

VANCOUVER, BC: LOS ANGELES, CA:: TULSA, OK: TORONTO, ON WEBSITE:

877.461.8378 ph. | 604.527.8368 fx. 909.483.0250 ph. | 909.483.0336 fx 918.437.8333 ph. | 918.437.8487 fx. 416.550.9280 WWW.QALORG

BUILDING PRODUCTS LISTING PROGRAM

Customer: Firestable® Insulation Company

Class: Polyurethane Foam Insulation Location: Essex, CT

Listing No. B1134-1 Effective Date: May 30, 2022 Last Revised: Date: October 30, 2024 Expires: <N/A>

Standards:	ASTM E84-23d	Standard Test Method for Surface Burning
	UL 723-18	Standard for Test for Surface Burning Characteristics of Building Materials
	NFPA 255- 2006	Standard Method of Test of Surface Burning
		Characteristics of Building Materials.
	ASTM E2768-11	Standard Test method for Extended Duration
		Surface Burning Characteristics of Building Materials (30 min Tunnel Test).
	NFPA 275-2022	Standard Method of Fire Tests for the Evaluation of Thermal Barriers.
	UL 1715-2017	Fire Test of Interior Finish Materials.
	2021 / 2018	International Building Code Section 803.14 Stability.
	2015	International Building Code Section 803.12 Stability.

Product: Firestable[®] FS 2.0 Spray-Applied Foam.

Description: Firestable[®] FS 2.0 is a spray-applied polyurethane foam used as a thermal barrier for the protection of foam plastics described below. Firestable[®] is available in the following colors:

- Cloud White.
- Charcoal.
- Markings: Firestable® FS 2.0 Component A and Component B drums bear a label with markings including the information outlined below:
 - Manufacturer's Name
 - Product name Firestable[®] FS 2.0
 - ASTM E84 Class A: Flame Spread ≤ 25 / Smoke Development ≤ 450 @ 4"
 - Traceability Code (Lot Number)
 - QAI Listing Number (B1134) and Certification Logo shown:





Models / Ratings:

The following outlines Firestable® FS 2.0 Spray-Applied Foam results determined in accordance with ASTM E84, UL 723, and ANSI/NFPA 255:

PRODUCT	FLAME SPREAD INDEX (FSI)	SMOKE DEVELOPED INDEX (SDI)	THICKNES S MAX. (inches)	DENSITY MAX (lbs/ft ³)
Firestable® FS 2.0	≤ 25	≤ 450	4	2.8

The following outlines Firestable[®] FS 2.0 Spray-Applied Foam results determined in accordance with ASTM E2768 / ASTM E84 Continued for 20 Minutes:

PRODUCT	FLAME SPREAD INDEX (FSI	SIGNIFCANT PROGRESSIVE COMBUSTION	MAX FLAME FRONT (ft)	THICKNESS MAX. (inches)	DENSITY MAX (Ibs/ft ³)
Firestable® FS 2.0	≤ 25	No	≤ 10.5	4	2.8

The following outlines Firestable® FS 2.0 spray-applied foam approved installation as a thermal barrier for protection of foam plastics in accordance with NFPA 275:

INSTALLED FIRESTABLE [®] FS 2.0 ≥ 2.5 INCHES THICKESS, 2.5 lbs/ft ³ DENSITY				
THERMOPLA	STIC INSULATION	THERMOSETTING INSULATION		
DENSITY (lbs/ft ³)	MAX. THICKNESS (inches)	MAX. DENSITY (lbs/ft ³)	MAX. THICKNESS (inches)	
1.0	5-1/2			
1.5	3-1/4			
2.0	2.5	3.0	6-1/2	
2.5	2			
3.0	1-3/4			

Firestable[®] FS 2.0 spray-applied foam has met 2021 / 2018 International Building Code Section 803.14 Stability, 2015 International Building Code Section 803.12 Stability when applied to thermoplastic foam plastics, thermosetting foam plastics, cement board, metal and gypsum-based substrates.



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The following outlines Firestable® FS 2.0 results determined in accordance with UL 1715¹:

Note 1: Testing to UL 1715 was conducted following 2021 / 2018 / 2015 International Building Code Section 2603.9 *Special Approval* evaluation based on full scale testing of an end-use configuration.

	BASE EOAM	BASE FOAM	BASE FOAM	
FRODUCT				INSTALLATION
		(inches)	(lbs/ft ³)	
Eiroctable® ES	No Roco	Firestable E	S 2 0 ot 2 5	Ensure the substrate is dry and clean of
		FileStable F	- 3 2.0 at 2.5	debris and dust Firestable FS 2.0 is
2.0	Foam	from 1" to		applied in a single pass up to 2.5 inches
		thick		thickness at 2.5 lbs/ft ³ target density (2.3
		UNCK	ness.	$= 2.8 \text{ lbs/ft}^3$ required) ES 2.0 is applied to
				ensure a continuous unbroken surface
A) IBC 2603.9				across walls and ceilings Installation of
(Alternate)				Firestable FS 2.0 to be done at ambient
Firestable [®] FS		Firestable F	S 2.0 at 2.5	temperatures of $30 - 100^{\circ}$ F where
20		lbs/ft ³ nominal density		temperatures are $> 5^{\circ}F$ above the dew
2.0		target at > 2.5	inches where	point to ensure bond to substrate.
B) IBC 2603 4		installed ne		· ·····
(Equivalant)		il istalleu pe		
	The sum and set			Ensure hass from is dry and clean of
Firestable®FS	l nermoplasti	See NFPA	275 Above	Ensure base foam is dry and clean of
2.0	C			applied in a single pass to minimum 2.5
				inches thickness, at 2.5 lbs/ft ³ target
				density $(2.3 - 2.8 \text{ lbs/ft}^3 \text{ required})$ FS 2.0
				is applied to ensure a continuous
				unbroken surface across walls and
				ceilings to ensure underlying foam
				protection with no voids or gaps present.
				Installation of Firestable FS 2.0 to be done
IBC 2603.4				at ambient temperatures of 30 – 100°F
(Equivalent)				where temperatures are > 5oF above the
(= q				dew point to ensure bond to base foam
				layer.
Firestable [®] FS	Thermosettin	See NFPA	275 Above	First pass of thermosetting foam base
2.0	a			layer is applied to maximum thickness and
-	5			density described in NFPA 275 above.
				The base layer is to be allowed to
				condition to ambient temperature and
				confirmed to be clean and dry prior to
				application of Firestable FS 2.0.
				Following, at minimum a single pass of
				Firestable FS 2.0 is to be applied at 2.5
				inches thickness, at 2.5 lbs/ft ³ target
				density (2.3 – 2.8 lbs/ft ³ installed
				required). FS 2.0 is applied to ensure a
				and appliance to ansure underlying form
				protection with no voide or gone procest
				Installation of Firestable FS 2.0 to be done
				at ambient temperatures of done at
				ambient temperatures of 30 – 100°F
				where temperatures are $> 50F$ above the
IBC 2603 4				dew point to ensure bond to base foam
(Equivalent)				layer.



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For application the manufacturers installations instructions must be followed, foam MUST be cured and cooled to ambient conditions, all surface preparation should be carried out in accordance with good application practices. Firestable® FS 2.0 should be installed by qualified contractors to ensure product performance.

Firestable FS 2.0 is to be installed at target thicknesses noted, in the density tolerances shown for use as a thermal barrier.

Final acceptance of the product in the intended application is to be determined by the authority having jurisdiction.

The materials, products or systems listed herein have been qualified to bear the QAI Listing Mark under the conditions stated with each Listing. Only those products bearing the QAI Listing Mark are considered to be listed by QAI. No warranty is expressed or implied, and no guarantee is provided that any jurisdictional authority will accept the Listing found herein. The appropriate authorities should be contacted regarding the acceptability of any given Listing. Visit the QAI Online Listing Directory located at <u>www.qai.org</u> for the most up to date version of this Listing and to validate that this QAI Listing is active. Questions regarding this listing may be directed to <u>info@qai.org</u>. Please include the listing number in the request.
