

September 11, 2020

Standards Equivalency Determination

Reference: Technoform Insulbar for use in Kawneer SGD948

I have performed an evaluation of the testing performed by Architectural Testing, Inc. in their test reports 60520.02-106-18 and 61261.01-106-18, and by ETC in their test report ETC-07-1043-19094.0. These reports include some testing for older versions of the various ASTM standards than those referenced in the Miami-Dade Checklist #0445 and Florida Building Code 7th Edition (2020); therefore I analyzed the standards for equivalency and current code compliance. Please see the table below for the findings:

As-Tested	As-Required in Checklist #0445 / FBC 7 th Edition (2020)	Equivalent / Meets FBC 7 th Ed.?
ASTM D1929-96(2001)e1 Ignition Temperature, with samples tested showing an average ignition temp. of 740°F	ASTM D1929-16, with required results of ignition temperature > 650°F. The '16 version compared to the '96/01 version has formatting and editorial revisions, additional clarifying notes, additional precision/bias data, and the allowance for entry of thermocouple 2 wire through the bottom rather than the top, however with the thermocouple sensor location unchanged. In my judgement these differences do not functionally affect the test results.	Yes
ASTM D2843-99 Smoke Density, with samples tested showing an average smoke density value of less than 3	ASTM D2843-16, with required results of smoke density <= 75. The '16 version compared to the '99 version has identical standard test sample size, burner assembly and pressure, chamber size, and photometric equipment. The primary difference is the heat shield below the burner in '99 was specified as asbestos and in '16 is specified as calcium silicate. Other changes are that temperature compensation is now as-required (mandatory in '99 version) and allows more software automation including more frequent measurements than every 15s if desired, however 15s is still the max. frequency as was required in the '99 version. Because the smoke density rating is the area under the curve of measured values, a smoother curve due to more frequent measurements would result in a lower smoke density rating, therefore the older as-tested method is more stringent. In my judgement these differences do not otherwise functionally affect the test results.	Yes

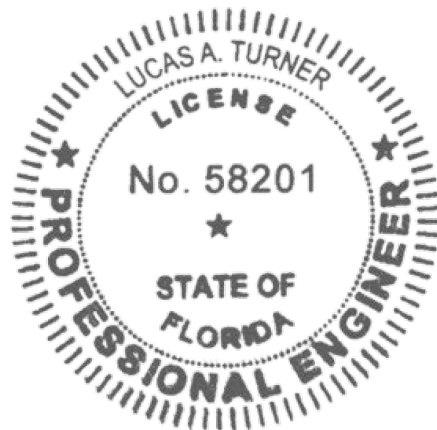
ASTM D635-03 Rate of Burning, with samples tested all achieving an average linear burn rate of 23.9 mm/min (meets criteria of CC2)	ASTM D635-14, with required results of Class CC1 (corresponds to Class C-1) or CC2. The '14 version compared to the '03 version has identical test duration, sample and flame size and orientation, and test apparatus, except that the wire gauze in the '14 version is positioned more directly under the test sample to catch falling embers, which does not affect the rate of burning. The '14 version loosens tolerances on the conditioning room chamber to +/- 10% RH rather than +/-5% RH, and also changes the test chamber required RH to simply <=75% from the previously required 45% to 75% RH. Because the as-tested conditions under the '03 version fall within the criteria of the '14 version they are in compliance.	Yes
ASTM G26-95 Method A Xenon UV Exposure, with testing protocols of 6500W lamp, daylight filter (0.35 W/m ² *nm @ 340nm), 4500 hours	ASTM G26 or G155 per Checklist, ASTM G155-13/D2565-99(2008) per FBC: Testing complies explicitly with G26. G155/D2565 also requires 6500 W lamp, daylight filter (0.35 W/m ² *nm @ 340nm), 4500 hours	Yes
ASTM D638-03 Tensile Test after G26 test exposure, with samples tested showing an average of 5.91% difference in Yield Strength between exposed and unexposed samples	ASTM D638-03 (same version), with required results of change in Yield Strength of < 10%	Yes

Based on these assessments, the standards used for the testing performed are equivalent to the corresponding standards as noted above as required in the FBC 7th Edition (2020) and Miami-Dade Checklist #0445.

Sincerely,

LT

9/11/2020
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