-	-	-120 (Lim. 7)
S-AM-96	G80	OPTIONAL Vapor Barrier	Min. 2-inch ISO	Fasteners & Plates secured 1 fastener per 1ft ²	ISO HD	OSFA, PG1, or KLFA applied 4-inch o.c.	WBMA, MBA, LVOC, or LSBA	-	-	-120 (Lim. 7)
S-AM-97	G80	OPTIONAL Vapor Barrier	Min. 2-inch ISO	Fasteners & Plates secured 1 fastener per 1ft ²	Min. 1.5-inch Kingspan ISO GF	OSFA, PG1 or KLFA applied 4-inch o.c.	LSBA or MBA	-	SA	-127.5 (Lim. 7)
S-AM-98	G80	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	Min. 0.5-inch DEXcell FA	Fasteners & Plates secured 1 fastener per 1ft ²	-	KLFA(S)	-	-135 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)										
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane and Attachment (Note 10)			MDP (psf)
							TPO	TPO FB	TPO SA	
S-AM-99	G80	Min. 0.5-inch DEXcell FA secured with top layer; JM Vapor Barrier SA self-adhered	Min. 1.5-inch ISO	Simultaneously secured with top layer	Min. 0.5-inch DEXcell FA	Fasteners & Plates secured 1 fastener per 1.0ft ²	-	PG1(B) applied 4-inch o.c.	-	-142.5 (Lim. 7)
S-AM-100	G80	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ISO	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	Fasteners & Plates or Kingspan Fasteners & Trufast Plates secured 1 fastener per 1.00ft ²	WBMA	-	SA	-150 (Lim. 7)

Mechanically Fastened Assemblies over Steel Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment (Note 12)	MDP (psf)
S-M-1	G33	OPTIONAL INSULATION under min. 1-inch ISO	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	TPO or TPO FB	Attached in-lap 12-inch o.c. with Kingspan #15 Fasteners and Kingspan Barbed Seam Plates; Fastener rows max. 114-inch o.c.	-30 (Lim. 7)
S-M-2	G33	OPTIONAL INSULATION under min. 1.5-inch ISO	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	Kingspan TPO (Min. 60 mil)	Attached in-lap 12-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 138-inch o.c.	-30 (Lim. 7)
S-M-3	G33	OPTIONAL INSULATION under min. 1.5-inch ISO	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	Kingspan TPO (Min. 60 mil)	Attached in-lap 12-inch o.c. with Trufast Seam Plates; Fastener rows max. 90-inch o.c.	-30 (Lim. 7)
S-M-4	G33	OPTIONAL INSULATION under min. 1.5-inch ISO	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	TPO or TPO FB	Attached in-lap 18-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 66-inch o.c.	-30 (Lim. 7)
S-M-5	G80	OPTIONAL INSULATION under min. 1.5-inch ISO	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	TPO	Attached in-lap 12-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 138-inch o.c.	-30 (Lim. 7)
S-M-6	G33	OPTIONAL INSULATION under min. 2-inch ISO	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	TPO	Attached in-lap 12-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 114-inch o.c.	-30 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Mechanically Fastened Assemblies over Steel Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment (Note 12)	MDP (psf)
S-M-7	G80	OPTIONAL INSULATION under min. 1-inch ISO	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	Kingspan TPO (Min. 60 mil)	Attached in-lap 12-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 90-inch o.c.	-37.5 (Lim. 7)
S-M-8	G33	OPTIONAL INSULATION under min. 1.5-inch ISO	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	Kingspan TPO (Min. 60 mil)	Attached in-lap 12-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 90-inch o.c.	-37.5 (Lim. 7)
S-M-9	G33	OPTIONAL INSULATION under min. 1.5-inch ISO	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	Kingspan TPO (Min. 60 mil)	Attached in-lap 12-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 90-inch o.c.	-37.5 (Lim. 7)
S-M-10	G80	OPTIONAL INSULATION under min. 1.5-inch ISO	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	TPO	Attached in-lap 12-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 114-inch o.c.	-37.5 (Lim. 7)
S-M-11	G33	OPTIONAL INSULATION under min. 1.5-inch ISO	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	Kingspan TPO (Min. 60 mil)	Attached in-lap 12-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 66-inch o.c.	(-45 Lim. 7)
S-M-12	G80	OPTIONAL INSULATION under min. 1.5-inch ISO	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	TPO or TPO FB	Attached in-lap 6-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 114-inch o.c.	-45 (Lim. 7)
S-M-13	22 GA Type N; G80	OPTIONAL INSULATION under min. 1.5-inch ISO	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	Kingspan TPO (Min. 60 mil)	Attached in-lap 8-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 138-inch o.c.	-45 (Lim. 7)
S-M-14	G33	OPTIONAL INSULATION under min. 1.5-inch ISO	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	TPO or TPO FB	Attached in-lap 12-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 66-inch o.c.	-45 (Lim. 7)
S-M-15	G33	OPTIONAL INSULATION under min. 1-inch ISO	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	TPO or TPO FB	Attached in-lap 6-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 114-inch o.c.	-52.5 (Lim. 7)
S-M-16	G80	OPTIONAL INSULATION under min. 1.5-inch ISO	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	TPO	Attached in-lap 6-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 138-inch o.c.	-52.5 (Lim. 7)
S-M-17	G33	OPTIONAL INSULATION under min. 1.5-inch ISO	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	TPO	Adhered to Kingspan TPO 10" RPS spaced 114-inch o.c. and attached with #15 Fasteners & 2-3/8" Plates spaced 6-inch o.c.	-52.5 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Mechanically Fastened Assemblies over Steel Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment (Note 12)	MDP (psf)
S-M-18	G33	OPTIONAL INSULATION under min. 1.5-inch ISO	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	Kingspan TPO (Min. 60 mil)	Attached in-lap 12-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 54-inch o.c.	-52.5 (Lim. 7)
S-M-19	22 GA Type N; G80	OPTIONAL INSULATION under min. 1.5-inch ISO	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	Kingspan TPO (Min. 60 mil)	Attached in-lap 8-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 90-inch o.c.	-60 (Lim. 7)
S-M-20	G80	OPTIONAL INSULATION under min. 1.5-inch ISO	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	TPO	Attached in-lap 6-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 90-inch o.c.	-60 (Lim. 7)
S-M-21	G33	OPTIONAL INSULATION under min. 1-inch ISO	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	TPO or TPO FB	Attached in-lap 6-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 114-inch o.c.	-60 (Lim. 7)
S-M-22	G33	OPTIONAL INSULATION under min. 1.5-inch ISO	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	Kingspan TPO (Min. 60 mil)	Attached in-lap 6-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 138-inch o.c.	-60 (Lim. 7)
S-M-23	G33	OPTIONAL INSULATION under min. 1.5-inch ISO	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	Kingspan TPO (Min. 60 mil)	Attached in-lap 6-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 138-inch o.c.	-60 (Lim. 7)
S-M-24	G33	OPTIONAL INSULATION under min. 1.5-inch ISO	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	Kingspan TPO (Min. 60 mil)	Attached in-lap 6-inch o.c. with Trufast Seam Plates; Fastener rows max. 90-inch o.c.	-60 (Lim. 7)
S-M-25	G80	OPTIONAL INSULATION under min. 1.5-inch ISO	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	Kingspan TPO (Min. 60 mil)	Attached in-lap 6-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 138-inch o.c.	-67.5 (Lim. 7)
S-M-26	G33	OPTIONAL INSULATION under min. 1-inch ISO	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	TPO	Attached in-lap 6-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 90-inch o.c.	-75 (Lim. 7)
S-M-27	G33	OPTIONAL INSULATION under min. 1.5-inch ISO	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	TPO or TPO FB	Attached in-lap 6-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 66-inch o.c.	-90 (Lim. 7)
S-M-28	G33	OPTIONAL INSULATION under min. 1-inch ISO	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	TPO or TPO FB	Attached in-lap 6-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 54-inch o.c.	-97.5 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Mechanically Fastened Assemblies over Steel Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment (Note 12)	MDP (psf)
S-M-29	G33	OPTIONAL INSULATION under min. 1.5-inch ISO	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	Kingspan TPO (Min. 60 mil)	Attached in-lap 6-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 66-inch o.c.	(-105 Lim. 7)

Induction Welded Assemblies over Steel Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment (Note 12)	MDP (psf)
S-W-1	G33	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Kingspan TPO Induction Welding Plates and Kingspan #15 Fasteners attached 18-inch o.c. in rows 60-inch o.c.	TPO	Induction welded to Weld plates	-30 (Lim. 7)
S-W-2	G33	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with OMG Heavy Duty and Kingspan TPO Induction Welding Plates at a rate of 6 per 4-ft x 8-ft board Pattern #2	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-37.5 (Lim. 7)
S-W-3	22 GA Type N; G80	OPTIONAL INSULATION under min. 1.5-inch ISO	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with InductionPlates at a rate of 6 per 4-ft x 8-ft board Type N; Insulation/Cover Boards laid perpendicular to deck flutes; Boards ends offset 8-inch from previous row	TPO	Induction welded to Weld plates	-37.5 (Lim. 7)
S-W-4	G33	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Kingspan TPO Induction Welding Plates and Kingspan #15 Fasteners attached at a rate of 1 fastener per 5.33-ft ²	TPO	Induction welded to Weld plates	-37.5 (Lim. 7)
S-W-5	G33	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with InductionPlates at a rate of 8 per 4-ft x 8-ft board Pattern #1 (1 fastener per 4.0-ft ²)	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-45 (Lim. 7)
S-W-6	G33	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with InductionPlates fastened 12-inch o.c.; Fastener rows max. 72-inch o.c.	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-45 (Lim. 7)
S-W-7	G33	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#15 at a rate of 1 fastener per 4.0-ft ²	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-45 (Lim. 7)
S-W-8	G80	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#15 spaced 24-inch o.c. in rows 24-inch o.c.	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-45 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Induction Welded Assemblies over Steel Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment (Note 12)	MDP (psf)
S-W-9	G80	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Attached with <i>ISOWELD-#12</i> or <i>ISOWELD-#15</i> spaced 12-inch o.c. in rows 60-inch o.c.	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-45 (Lim. 7)
S-W-10	G80	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Attached with <i>ISOWELD-#12</i> or <i>ISOWELD-#15</i> spaced in a 2-ft x 3-ft staggered grid	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-45 (Lim. 7)
S-W-11	G33	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Trufast IW Plates</i> attached 1 fastener per 5.33ft ² ; Boards placed perpendicular to deck ribs; End joints offset 12-inches between board rows	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-45 (Lim. 7)
S-W-12	G33	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Kingspan TPO Induction Welding Plates and Kingspan #15 Fasteners attached 12-inch o.c. in rows 60-inch o.c.	TPO	Induction welded to Weld plates	-45 (Lim. 7)
S-W-13	G33	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Kingspan TPO Induction Welding Plates and Kingspan #15 Fasteners attached 6-inch o.c. in rows 120-inch o.c.	TPO	Induction welded to Weld plates	-45 (Lim. 7)
S-W-14	G33	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Kingspan #15 Fasteners and Kingspan TPO Induction Welding Plate at a rate of 1 fastener per 5.33ft ²	TPO	Induction welded to weld plates	-45 (Lim. 7)
S-W-15	G33	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Attached with <i>InductionPlates</i> at a rate of 6 per 4-ft x 8-ft board Pattern #2 (1 fastener per 5.33-ft ²); Board length perpendicular to deck flutes with 6-inch stagger from preceding course	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-52.5 (Lim. 7)
S-W-16	G33	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Trufast IW Plates</i> attached 1 fastener per 4.0ft ² ; Boards placed perpendicular to deck ribs; End joints offset 12-inches between board rows	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-52.5 (Lim. 7)
S-W-17	22 GA Type N; G80	OPTIONAL INSULATION under min. 1.5-inch ISO	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Attached with <i>InductionPlates</i> at a rate of 8 per 4-ft x 8-ft board Type N; Insulation/Cover Boards laid perpendicular to deck flutes; Boards ends offset 8-inch from previous row	TPO	Induction welded to Weld plates	-52.5 (Lim. 7)
S-W-18	G33	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Kingspan TPO Induction Welding Plates and Kingspan #15 Fasteners attached 24-inch o.c. in rows 24-inch o.c.	TPO	Induction welded to Weld plates	-52.5 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Induction Welded Assemblies over Steel Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment (Note 12)	MDP (psf)
S-W-19	G33	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Kingspan TPO Induction Welding Plates and Kingspan #15 Fasteners attached at a rate of 1 fastener per 4.0-ft ²	TPO	Induction welded to Weld plates	-52.5 (Lim. 7)
S-W-20	G33	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Attached with <i>ISOWELD</i> -#15 spaced in a 2-ft x 2-ft staggered grid	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-60 (Lim. 7)
S-W-21	G33	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Trufast IW Plates</i> attached 6-inch o.c. in rows 60-inch o.c.	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-60 (Lim. 7)
S-W-22	G33	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Attached with <i>InductionPlates</i> at a rate of 8 per 4-ft x 8-ft board Pattern #2 (1 fastener per 4.0-ft ²); Board length perpendicular to deck flutes with 6-inch stagger from preceding course	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-67.5 (Lim. 7)
S-W-23	G33	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Attached with <i>InductionPlates</i> at a rate of 8 per 4-ft x 8-ft board Pattern #1 (1 fastener per 4.0-ft ²)	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-67.5 (Lim. 7)
S-W-24	G33	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Attached with <i>InductionPlates</i> at a rate of 12 per 4-ft x 8-ft board (1 fastener per 2.67-ft ²)	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-75 (Lim. 7)
S-W-25	G33	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Attached with <i>ISOWELD</i> -#15 at a rate of 1 fastener per 3.2-ft ²	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-75 (Lim. 7)
S-W-26	G33	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Attached with <i>InductionPlates</i> in a 24-inch by 16-inch grid pattern	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-82.5 (Lim. 7)
S-W-27	G33	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Attached with <i>ISOWELD</i> -#15 spaced in a 1.5-ft x 2-ft staggered grid	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-82.5 (Lim. 7)
S-W-28	G33	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Trufast IW Plates</i> attached 1 fastener per 2.0ft ² ; Boards placed perpendicular to deck ribs; End joints offset 12-inches between board rows	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-82.5 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Induction Welded Assemblies over Steel Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment (Note 12)	MDP (psf)
S-W-29	G33	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Kingspan TPO Induction Welding Plates and Kingspan #15 Fasteners attached 24-inch by 16-inch grid pattern	TPO	Induction welded to Weld plates	-82.5 (Lim. 7)
S-W-30	G80	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Attached with <i>InductionPlates</i> in a 24-inch by 16-inch grid pattern	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-90 (Lim. 7)
S-W-31	G33	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Attached with <i>InductionPlates</i> at a rate of 15 per 4-ft x 8-ft board (1 fastener per 2.13-ft ²)	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-90 (Lim. 7)
S-W-32	G33	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Attached with <i>InductionPlates</i> at a rate of 12 per 4-ft x 8-ft board Pattern #1 (1 fastener per 2.67-ft ²); Board length perpendicular to deck flutes with 6-inch stagger from preceding course	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-90 (Lim. 7)
S-W-33	G33	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Attached with <i>ISOWELD-#15</i> spaced 6-inch o.c. in rows 60-inch o.c.	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-90 (Lim. 7)
S-W-34	G80	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Trufast IW Plates</i> attached 6-inch o.c. in rows 60-inch o.c.	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-90 (Lim. 7)
S-W-35	G33	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Kingspan TPO Induction Welding Plates and Kingspan #15 Fasteners attached 6-inch o.c. in rows 60-inch o.c.	TPO	Induction welded to Weld plates	-90 (Lim. 7)
S-W-36	G80	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Attached with <i>ISOWELD-#15</i> spaced 18-inch o.c. in rows 18-inch o.c.	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-97.5 (Lim. 7)
S-W-37	G80	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Attached with <i>ISOWELD-#12</i> or <i>ISOWELD-#15</i> spaced 6-inch o.c. in rows 60-inch o.c.	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-97.5 (Lim. 7)
S-W-38	G80	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Trufast IW Plates</i> attached 1 fastener per 2.0ft ² ; Boards placed perpendicular to deck ribs; End joints offset 12-inches between board rows	Kingspan TPO (Min. 60 mil)	Induction welded to Weld plates	-105 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Adhered Assemblies over Wood Deck (New or Existing)								
System No.	Deck Detail	Vapor Barrier or Anchor Sheet	Base Insulation (Note 6)	Top Insulation or Coverboard	Membrane and Attachment (Note 10)			MDP (psf)
					TPO	TPO FB	TPO SA	
W-A-1	T7/16O, L24	PermaPly 28 attached with RS Nails & Tin Tags attached 8-inch o.c. at the 3-inch wide side laps and 8-inch o.c. in two equally spaced rows in the field	Min. 1.5-inch ISO in PG1 applied 12-inch o.c.	-	LSBA, WBMA, MBA or LVOC	WBMA or KLFA(S)	SA	-37.5 (Lim. 7)
W-A-2	T7/16O, L24	PermaPly 28 attached with RS Nails & Tin Tags attached 8-inch o.c. at the 3-inch wide side laps and 8-inch o.c. in two equally spaced rows in the field	OPTIONAL Min. 1.5-inch ISO in PG1 applied 12-inch o.c.	ISO HD, DensDeck Prime, DEXcell FA, or SECUROCK in PG1 applied 12-inch o.c.	LSBA, WBMA, MBA or LVOC	WBMA or KLFA(S)	SA	-37.5 (Lim. 7)
W-A-3	T7/16O, L24	PermaPly 28 attached with RS Nails & Tin Tags attached 8-inch o.c. at the 3-inch wide side laps and 8-inch o.c. in two equally spaced rows in the field	OPTIONAL Min. 1.5-inch ISO in PG1 applied 12-inch o.c.	DensDeck Prime, DEXcell FA, or SECUROCK in PG1 applied 12-inch o.c.	-	HA	-	-37.5 (Lim. 7)
W-A-4	T15/32P, L24	PermaPly 28 attached with RS Nails & Tin Tags attached 8-inch o.c. at the 3-inch wide side laps and 8-inch o.c. in three (3) equally spaced rows in the field	Min. 1.5-inch ISO in PG1 applied 12-inch o.c.	-	LSBA, WBMA, MBA or LVOC	WBMA or KLFA(S)	SA	-37.5 (Lim. 7)
W-A-5	T15/32P, L24	PermaPly 28 attached with RS Nails & Tin Tags attached 8-inch o.c. at the 3-inch wide side laps and 8-inch o.c. in three (3) equally spaced rows in the field	OPTIONAL Min. 1.5-inch ISO in PG1 applied 12-inch o.c.	ISO HD, DensDeck Prime, DEXcell FA, or SECUROCK in PG1 applied 12-inch o.c.	LSBA, WBMA, MBA or LVOC	WBMA or KLFA(S)	SA	-37.5 (Lim. 7)
W-A-6	T15/32P, L24	PermaPly 28 attached with RS Nails & Tin Tags attached 8-inch o.c. at the 3-inch wide side laps and 8-inch o.c. in three (3) equally spaced rows in the field	OPTIONAL Min. 1.5-inch ISO in PG1 applied 12-inch o.c.	DensDeck Prime, DEXcell FA, or SECUROCK in PG1 applied 12-inch o.c.	-	HA	-	-37.5 (Lim. 7)
W-A-7	T7/16O, L24	-	OPTIONAL Min. 1.5-inch ISO in PG1 or KLFA applied 12-inch o.c.	ISO HD, DensDeck Prime, DEXcell FA, or SECUROCK in PG1 or KLFA applied 12-inch o.c.	LSBA, WBMA, MBA or LVOC	WBMA or KLFA(S)	-	-45 (Lim. 9)
W-A-8	T7/16O, L24	-	OPTIONAL Min. 1.5-inch ISO in PG1 or KLFA applied 12-inch o.c.	DensDeck Prime, DEXcell FA, or SECUROCK in PG1 or KLFA applied 12-inch o.c.	-	HA	SA	-45 (Lim. 9)
W-A-9	T7/16O, L24	-	Min. 1.5-inch ISO in PG1 or KLFA applied 12-inch o.c.	-	LSBA, WBMA, MBA or LVOC	WBMA or KLFA(S)	SA	-45 (Lim. 9)
W-A-10	T15/32P, L24	PermaPly 28 attached with RS Nails & Tin Tags attached 8-inch o.c. at the 4-inch wide side laps and 8-inch o.c. in three (3) equally spaced rows in the field	Min. 1.5-inch ISO in PG1 applied 8-inch o.c. over fastener rows	-	LSBA, WBMA, MBA or LVOC	KLFA(S)	SA	-67.5 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Adhered Assemblies over Wood Deck (New or Existing)								
System No.	Deck Detail	Vapor Barrier or Anchor Sheet	Base Insulation (Note 6)	Top Insulation or Coverboard	Membrane and Attachment (Note 10)			MDP (psf)
					TPO	TPO FB	TPO SA	
W-A-11	T15/32P, L24	PermaPly 28 attached with RS Nails & Tin Tags attached 8-inch o.c. at the 4-inch wide side laps and 8-inch o.c. in three (3) equally spaced rows in the field	-	Min. 0.5-inch DensDeck Prime in PG1 applied 8-inch o.c. over fastener rows	-	WBMA, LSBA, KLFA(S), or HA	SA	-67.5 (Lim. 7)
W-A-12	T15/32P, L24	PermaPly 28 attached with RS Nails & Tin Tags attached 8-inch o.c. at the 4-inch wide side laps and 8-inch o.c. in three (3) equally spaced rows in the field	-	Min. 0.5-inch SECUROCK in PG1 applied 8-inch o.c. over fastener rows	WBMA, MBA, LVOC, or LSBA	KLFA(S), or HA	SA	-67.5 (Lim. 7)
W-A-13	T7/16O, L24	-	Min. 1-inch ISO in PG1 applied 6-inch o.c.	ISO HD, SECUROCK, or DensDeck Prime in PG1 applied 6-inch o.c.	LVOC, MBA, or LSBA	WBMA or KLFA(S)	SA	-105 (Lim. 9)
W-A-14	T7/16O, L24	-	Min. 1-inch ISO in PG1 applied 6-inch o.c.	ISO HD, SECUROCK, or DensDeck Prime in PG1 applied 6-inch o.c.	WBMA	-	-	-105 (Lim. 9)
W-A-15	T7/16O, L24	-	Min. 1-inch ISO in PG1 applied 6-inch o.c.	SECUROCK or DensDeck Prime in PG1 applied 6-inch o.c.	-	HA	-	-105 (Lim. 9)
W-A-16	T7/16O, L24	-	Min. 1-inch ISO in PG1 applied 6-inch o.c.	-	LVOC, MBA, LSBA, or WBMA	KLFA(S)	-	-105 (Lim. 9)
W-A-17	T7/16O, L24	-	Min. 1-inch Kingspan ISO CG in PG1 applied 6-inch o.c.	-	-	-	SA	-105 (Lim. 9)
W-A-18	T15/32P, L24	-	Min. 1-inch ISO in KLFA applied 6-inch o.c.	ISO HD, SECUROCK, DensDeck Prime, or DEXcell FA in KLFA applied 6-inch o.c.	LVOC, MBA, or LSBA	WBMA or KLFA(S)	SA	-112.5 (Lim. 9)
W-A-19	T15/32P, L24	-	Min. 1-inch ISO in KLFA applied 6-inch o.c.	ISO HD, SECUROCK, or DensDeck Prime in KLFA applied 6-inch o.c.	WBMA	-	-	-112.5 (Lim. 9)
W-A-20	T15/32P, L24	-	Min. 1-inch ISO in KLFA applied 6-inch o.c.	SECUROCK, DensDeck Prime, or DEXcell FA in KLFA applied 6-inch o.c.	-	HA	-	-112.5 (Lim. 9)
W-A-21	T15/32P, L24	-	Min. 1-inch ISO in KLFA applied 6-inch o.c.	-	LVOC, MBA, LSBA, or WBMA	KLFA(S)	-	-112.5 (Lim. 9)
W-A-22	T15/32P, L24	-	Min. 1-inch Kingspan ISO CG in KLFA applied 6-inch o.c.	-	-	-	SA	-112.5 (Lim. 9)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Wood Deck (New, Existing, or Recover)									
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane and Attachment (Note 10)			MDP (psf)
						TPO	TPO FB	TPO SA	
W-AM-1	T7/16O, L24	Optional INSULATION and/or Vapor Barrier	Preliminarily Secured or secured with top layer	Min. 1.5-inch ISO	Trufast VERSA-FAST fastener and OMG 3" Round Metal Plate secured 12 per 4-ft x 8-ft board Pattern #1	MBA, WBMA, LVOC, or LSBA	KLFA(S)	SA	-30 (Lim. 7)
W-AM-2	T7/16O, L24	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	ISO HD	OMG Heavy Duty and Kingspan Plates (Square) secured at a rate of 12 per 4-ft x 8-ft board Pattern #1	MBA, WBMA, LVOC, or LSBA	KLFA(S), WBMA or LSBA	SA	-30 (Lim. 7)
W-AM-3	T7/16O, L24	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	ISO HD	Trufast VERSA-FAST fastener and PLT-R-3 secured at a rate of 11 per 4-ft x 8-ft board	MBA, WBMA, LVOC, or LSBA	KLFA(S), WBMA or LSBA	SA	-30 (Lim. 7)
W-AM-4	T15/32P, L24	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	ISO HD	Trufast VERSA-FAST fastener or FASTENERS and PLT-R-3 secured at a rate of 11 per 4-ft x 8-ft board	MBA, WBMA, LVOC, or LSBA	KLFA(S), WBMA or LSBA	SA	-30 (Lim. 7)
W-AM-5	T7/16O, L24	OPTIONAL INSULATION under min. 1.5-inch ISO	Preliminarily Secured or secured with top layer	ISO HD	Fasteners & Plates at a rate of 1 fastener per 2-ft ²	MBA, WBMA, LVOC, or LSBA	PG1(B) or KLFA(S)	SA	-37.5 (Lim. 7)
W-AM-6	T7/16O, L24	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	ISO HD	Fasteners & Plates secured at a rate of 1 per 2.13ft ²	MBA, WBMA, LVOC, or LSBA	KLFA(S), WBMA or LSBA	SA	-37.5 (Lim. 7)
W-AM-7	T15/32P, L24	-	-	ISO HD	PG1 applied 12-inch o.c.	MBA, LVOC, WBMA or LSBA	KLFA(S)	SA	-37.5 (Lim. 7)
W-AM-8	19/32P, L24	Optional INSULATION and/or Vapor Barrier	Preliminarily Secured or secured with top layer	Min. 1.5-inch Kingspan ISO CG	DF, TF or KS secured 1 fastener per 4ft ²	MBA, WBMA, LVOC, or LSBA	PG1(B) or KLFA(S)	SA	-37.5 (Lim. 7)
W-AM-9	T7/16O, L24	Optional INSULATION and/or Vapor Barrier	Preliminarily Secured or secured with top layer	DensDeck Prime	Trufast VERSA-FAST fastener and Kingspan Square Insulation Plate secured 12 per 4-ft x 8-ft board Pattern #1	LSBA, WBMA, MBA or LVOC	PG1(B), WBMA, KLFA(S), or HA	SA	-37.5 (Lim. 7)
W-AM-10	T7/16O, L24	-	-	ISO HD	PG1 applied 12-inch o.c.	MBA, WBMA, LVOC, or LSBA	KLFA(S), WBMA or LSBA	SA	-45 (Lim. 7)
W-AM-11	T7/16O, L24	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	ISO HD	OMG Heavy Duty and Kingspan Plates (Square) secured at a rate of 15 per 4-ft x 8-ft board	MBA, WBMA, LVOC, or LSBA	KLFA(S), WBMA or LSBA	SA	-45 (Lim. 7)
W-AM-12	19/32P, L24	Optional INSULATION and/or Vapor Barrier	Preliminarily Secured or secured with top layer	Min. 1.5-inch ISO	DF or TF secured 12 per 4-ft x 8-ft board Pattern #1	MBA, WBMA, LVOC, or LSBA	KLFA(S)	-	-45 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Wood Deck (New, Existing, or Recover)									
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane and Attachment (Note 10)			MDP (psf)
						TPO	TPO FB	TPO SA	
W-AM-13	19/32P, L24	Optional INSULATION and/or Vapor Barrier	Preliminarily Secured or secured with top layer	Min. 1.5-inch Kingspan ISO CG	DF or TF secured 12 per 4-ft x 8-ft board Pattern #1	-	-	SA	-45 (Lim. 7)
W-AM-14	T7/16O, L24	OPTIONAL INSULATION under min. 1.5-inch ISO	Kingspan #15 Fasteners and Kingspan Plates secured at a rate of 16 per 4-ft x 8-ft board	DensDeck Prime, DEXcell FA, or SECUROCK	OSFA, PG1, or KLFA applied 12-inch o.c.; or PG1(S)	LSBA, WBMA, MBA or LVOC	PG1(B), WBMA, KLFA(S), or HA	SA	-45 (Lim. 7)
W-AM-15	T15/32P, L24	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	ISO HD	Trufast VERSA-FAST fastener or FASTENERS and PLT-R-3 secured at a rate of 18 per 4-ft x 8-ft board Pattern #3	MBA, WBMA, LVOC, or LSBA	KLFA(S), WBMA or LSBA	SA	-45 (Lim. 7)
W-AM-16	T19/32P, L24	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	SECUROCK or DensDeck Prime	OMG Heavy Duty and Kingspan Plates (Square) secured 1 fastener per 1.45ft ²	LSBA, WBMA, MBA or LVOC	PG1(B), WBMA, LSBA or KLFA(S)	SA	-45 (Lim. 7)
W-AM-17	T19/32P, L24	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	DensDeck Prime	OMG Heavy Duty and Kingspan Plates (Square) secured 1 fastener per 1.45ft ²	-	HA	-	-45 (Lim. 7)
W-AM-18	T15/32P, L24	Optional INSULATION and/or Vapor Barrier	Preliminarily Secured or secured with top layer	Min. 2-inch Kingspan ISO GF	Fasteners & Plates secured 16 per 4-ft x 8-ft board	LVOC or MBA	PG1(B) or KLFA(S)	-	-52.5 (Lim. 7)
W-AM-19	T15/32P, L24	Optional INSULATION and/or Vapor Barrier	Preliminarily Secured or secured with top layer	Min. 2-inch Kingspan ISO CG	Fasteners & Plates secured 16 per 4-ft x 8-ft board	MBA, WBMA, LVOC, or LSBA	PG1(B) or KLFA(S)	SA	-52.5 (Lim. 7)
W-AM-20	T15/32P, L24	Min. 2-inch ISO	Fasteners & Plates secured 16 per 4-ft x 8-ft board	Min. 1.5-inch Kingspan ISO GF	KLFA, OSFA, or PG1 applied 6-inch o.c.	LVOC or MBA	PG1(B) or KLFA(S)	-	-52.5 (Lim. 7)
W-AM-21	T15/32P, L24	Min. 2-inch ISO	Fasteners & Plates secured 16 per 4-ft x 8-ft board	Min. 1.5-inch Kingspan ISO CG	KLFA, OSFA, or PG1 applied 6-inch o.c.	MBA, WBMA, LVOC, or LSBA	PG1(B) or KLFA(S)	SA	-52.5 (Lim. 7)
W-AM-22	T15/32P, L24	Min. 2-inch ISO	Fasteners & Plates secured 16 per 4-ft x 8-ft board	ISO HD	KLFA, OSFA, or PG1 applied 6-inch o.c.	WBMA, MBA, LVOC, or LSBA	KLFA(S)	SA	-52.5 (Lim. 7)
W-AM-23	T15/32P, L24	Min. 2-inch ISO	Fasteners & Plates secured 16 per 4-ft x 8-ft board	Min. 0.5-inch DEXcell FA, SECUROCK, or DensDeck Prime	KLFA, OSFA, or PG1 applied 6-inch o.c.	LSBA, WBMA, MBA or LVOC	-	SA	-52.5 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Wood Deck (New, Existing, or Recover)									
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane and Attachment (Note 10)			MDP (psf)
						TPO	TPO FB	TPO SA	
W-AM-24	T19/32P, L24	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 1.5-inch Kingspan ISO CG	FASTENERS (no Kingspan #12 Fastener) with Kingspan Plates (Square) secured at a rate of 18 per 4-ft x 8-ft board Pattern #1	MBA, WBMA, LVOC, or LSBA	PG1(B) or KLFA(S)	SA	-60 (Lim. 7)
W-AM-25	T15/32P, L24	Optional INSULATION and/or Vapor Barrier	Preliminarily Secured or secured with top layer	Min. 0.5-inch DEXcell FA	Kingspan Square Insulation Plate and OMG Heavy Duty secured 24 per 4-ft x 8-ft board Pattern #2	LSBA, WBMA, MBA or LVOC	KLFA(S)	SA	-75 (Lim. 7)
W-AM-26	T19/32P, L24	Optional INSULATION and/or Vapor Barrier	Preliminarily Secured or secured with top layer	Min. 0.5-inch DEXcell FA	Kingspan Square Insulation Plate and OMG Heavy Duty secured 24 per 4-ft x 8-ft board Pattern #2	LSBA, WBMA, MBA or LVOC	KLFA(S)	SA	-82.5 (Lim. 7)
W-AM-27	T15/32P, L24	Optional INSULATION and/or Vapor Barrier	Preliminarily Secured or secured with top layer	Min. 2-inch ISO	Fasteners & Plates secured 24 per 4-ft x 8-ft board Pattern #2	LSBA, WBMA, MBA or LVOC	-	SA	-82.5 (Lim. 7)
W-AM-28	T15/32P, L24	Min. 2-inch ISO	Fasteners & Plates secured 24 per 4-ft x 8-ft board Pattern #2	Min. 1.5-inch ISO	KLFA, OSFA, or PG1 applied 6-inch o.c.	LSBA, WBMA, MBA or LVOC	-	SA	-82.5 (Lim. 7)
W-AM-29	T15/32P, L24	Min. 2-inch ISO	Fasteners & Plates secured 24 per 4-ft x 8-ft board Pattern #2	Min. 1.5-inch ISO	KLFA, OSFA, or PG1 applied 6-inch o.c.	-	-	-	-82.5 (Lim. 7)
W-AM-30	T15/32P, L24	Min. 2-inch ISO	Fasteners & Plates secured 24 per 4-ft x 8-ft board Pattern #2	ISO HD	KLFA, OSFA, or PG1 applied 6-inch o.c.	WBMA, MBA, LVOC, or LSBA	KLFA(S)	SA	-82.5 (Lim. 7)
W-AM-31	T15/32P, L24	Min. 2-inch ISO	Fasteners & Plates secured 24 per 4-ft x 8-ft board Pattern #2	Min. 0.5-inch DEXcell FA, SECUROCK, or DensDeck Prime	KLFA, OSFA, or PG1 applied 6-inch o.c.	WBMA, MBA, LVOC, or LSBA	-	SA	-82.5 (Lim. 7)

Mechanically Fastened Assemblies over Wood Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal Barrier	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment (Note 12)	MDP (psf)
W-M-1	T19/32P, L24	As required	Min. 0.25-inch INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	TPO	Attached in-lap 4-inch o.c. with OMG 2" Barbed Plates and Kingspan #15 Fasteners; Fastener rows max. 114-inch o.c.	-37.5 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Mechanically Fastened Assemblies over Wood Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal Barrier	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment (Note 12)	MDP (psf)
W-M-2	T7/16O, L24	As required	Min. 0.5-inch INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	TPO	Attached in-lap 6-inch o.c. with VERSA-FAST at a rate of 4 Fasteners (Wedge)/Plate; Fastener rows max. 138-inch o.c.	-37.5 (Lim. 7)
W-M-3	T19/32P, L24	As required	Min. 0.5-inch INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	TPO	Attached in-lap 6-inch o.c. with VERSA-FAST at a rate of 3 Fasteners/Plate; Fastener rows max. 138-inch o.c.	-52.5 (Lim. 7)
W-M-4	T19/32P, L24	As required	Min. 0.25-inch INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	TPO	Attached in-lap 6-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 54-inch o.c.	-60 (Lim. 7)
W-M-5	T19/32P, L24	As required	Min. 0.25-inch INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	TPO	Attached in-lap 6-inch o.c. with OMG Heavy Duty and OMG Eyehook Accuseam Plates; Fastener rows max. 90-inch o.c.	-60 (Lim. 7)
W-M-6	T19/32P, L24	As required	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.25-inch DensDeck, DensDeck Prime, DEXcell FA, or SECUROCK	Preliminarily Secured	TPO	Attached in-lap 6-inch o.c. with #15 Fasteners & 2-3/8" Plates; Fastener rows max. 90-inch o.c.	-60 (Lim. 7)

Induction Welded Assemblies over Wood Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal Barrier	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment (Note 12)	MDP (psf)
W-W-1	T7/16O or T15/32P, L24	As required	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch ISO or Cover Board	OMG Heavy Duty (min. 1-inch embedment into wood supports) and Kingspan TPO Induction Welding Plates, Trufast TPO IW Plates, or isoweld FI-P-6.8-TPO plates secured max. 12-inch o.c. through sheathing into wood structural supports in rows max. 8-ft o.c.	Kingspan TPO (Min. 60 mil)	Induction welded to weld plates	-37.5 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Induction Welded Assemblies over Wood Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal Barrier	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment (Note 12)	MDP (psf)
W-W-2	T7/16O or T15/32P, L24	As required	OPTIONAL INSULATION	Loose laid	ISO HD	OMG Heavy Duty (min. 1-inch embedment into wood supports) and Kingspan TPO Induction Welding Plates, Trufast TPO IW Plates, or <i>isoweld</i> FI-P-6.8-TPO plates secured max. 24-inch o.c. through sheathing into wood structural supports in rows max. 48-inch" o.c.	Kingspan TPO (Min. 60 mil)	Induction welded to weld plates	-37.5 (Lim. 7)
W-W-3	T15/32P, L24	As required	Min. 0.5-inch INSULATION	Loose laid	OPTIONAL Cover Board	Trufast VERSA-FAST or FASTENERS and Kingspan TPO Induction Welding Plates secured at a rate of 1 fastener per 4ft ²	Kingspan TPO (Min. 60 mil)	Induction welded to weld plates	-37.5 (Lim. 7)
W-W-4	T19/32P, L24	As required	Min. 0.5-inch INSULATION	Loose laid	OPTIONAL Cover Board	IW secured at a rate of 1 fastener per 4ft ²	Kingspan TPO (Min. 60 mil)	Induction welded to weld plates	-37.5 (Lim. 7)
W-W-5	T15/32P, L24	As required	Min. 0.25-inch INSULATION	Loose laid	OPTIONAL Cover Board	OMG Heavy Duty and Kingspan TPO Induction Welding Plates secured 16-inch o.c. in rows 24-inch o.c.	Kingspan TPO (Min. 60 mil)	Induction welded to weld plates	-37.5 (Lim. 7)
W-W-6	T1/2O, L24	As required	Min. 0.5-inch INSULATION	Loose laid	OPTIONAL Cover Board	Kingspan #15 Fasteners and Kingspan TPO Induction Welding Plates, Trufast TPO IW Plates, or <i>isoweld</i> FI-P-6.8-TPO plates secured at a rate of 1 fastener per 4ft ²	TPO	Induction welded to weld plates	-37.5 (Lim. 7)
W-W-7	T15/32, L24	As required	Min. 0.25-inch INSULATION	Loose laid	OPTIONAL Cover Board	OMG Heavy Duty and Kingspan TPO Induction Welding Plates secured at a rate of 1 fastener per 4ft ²	Kingspan TPO (Min. 60 mil)	Induction welded to weld plates	-45 (Lim. 7)
W-W-8	T7/16O or T15/32P, L24	As required	Min. 1-inch ISO	Loose laid	OPTIONAL Cover Board	OMG Heavy Duty (min. 1.5-inch embedment into wood supports) and Kingspan TPO Induction Welding Plates, Trufast TPO IW Plates, or <i>isoweld</i> FI-P-6.8-TPO plates secured max. 24-inch o.c. through sheathing into wood structural supports in rows max. 48-inch o.c.	Kingspan TPO (Min. 60 mil)	Induction welded to weld plates	-45 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Induction Welded Assemblies over Wood Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal Barrier	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment (Note 12)	MDP (psf)
W-W-9	T7/16O or T15/32P, L24	As required	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	OMG Heavy Duty (min. 1.75-inch embedment into wood supports) and Kingspan TPO Induction Welding Plates, Trufast TPO IW Plates, or <i>isoweld</i> FI-P-6.8-TPO plates secured max. 18-inch o.c. through sheathing into wood structural supports in rows max. 4-ft o.c.	Kingspan TPO (Min. 60 mil)	Induction welded to weld plates	-45 (Lim. 7)
W-W-10	T19/32P, L24	As required	Min. 0.5-inch INSULATION	Loose laid	OPTIONAL Cover Board	IW #15 secured at a rate of 1 fastener per 5.33ft ²	TPO	Induction welded to weld plates	-45 (Lim. 7)
W-W-11	T7/16O, L24 or T15/32P, L24	As required	Min. 0.5-inch INSULATION	Loose laid	OPTIONAL Cover Board	Kingspan #15 Fasteners and Kingspan TPO Induction Welding Plates, Trufast TPO IW Plates, or <i>isoweld</i> FI-P-6.8-TPO plates secured at a rate of 1 fastener per 2.67ft ²	TPO	Induction welded to weld plates	-45 (Lim. 7)
W-W-12	T19/32P, L24	As required	Min. 0.5-inch INSULATION	Loose laid	OPTIONAL Cover Board	Kingspan #15 Fasteners and Kingspan TPO Induction Welding Plates at a rate of 1 fastener per 5.33ft ²	TPO	Induction welded to weld plates	-45 (Lim. 7)
W-W-13	T15/32P, L24	As required	Min. 0.25-inch INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	OMG Heavy Duty (min. 1.5-inch embedment into wood supports) and Kingspan TPO Induction Welding Plates, Trufast TPO IW Plates, or <i>isoweld</i> FI-P-6.8-TPO plates secured max. 24-inch o.c. through sheathing into wood structural supports in rows max. 24-inch o.c.	Kingspan TPO (Min. 60 mil)	Induction welded to weld plates	-52.5 (Lim. 7)
W-W-14	T15/32P, L24	As required	Min. 0.25-inch INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	OMG Heavy Duty (min. 1.5-inch embedment into wood supports) and Kingspan TPO Induction Welding Plates, Trufast TPO IW Plates, or <i>isoweld</i> FI-P-6.8-TPO plates secured max. 9-inch o.c. through sheathing into wood structural supports in rows max. 48-inch o.c.	Kingspan TPO (Min. 60 mil)	Induction welded to weld plates	-60 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR Kingspan TPO SINGLE-PLY MEMBRANES

Induction Welded Assemblies over <i>Wood Deck (New, Existing, or Recover)</i>									
System No.	Deck Detail	Thermal Barrier	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment (Note 12)	MDP (psf)
W-W-15	T15/32P, L24	As required	Min. 0.25-inch <i>INSULATION</i>	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL <i>Cover Board</i>	OMG Heavy Duty (min. 1.5-inch embedment into wood supports) and Kingspan TPO Induction Welding Plates, Trufast TPO IW Plates, or <i>isoweld</i> FI-P-6.8-TPO plates secured max. 6-inch o.c. through sheathing into wood structural supports in rows max. 48-inch o.c.	Kingspan TPO (Min. 60 mil)	Induction welded to weld plates	-112.5 (Lim. 7)

END OF REPORT