ICC-ES Evaluation Report

ESR-5614

Issued November 2024

Subject to renewal November 2025

DIVISION: 09 00 00 — FINISHES **Section: 09 96 43—Fire-Retardant Coatings**	**REPORT HOLDER:** **FLAME CONTROL COATINGS**	**FLAME CONTROL 60-60A**	

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2024, 2021 and 2018 *International Building Code*® (IBC)
- 2024, 2021 and 2018 *International Residential Code*® (IRC)

Properties evaluated:

- Physical properties
- Application without a prescriptive thermal barrier

2.0 USES

Flame Control 60-60A is a liquid-applied coating intended for application over the surface of spray-applied foam plastic insulation complying with ICC-ES Acceptance Criteria for Spray-applied Foam Plastic Insulation (AC377). The coated assembly may be left exposed to the interior of the building without the application of a code-prescribed thermal barrier when installed as described in this report.

3.0 DESCRIPTION

3.1 General:

Flame Control 60-60A is a single-component, water-based, liquid-applied intumescent coating. The coating is supplied in 5-gallon (19 L) pails and 55-gallon (208 L) drums and has a shelf life of one (1) year when stored in factory-sealed containers at temperatures between 50°F and 80°F (10°C and 26.7°C).

3.2 Surface Burning Characteristics:

The Flame Control 60-60A coated foam assemblies listed in Table 1 were tested in accordance with NFPA 286 and comply with the acceptance criteria of IBC Section 803.1.1.1 and IRC Section R302.9.4 and are permitted to be used where a Class A classification in accordance with ASTM E 84 or UL 723 is required by IBC Section 803.13.

4.0 DESIGN AND INSTALLATION

Flame Control 60-60A must be applied in accordance with the manufacturer's published application instructions and this report. A copy of the instructions must be available on the job site at all times.

Flame Control 60-60A must be mechanically mixed prior to application. The coating is applied to the required thickness using spray equipment, a brush or a roller having a medium nap. Surfaces to be coated must be inspected in accordance with the manufacturer's published application instructions and must be dry, clean, and free of dirt, loose debris and other substances that could interfere with the adhesion of the coating. The coating must not be applied when the ambient or surface temperature is below 50°F (10°C) or above 80°F (26.7°C) and relative humidity of not more than 65%. The manufacturer must be consulted for specific application conditions.

The Flame Control 60-60A coating may be applied over spray-applied foam plastic insulations listed in Table 1 without covering the coated assembly with the thermal barrier prescribed in the IBC Section 2603.4 and 2024 IRC Section 303.4 (2021 and 2018 IRC Section R316.4).

5.0 CONDITIONS OF USE:

The Flame Control 60-60A coating described in this report complies with, or is a suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

5.1 Application must comply with this report, the manufacturer's published application instructions, and the applicable code. A copy of the application instructions must be on the job site during application of the coating. In the event of a conflict, this report and the code govern.

5.2 The application of additional interior finishes over the coating is outside the scope of this report.

5.3 Recognition in this report is for the specific assemblies and spray-applied foam plastic insulations described in Table 1. The spray-applied foam plastic insulation must be installed in accordance with the requirements set forth in the specific ICC-ES evaluation report noted in Table 1. For spray-applied foam plastic insulation that is not covered in an ICC-ES evaluation report, the evaluation is limited to the specified test method, evaluation for compliance of the spray foam insulation with other applicable requirements of AC377 and the IBC and IRC are outside the scope of this report and must be approved by the code official as noted in Table 1, Footnote 3.

5.4 The coating is manufactured under a quality control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

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 July 2024), including room corner fire testing in accordance with NFPA 286.

7.0 IDENTIFICATION

7.1 The ICC-ES mark of conformity, electronic labeling, or the evaluation report number (ICC-ES ESR-5614) along with the name, registered trademark, or registered logo of the report holder (Flame Control Coatings) must be included in the product label.

7.2 In addition, all containers of Flame Control 60-60A must be labeled with the manufacturer's address; the product name; the date of manufacture, the shelf life or expiration date and the manufacturer's instructions for application.

The spray-applied foam plastic insulations must be labeled in accordance with the applicable evaluation report (see Table 1).

7.3 The report holder's contact information is the following:

FLAME CONTROL COATINGS
4310 CAMPBELL ROAD
HOUSTON, TEXAS 77041
(716) 282-1399
www.flamecontrolcoatings.com
niagaracs@sealforlige.com

TABLE 1—USE OF INSULATION WITHOUT A PRESCRIPTIVE THERMAL BARRIER (TESTED IN ACCORDANCE WITH NFPA 286

INSULATION COMPANY NAME	INSULATION PRODUCT NAME	MAXIMUM THICKNESS (in.) (Vertical Surfaces)	MAXIMUM THICKNESS (in.) (Overhead Surfaces)	60-60A COATING MINIMUM AVERAGE THICKNESS[1] (Applied to all Foam Surfaces)	MINIMUM THEORETICAL APPLICATION RATE OF COATING[2]
Alpha Polymers LLC	AP 210 (ESR-5242)	8	12	9 mils DFT 14 mils WFT	0.88 gal/100 ft²
AMBIT Polyurethane LLC	AMBI-TITE 204 HFO (ESR-4427)	8	12	9 mils DFT 14 mils WFT	0.88 gal/100 ft²
Barnhardt Manufacturing INC. DBA – NCFI Polyurethanes	InsulBloc (ESR-1615)	8	12	9 mils DFT 14 mils WFT	0.88 gal/100 ft²
Barnhardt Manufacturing INC, dba NCFI Polyurethanes	InsulBloc SmartSPF (See Note 3)	8	12	9 mils DFT 14 mils WFT	0.88 gal/100 ft²
Barnhardt Manufacturing INC, dba NCFI Polyurethanes	InsulStar SmartSPF (See Note 3)	8	12	9 mils DFT 14 mils WFT	0.88 gal/100 ft²
Barnhardt Manufacturing INC, dba NCFI Polyurethanes	InsulStar 1.7 SmarSPF (See Note 3)	8	12	9 mils DFT 14 mils WFT	0.88 gal/100 ft²
Barnhardt Manufacturing INC, dba NCFI Polyurethanes	InsulStar® Light 12-008 (See Note 3)	10	14	9 mils DFT 14 mils WFT	0.88 gal/100 ft²
Barnhardt Manufacturing INC, dba NCFI Polyurethanes	InsulStar® Light 12-075 (See Note 3)	10	14	9 mils DFT 14 mils WFT	0.88 gal/100 ft²
BASF Corporation	SPRAYTITE® 158 (ESR-5215)	7 1/2	11 1/2	13 mils DFT 20 mils WFT	1.25 gal/100 ft²
BASF Corporation	SPRAYTITE® SP (ESR-5215)	7 1/2	11 1/2	13 mils DFT 20 mils WFT	1.25 gal/100 ft²
BASF Corporation	WALLTITE® Plus S (See Note 3)	6	10	9 mils DFT 14 mils WFT	0.88 gal/100 ft²
Carlisle Spray Foam Insulation	Sealtite PRO No Mix (See Note 3)	6	10	9 mils DFT 14 mils WFT	0.88 gal/100 ft²
Carlisle Spray Foam Insulation	Sealtite PRO Closed Cell (See Note 3)	6	10	9 mils DFT 14 mils WFT	0.88 gal/100 ft²
Carlisle Spray Foam Insulation	Sealtite PRO High Yield (See Note 3)	6	10	9 mils DFT 14 mils WFT	0.88 gal/100 ft²
Carlisle Spray Foam Insulation	Sealtite PRO OC (See Note 3)	6	10	9 mils DFT 14 mils WFT	0.88 gal/100 ft²
Carlisle Spray Foam Insulation	Sealtite PRO One Zero (See Note 3)	6	10	9 mils DFT 14 mils WFT	0.88 gal/100 ft²
Carlisle Spray Foam Insulation	Sealtite PRO HFO (See Note 3)	6	12	9 mils DFT 14 mils WFT	0.88 gal/100 ft²
Carlisle Spray Foam Insulation	Foamsulate HFO (See Note 3)	6	12	9 mils DFT 14 mils WFT	0.88 gal/100 ft²
Central Urethane	X-Press Seal 500 XP (See Note 3)	10	14	11 mils DFT 16 mils WFT	1.00 gal/100 ft²
Creative Polymer Solutions	Accufoam CC (ESR-5254)	7 1/2	9 1/2	9 mils DFT 14 mils WFT	0.88 gal/100 ft²
Creative Polymer Solutions	AirLok 170 CC (ESR-5253)	7 1/2	9 1/2	9 mils DFT 14 mils WFT	0.88 gal/100 ft²
Creative Polymer Solutions	Accufoam OC (ESR-5254)	10	14	11 mils DFT 16 mils WFT	1.00 gal/100 ft²
Creative Polymer Solutions	AirLok 45 OC (ESR-5253)	10	14	11 mils DFT 16 mils WFT	1.00 gal/100 ft²
Creative Polymer Solutions	Accufoam AF1 (ESR-5255)	10	14	11 mils DFT 16 mils WFT	1.00 gal/100 ft²

TABLE 1—USE OF INSULATION WITHOUT A PRESCRIPTIVE THERMAL BARRIER (TESTED IN ACCORDANCE WITH NFPA 286) (Continued)

INSULATION COMPANY NAME	INSULATION PRODUCT NAME	MAXIMUM THICKNESS (in.) (Vertical Surfaces)	MAXIMUM THICKNESS (in.) (Overhead Surfaces)	60-60A COATING MINIMUM AVERAGE THICKNESS[1] (Applied to all Foam Surfaces)	MINIMUM THEORETICAL APPLICATION RATE OF COATING[2]
Creative Polymer Solutions	Accufoam CC 1.7 (ESR-5256)	7 1/2	9 1/2	9 mils DFT 14 mils WFT	0.88 gal/100 ft²
Elastochem Specialty Chemicals, Inc.	Insulthane® Extreme (See Note 3)	8	10	9 mils DFT 14 mils WFT	0.88 gal/100 ft²
Elastochem Specialty Chemicals, Inc.	Insulthane® 450NM (See Note 3)	10	14	11 mils DFT 16 mils WFT	1.00 gal/100 ft²
Enerlab-USA	Ecothane 2.0 (See Note 3)	8	12	9 mils DFT 14 mils WFT	0.88 gal/100 ft²
Firestable Insulation Company	StableBase Max Yield Open Cell (See Note 3)	10	14	11 mils DFT 16 mils WFT	1.00 gal/100 ft²
Holcim Solutions and Products US, LLC Building Envelope Division	EnvergeOnePass® HFO (1860) (See Note 3)	6	10	8 mils DFT 12 mils WFT	0.75 gal/100 ft²
Holcim Solutions and Products US, LLC Building Envelope Division	EnvergeOnePass® F1850 (See Note 3)	6	10	8 mils DFT 12 mils WFT	0.75 gal/100 ft²
Holcim Solutions and Products US, LLC Building Envelope Division	EnvergeOnePass® Low 1880 (See Note 3)	6	10	8 mils DFT 12 mils WFT	0.75 gal/100 ft²
Holcim Solutions and Products US, LLC Building Envelope Division	Enverge® 183M (See Note 3)	6	10	8 mils DFT 12 mils WFT	0.75 gal/100 ft²
Holcim Solutions and Products US, LLC Building Envelope Division	Gaco EZ Spray 4500 (See Note 3)	6	10	8 mils DFT 12 mils WFT	0.75 gal/100 ft²
Holcim Solutions and Products US, LLC Building Envelope Division	Enverge® Nexseal® 2.0 (See Note 3)	6	10	8 mils DFT 12 mils WFT	0.75 gal/100 ft²
Holcim Solutions and Products US, LLC Building Envelope Division	Enverge® Nexseal® LE 2.0 (See Note 3)	6	10	8 mils DFT 12 mils WFT	0.75 gal/100 ft²
Holcim Solutions and Products US, LLC Building Envelope Division	Enverge® EasySeal 0.5 (See Note 3)	10	14	9 mils DFT 14 mils WFT	0.88 gal/100 ft²
Holcim Solutions and Products US, LLC Building Envelope Division	Enverge® Suraseal 0.5 (See Note 3)	6	10	8 mils DFT 12 mils WFT	0.75 gal/100 ft²
Huntsman Building Solutions	Heatlok HFO High Lift (ESR-4073)	5 1/2	9 1/2	12 mils DFT 18 mils WFT	1.13 gal/100 ft²
Huntsman Building Solutions	Heatlok XT-s (ESR-3824)	7	10	9 mils DFT 14 mils WFT	0.88 gal/100 ft²
Huntsman Building Solutions	Heatlok HFO Pro Closed Cell (See Note 3)	5 1/2	9 1/2	12 mils DFT 18 mils WFT	1.13 gal/100 ft²
Huntsman Building Solutions	Heatlok HFO EZ (See Note 3)	5 1/2	9 1/2	12 mils DFT 18 mils WFT	1.13 gal/100 ft²
Huntsman Building Solutions	Icynene HFO 200 (See Note 3)	5 1/2	9 1/2	12 mils DFT 18 mils WFT	1.13 gal/100 ft²
Huntsman Building Solutions	Icynene HFO Max (ESR-5496)	5 1/2	9 1/2	12 mils DFT 18 mils WFT	1.13 gal/100 ft²
Huntsman Building Solutions	Icynene Classic 45 (ESR-5498)	10	14	9 mils DFT 14 mils WFT	0.88 gal/100 ft²
Huntsman Building Solutions	Classic (ESR-1826)	10	14	9 mils DFT 14 mils WFT	0.88 gal/100 ft²

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INSULATION COMPANY NAME	INSULATION PRODUCT NAME	MAXIMUM THICKNESS (in.) (Vertical Surfaces)	MAXIMUM THICKNESS (in.) (Overhead Surfaces)	60-60A COATING MINIMUM AVERAGE THICKNESS[1] (Applied to all Foam Surfaces)	MINIMUM THEORETICAL APPLICATION RATE OF COATING[2]
Huntsman Building Solutions	Classic Ultra (ESR-1826)	10	14	9 mils DFT 14 mils WFT	0.88 gal/100 ft²
Huntsman Building Solutions	Classic Ultra Select (ESR-1826)	10	14	9 mils DFT 14 mils WFT	0.88 gal/100 ft²
Huntsman Building Solutions	Foam-Lok FL450 (ESR-4242)	10	14	9 mils DFT 14 mils WFT	0.88 gal/100 ft²
Huntsman Building Solutions	Foam-Lok 500 (ESR-2847)	10	14	9 mils DFT 14 mils WFT	0.88 gal/100 ft²
Huntsman Building Solutions	Icynene OC No-Mix (ESR-5499)	10	14	9 mils DFT 14 mils WFT	0.88 gal/100 ft²
NSF Polymers	OC 365 (See Note 3)	10	14	11 mils DFT 16 mils WFT	1.00 gal/100 ft²
NSF Polymers	OC – OG (See Note 3)	10	14	11 mils DFT 16 mils WFT	1.00 gal/100 ft²
NSF Polymers	CC -OG (See Note 3)	10	14	11 mils DFT 16 mils WFT	1.00 gal/100 ft²
Profoam Corporation	ProSeal™ (ESR-3835)	8	12	9 mils DFT 14 mils WFT	0.88 gal/100 ft²
Profoam Corporation	Proseal 1.7 (See Note 3)	8	12	9 mils DFT 14 mils WFT	0.88 gal/100 ft²
Quadrant Performance Materials, LLC	QuadFoam 2.0 (See Note 3)	7 1/2	11 1/2	12 mils DFT 20 mils WFT	1.25 gal/100 ft²
Quadrant Performance Materials, LLC	QuadFoam 500 (See Note 3)	7 1/2	11 1/2	12 mils DFT 20 mils WFT	1.25 gal/100 ft²
Quadrant Performance Materials, LLC	EnviroSeal® OC Platinum (See Note 3)	7 1/2	11 1/2	12 mils DFT 20 mils WFT	1.25 gal/100 ft²
Quadrant Performance Materials, LLC	EnviroSeal® CC Platinum Max (See Note 3)	8	10	9 mils DFT 14 mils WFT	0.88 gal/100 ft²
Rhino Linings Corporation	Thermal Guard CC2 ECO (See Note 3)	5 1/2	9 1/2	9 mils DFT 14 mils WFT	0.88 gal/100 ft²
Rhino Linings Corporation	Thermal Guard OC.5 (ESR-2100)	6	10	9 mils DFT 14 mils WFT	0.88 gal/100 ft²
Spray Foam Genie	SFG 2.0 (See Note 3)	8	12	9 mils DFT 14 mils WFT	0.88 gal/100 ft²
Spray Foam Genie	SFG 1.7 (See Note 3)	8	12	9 mils DFT 14 mils WFT	0.88 gal/100 ft²
Sustainable Polymers Products	Celltech OCA (See Note 3)	10	14	11 mils DFT 16 mils WFT	1.00 gal/100 ft²
Sustainable Polymers Products	Celltech 1.7A (See Note 3)	7 1/2	9 1/2	9 mils DFT 14 mils WFT	0.88 gal/100 ft²
SWD Urethane	Quik-Shield 112 (See Note 3)	9 1/2	9 1/2	12 mils DFT 20 mils WFT	1.25 gal/100 ft²
SWD Urethane	Quik-Shield 112 XC (See Note 3)	9 1/2	9 1/2	12 mils DFT 20 mils WFT	1.25 gal/100 ft²
SWD Urethane	Quik-Shield 108 OC YM (See Note 3)	8	12	9 mils DFT 14 mils WFT	0.88 gal/100 ft²
Thermoseal™	Thermoseal™ HFO (See Note 3)	6	10	9 mils DFT 14 mils WFT	0.88 gal/100 ft²

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INSULATION COMPANY NAME	INSULATION PRODUCT NAME	MAXIMUM THICKNESS (in.) (Vertical Surfaces)	MAXIMUM THICKNESS (in.) (Overhead Surfaces)	60-60A COATING MINIMUM AVERAGE THICKNESS[1] (Applied to all Foam Surfaces)	MINIMUM THEORETICAL APPLICATION RATE OF COATING[2]
Thermoseal™	Thermoseal 5G (See Note 3)	6	10	9 mils DFT 14 mils WFT	0.88 gal/100 ft^2
Universal Polymer	UPBSI OC 500 (See Note 3)	10	14	11 mils DFT 16 mils WFT	1.00 gal/100 ft^2
Universal Polymer	UPBSI CC 2.0 (See Note 3)	$7^1/_2$	$9^1/_2$	9 mils DFT 14 mils WFT	0.88 gal/100 ft^2
Universal Polymer	UPBSI OC 450 (See Note 3)	10	14	11 mils DFT 16 mils WFT	1.00 gal/100 ft^2
Xcelus Building Systems	XLS 450NM	10	14	11 mils DFT 16 mils WFT	1.00 gal/100 ft^2
Xcelus Building Systems	XLS 2000	8	10	9 mils DFT 14 mils WFT	0.88 gal/100 ft^2

For **SI:** 1 inch = 25.4 mm; 1 mil = 0.0254 mm; 1 gallon = 3.38 L; 1 ft^2 = 0.93 m^2.

Notes:

[1]DFT = Dry Film Thickness; WFT = Wet Film Thickness

[2]As reported in the manufacturer's application instructions. Actual application rate, based upon specific project conditions, must be in accordance with the manufacturer's application instructions.

[3]Evaluation is limited to the NFPA 286 test data for the coated assembly described. Evaluation for compliance of the spray foam insulation with other applicable requirements of AC377 and the IBC and IRC are outside the scope of the report.