



FLAME CONTROL COATINGS

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FLAME CONTROL 60-60A INTUMESCENT THERMAL BARRIER FOR SPRAY POLYURETHANE FOAM INSULATION

CSI Section:

09 96 43 Fire-Retardant Coatings

1.0 RECOGNITION

Flame Control 60-60A has been evaluated for use as a fire-protective coating for spray foam plastic products. The coating has been evaluated for the contribution of wall and ceiling finish to room fire growth and as an alternate to the prescriptive thermal barrier required in Section 2603.4 of the IBC and Section 316.4 of the IRC. Flame Control 60-60A evaluated in this report is a satisfactory alternative to those prescribed in the following codes and regulations:

- 2021, 2018, 2015 and 2012 International Building Code® (IBC)
- 2021, 2018, 2015 and 2012 International Residential Code® (IRC)

2.0 LIMITATIONS

Use of Flame Control 60-60A recognized in this report is subject to the following limitations:

2.1 The application of any additional interior finish over the fire-protective coating is beyond the scope of this report.

2.2 Spray foam plastic insulation shall be installed in accordance with the manufacturer's installation instructions.

2.3 Approval of Flame Control 60-60A for use with any insulation product listed herein is conditional upon that insulation products' current approval for use with Flame Control 60-60A. Users must independently verify the current validity of any evaluation report referenced herein.

2.4 Flame Control 60-60A is produced in Niagara Falls, New York.

3.0 PRODUCT USE

3.1 Design

3.1.1 Alternative Thermal Barrier Assembly: When used as an alternate to the prescriptive thermal barrier required in IBC Section 2603.4 or IRC Section R316.4, Flame Control

60-60A shall be applied in the minimum thickness shown in Table 1 of this report.

3.1.2 Interior Finish: Based on testing to NFPA 286, when Flame Control 60-60A is applied to spray foam plastic insulations as shown in Table 1 of this report, the assembly is considered to have a Class A interior wall and ceiling finish classification as defined in Section 803.1.1 of the 2021 and 2018 IBC and Section 803.1.2 of the 2015 and 2012 IBC.

3.2 Application

3.2.1 General: Flame Control 60-60A shall be applied in accordance with Flame Control Coating's installation instructions, the spray foam plastic manufacturer's installation instructions, this evaluation report and the applicable codes listed in Section 1.0 of this report. Where conflicts occur, the more restrictive governs. The manufacturer's published installation instructions and this report shall be available at the jobsite for quality control purposes.

3.2.2 Application: The minimum installed thickness of Flame Control 60-60A shall be applied to foam plastic insulation as shown in [Table 1](#) of this report. Before application of Flame Control 60-60A, the spray foam plastic insulation shall be allowed to cool and cure a minimum of one hour or as required by the foam plastic manufacturer, as applicable. The surface of the foam plastic shall be free of dirt, debris and other contaminants and shall be firm and dry before application.

Flame Control 60-60A shall be thoroughly mixed using a high-speed drill mixer before application. The coating shall be applied by airless spray, brush or roller in a single coat to the spray foam insulation in a uniform manner. Application shall occur at temperatures ranging from 50°F to 90°F (10°C to 32°C) unless special instructions are provided by the manufacturer for applications at colder temperatures. For applications with a relative humidity at the time of application greater than 65 percent, fans shall be used to circulate the air for proper curing.

4.0 PRODUCT DESCRIPTION

Flame Control 60-60A intumescent coating is manufactured in white, gray and black colors by Flame Control Coatings, LLC. The coating is water-based and supplied in 5-gallon (18.9 L) pails weighing 62 lbs. (28.1 kg) and 55-gallon (208 L) drums weighing 682 lbs. (309 kg). The coating material has a maximum shelf life of 12 months when stored in factory sealed containers. The material shall be protected from freezing and it is recommended to be stored at temperatures above 50°F (10°C). Flame Control 60-60A has a drying time of 1 to 2 hours to touch and 2 to 4 hours to recoat.

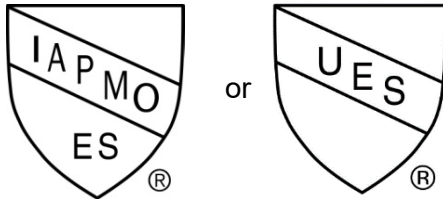
The product described in this Uniform Evaluation Service (UES) Report has been evaluated as an alternative material, design or method of construction in order to satisfy and comply with the intent of the provision of the code, as noted in this report, and for at least equivalence to that prescribed in the code in quality, strength, effectiveness, fire resistance, durability and safety, as applicable, in accordance with IBC Section 104.11. This document shall only be reproduced in its entirety.





5.0 IDENTIFICATION

Flame Control 60-60A's pails and drums are identified by the Flame Control Coating's name and address, product name (Flame Control 60-60A), date of manufacture, product shelf life, conditions for storage and evaluation report number (ER-596). The container identification also includes the IAPMO Uniform Evaluation Service Mark of Conformity. Either Mark of Conformity may be used as shown below:



IAPMO UES ER-596

6.0 SUBSTANTIATING DATA

6.1 Manufacturer's descriptive literature and installation instructions. Test reports are from laboratories in compliance with ISO/IEC 17025.

6.2 Data in accordance with the ICC-ES Acceptance Criteria for Fire-protective Coatings Applied to Spray-applied Foam Plastic Insulation Installed Without a Code-Prescribed Thermal Barrier, AC456, dated October 2015, editorially revised January 2021.

6.3 Testing in accordance with NFPA 286.

6.4 Data in accordance with IAPMO/ANSI ES1000-2020, Standard for Building Code Compliance of Spray-Applied Polyurethane Foam.

6.5 Data in accordance with 2019 ICC 1100 Standard for Spray-applied Polyurethane Foam Plastic Insulation.

7.0 STATEMENT OF RECOGNITION

This evaluation report describes the results of research carried out by IAPMO Uniform Evaluation Service on Flame Control 60-60A intumescent coatings to the conformance to the codes shown in Section 1.0 of this report and documents the product's certification. Flame Control 60-60A is produced at locations noted in Section 2.4 of this report under a quality control program with periodic inspection under the supervision of IAPMO UES.

For additional information about this evaluation report please visit www.uniform-es.org or email us at info@uniform-es.org



TABLE 1 (continued on next page)
FOAM PLASTIC PRODUCTS APPROVED FOR USE WITH FLAME CONTROL 60-60A AS
ASSEMBLIES NOT REQUIRING A PRESCRIPTIVE 15-MINUTE THERMAL BARRIER

Manufacturer's Name	Product Name	Product Density	Evaluation Report ^{1,2}	Application of Flame Control 60-60A			Maximum Thickness of Spray Foam (inches)	
				Minimum Installed Thickness (mils)		Theoretical Application Rate (gallons/100 square feet) ³	Vertical	Overhead
				Wet Film	Dry Film			
BASF	Spraytite 158	2.0 pcf	CCRR-1031 and ESR-2642	20	13	1.3	7.5	11.5
BASF	Spraytite SP	2.0 pcf	CCRR-1031 and ESR-2642	20	13	1.3	7.5	11.5
Carlisle	Foamsulate 50	0.5 pcf	ER-351	14	9	0.87	6	10
Carlisle	Foamsulate OCX	0.5 pcf	ER-394	20	13	1.3	7.5	11.5
Carlisle	Foamsulate 50 HY	0.5 pcf	ER-540	14	9	0.87	6	10
Carlisle	Sealtite PRO OCX	0.5 pcf	ER-615	20	13	1.3	7.5	11.5
Carlisle	Sealtite PRO No Mix	0.5 pcf	ER-616	14	9	0.87	6	10
Carlisle	Sealtite PRO Closed Cell	2.0 pcf	ER-621	14	9	0.87	6	10
Carlisle	SealTite Pro High Yield	0.5	ER-623	14	9	0.87	6	10
Carlisle	SealTite PRO OC	0.5 pcf	ER-624	14	9	0.87	6	10
Carlisle	Foamsulate Closed Cell	2.0	ER-626	14	9	0.87	6	10
Carlisle	Sealtite PRO One Zero	2.0	ER-640	14	9	0.87	6	10
Carlisle	Foamsulate HFO	2.0	ER-650	14	9	0.87	6	10
Demilec	Heatlok HFO Pro Closed Cell	2.0	ER-565	18	12	1.12	5.5	9.5
Demilec	Heatlok HFO High Lift	2.0	ESR-4073	18	12	1.12	5.5	9.5
Gaco/Firestone	Gaco OnePass F1850	2.1	CCRR-1043	12	8	0.75	6	10
Gaco/Firestone	Gaco One Pass Low F1880	2.2	CCRR-1106	12	8	0.75	6	10
Gaco/Firestone	Gaco 183M	2.0	CCRR-1002	12	8	0.75	6	10
Gaco/Firestone	Gaco EZ Spray F4500	0.55	CCRR-1107	12	8	0.75	6	10
Johns Manville	JM Corbond OCX spf	0.5	ER-372	20	13	1.3	7.5	11.5
Johns Manville	JM Gen IV	2.0	ER-700	14	9	0.87	6	10
Rhino Linings	Thermal Guard CC2 ECO	2.0	ESL-1121	14	9	0.87	5.5	9.5



TABLE 1 (continued)

Manufacturer's Name	Product Name	Product Density	Evaluation Report ^{1, 2}	Application of Flame Control 60-60A			Maximum Thickness of Spray Foam (inches)	
				Minimum Installed Thickness (mils)		Theoretical Application Rate (gallons/100 square feet) ³	Vertical	Overhead
				Wet Film	Dry Film			
Rhino Linings	Thermal Guard OC.5 B-D	0.5	ESR-2100	14	9	0.87	6	10
SES Foam	Nexseal 2.0	2.0	ER-374	12	8	0.75	6	10
SES Foam	Sucraseal	0.5	ESR-3375	12	8	0.75	6	10
SWD	108	0.4	CCRR-1051	14	9	0.87	8	12
SWD	Quik-Shield 108 OC YM	0.4	CCRR-1051	14	9	0.87	8	12
SWD	Quik-Shield 112	2.0 pcf	CCRR-1011	20	13	1.3	9.5	9.5
SWD	Quik-Shield 118	2.0	CCRR-1093	20	13	1.3	7.5	11.5
Sustainable Polymers	.50 OCX	0.5	ER-512	20	13	1.3	7.5	11.5
Sustainable Polymers	.50 OC	0.5	ER-513	14	9	0.87	6	10
Thermoseal	2000/2000W	2.0	ER-581	14	9	0.87	6	10
Victory Polymers	VPC-50 OC	0.5	ER-674	14	9	0.87	6	10

For SI: 1mil = 0.0254 mm, 1 inch = 25.4 mm, 1 pcf = 16.02 kg/m³

Notes:

- Approval of Flame Control 60-60A for use with any insulation product listed herein is conditional upon that insulation product's current approval for use with Flame Control 60-60A. Users must independently verify the current validity of any evaluation report referenced herein.
- ER – Evaluation Reports from IAPMO Uniform Evaluation Service
 CCRR – Code Compliance Research Reports from Intertek
 ESR – Evaluation Service Reports from ICC-ES
 ESL – Evaluation Service Listing from ICC-ES
- Theoretical coating application rates are based strictly on minimum wet film thickness requirements and shall be increased for site-specific conditions such as foam plastic surface texture, overspray loss, container and other residues, application technique and environmental conditions.