



CONSTRUCTION MATERIALS

LABORATORY TEST RESULTS

TECHNOLOGIES

Report for: Gardner Gibson
4146 E. 7th Avenue
Tampa, FL 33605

Attention: Matt Mullins

Product Name(s): APOC Tuff-Felt 46	Manufacturer: Gardner Gibson
PRI-CMT Project No.: GGI-206-02-01	Source: Gardner Gibson
Date Received: January 31, 2018	Dates Tested: Feb. 26, 2018 – Mar. 5, 2018

Purpose: Evaluate *APOC Tuff-Felt 46* for compliance with the physical properties of **ASTM D 226 Asphalt-Saturated Felt Used in Roofing and Waterproofing, Type I.**

Test Methods: Testing was completed as described in ASTM D 226-09: *Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing*. Test methods assigned or referenced include ASTM D 70: *Standard Test Method for Density of Semi-Solid Bituminous Materials (Pycnometer Method)*; ASTM D 146: *Standard Test Methods for Sampling and Testing Bitumen-Saturated Felts and Woven Fabrics for Roofing and Waterproofing*; and ASTM D 6136: *Standard Test Method for Kerosine Number of Unsaturated (Dry) Felt by Vacuum Method*.

Sampling: Product samples were provided by Gardner Gibson in Tampa, FL

GGI-206-02-02

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Results: ASTM D 226

Property	Test Method	Result	Requirement	
			Type I	Type II
Physical Requirements				
Breaking Strength (lbf/in-width) 20 specimens; 1" x 6" x thickness; Cond. 2h @ 73.4±3.6°F & 50±5%RH; Test @ 73.4±3.6°F; Rate=2in/min	ASTM D 146			
Longitudinal (with fiber grain)		75	≥ 30	≥ 40
Transverse (across fiber grain)		23	≥ 15	≥ 20
Pliability [Pass/Fail] 10 specimens; 1" x 8" x thickness; Cond. 10-15min in water @ 77±1.8°F; Test 90° around ½" radius in 2s	ASTM D 146		½" radius	¾" radius
Longitudinal (with fiber grain)		Pass	No Failures	No Failures
Transverse (across fiber grain)		Pass	No Failures	No Failures
Loss on Heating (weight %) 2 specimens; 12" x 6" x thickness; Test Cond. 221±5°F for 5h±3min	ASTM D 146	2	≤ 4	≤ 4
Dimensions and Masses				
Width of Roll (in)	ASTM D 146	36	36±1/4	36±1/4
Area, min (ft²)	ASTM D 146	432	432	216
Moisture at Point of Manufacture (%)	ASTM D 146	NT	≤ 4.3	≤ 4.1
As Received¹		0.8	≤ 4.3	≤ 4.1
Net Mass of Saturated Felt (lb/100ft²)	ASTM D 146	11.5	≥ 11.5	≥ 26
Mass of Saturant (lb/100ft²)	ASTM D 146	6.3	≥ 6.2	≥ 15.0
Mass Ratio of Saturant to Desaturated Felt	ASTM D 226	1.2	≥ 1.2	≥ 1.5
Saturation Efficiency (%)	ASTM D 226	79	≥ 70	...
Mass of Desaturated Felt (lb/100ft²)	ASTM D 146	5.2	≥ 5.2	≥ 10.0
Ash (%)	ASTM D 146	8.7	≤ 10.0	≤ 10.0

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GGI-206-02-02

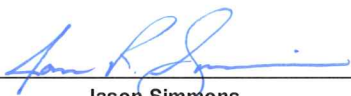
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Property	Test Method	Result	Requirement	
			Type I	Type II
Perforated Felt (in ²)	ASTM D 226	NA	≤ 0.05	...
Average Venting Area (%)	ASTM D 226	NA	≥ 0.1	...
Other				
Unrolling @ 50°F and 140°F [Pass/Fail]	ASTM D 226	Pass	No Damage	No Damage

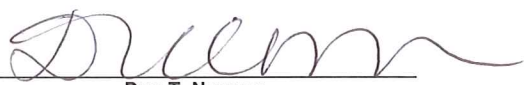
Note(s): 1- Moisture (As Received) was utilized in lieu of Moisture at Point of Manufacture;
NT- Not Tested;
NA- Not Applicable

Statement of Compliance:

The product was tested has demonstrated compliance with the physical requirements of Type I prescribed in **ASTM D 226-09: Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing**.

Signed: 
Jason Simmons
Director

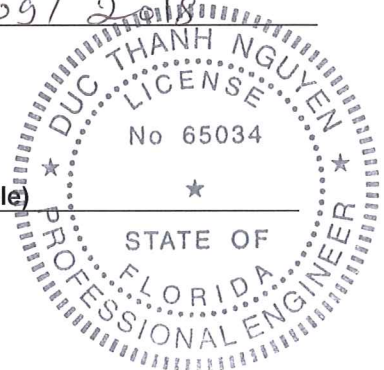
Date: 3/8/2018

Signed: 
Duc T. Nguyen
Florida Registered Professional Engineer
PE No.: 65034

Date: 3/09/2018

Report Issue History:

Issue #	Date	Pages	Revision Description (if applicable)
Original	03/08/2018	3	NA



END OF REPORT

GGI-206-02-02

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