NO-BURN®, INC.
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NO-BURN® PLUS, PLUS THB, PLUS XD, PLUS MIH, ORIGINAL, ORIGINAL MIH, WOOD GARD, AND WOOD GARD MIH

CSI Division:
09 00 00 FINISHES
CSI Section:
09 96 46 Intumescent Paints
09 96 43 Fire-Retardant Coatings

1.0 SCOPE OF EVALUATION

1.1 Compliance to the following codes & regulations:

- 2021, 2018, 2015, 2012, and 2009 International Building Code® (IBC)
- 2021, 2018, 2015, 2012, and 2009 International Residential Code® (IRC)
- 2021, 2018, 2015, 2012, and 2009 International Existing Building Code® (IEBC)
- 2021, 2018, 2015, 2012, and 2009 International Mechanical Code® (IMC)

1.2 Evaluated in accordance with:

- IAPMO UES EC017, Evaluation Criteria for Field-Applied Fire Protective Coatings
- ICC-ES AC377, Acceptance Criteria for Spray-Applied Foam Plastic Insulation
- ICC-ES AC456, Acceptance Criteria for Fire-Protective Coatings Applied to Spray-Applied Foam Plastic Insulation Installed Without a Code-Prescribed Thermal Barrier
- IAPMO ES1000, Standard for Building Code Compliance of Spray-Applied Polyurethane Foam
- ICC 1100, Standard for Spray-applied Polyurethane Foam Plastic Insulation

1.3 Properties assessed:

- Surface-burning characteristics
- Interior finishes
- Alternative thermal barrier assemblies
- Alternative ignition barrier assemblies
- Fire resistance

2.0 PRODUCT USE

No-Burn® coatings comply with the IBC®, IRC®, IEBC® and IMC® for use in new and existing buildings. Applied to the substrates listed in Tables 1 through 6 of this report, No-Burn® coatings provide the following attributes:

1. Surface-burning characteristics and interior finish in accordance with Section 3.2 of this report.
2. Alternative thermal barrier assemblies in accordance with Section 3.3 of this report.
3. Alternative ignition barrier assemblies in accordance with Section 3.4 of this report.
4. Fire resistance performance in accordance with Section 3.5 and 3.6 of this report.
5. Use in Types I-IV Construction in accordance with Section 3.8 of this report.

3.0 PRODUCT DESCRIPTION

3.1 Product Information

3.1.1 No-Burn® Original, No-Burn® Original Mih, No- Burn® Wood Gard and No-Burn® Wood Gard Mih are transparent, water-based liquids, packaged in 5-gallon (18.9 L) pails and 55-gallon (208 L) drums. The coatings have a shelf life of two years when stored in unopened containers between 40°F and 90°F (4.4°C and 32.2°C). No-Burn® Original, No-Burn® Original Mih, No-Burn® Wood Gard and No-Burn® Wood Gard Mih shall be mixed with a power mixing wand or equivalent at or between 500-900 RPM for a mixing time of 5 minutes per container.

3.1.2 No-Burn® Plus, No-Burn® Plus ThB, No-Burn® Plus XD, and No-Burn® Plus Mih are white, water-based latex liquids, which exhibit intumescent properties when exposed to elevated temperatures and flame, packaged in 5-gallon (18.9 L) pails and 55-gallon (208 L) drums. No-Burn® Plus, No-Burn® Plus XD, and No-Burn® Plus Mih have a shelf life of two years when stored in unopened containers between 40°F and 90°F (4.4°C and 32.2°C). No-Burn® Plus ThB has a shelf life of 1 year when stored in unopened containers between 40°F and 90°F (4.4°C and 32.2°C). No-Burn® Plus, No-Burn® Plus XD, and No-Burn® Plus Mih shall be mixed with a power mixing wand or equivalent at or between 500-1500 RPM for a mixing time of 5 minutes per container. No-Burn® Plus ThB shall be mixed with a power mixing wand or equivalent at or between 800-1200 RPM for a mixing time of 5 minutes per container.

3.2 Surface-Burning Characteristics: As shown in Table 1 of this report, No-Burn® Plus, No-Burn® Plus ThB, No-Burn® Plus Mih, No-Burn® Original, No-Burn® Original Mih, No-Burn® Wood Gard and No-Burn® Wood Gard Mih provide a Class A interior finish when applied to the specified substrates. When tested in accordance with ASTM E84 or UL 723, the listed coatings provide flame spread indices complying with ranges set forth for interior finishes in IBC® Section 803.1 of the 2021, 2018, 2015, 2012, and 2009 IBC®, Section R302.9 of the 2021, 2018, 2015, 2012, and 2009 IRC®, and Section 602.2.1 of the 2021, 2018, 2015, 2012, and 2009 IMC®.

3.3 Alternative Thermal Barrier Assemblies: No-Burn® Plus ThB when applied to spray-applied polyurethane foam insulation listed in Table 2 of this report may be installed without a prescriptive 15-minute thermal barrier in accordance with Section 2603.9 of the 2021, 2018, and 2015 IBC®, Section 2603.10 of the 2012 IBC®, and Section 2603.4 of the 2009 IBC®; Section R316.6 of the 2021, 2018, 2015, and 2012 IRC®, and Section R316.4 of the 2009 IRC®.

The assemblies noted in Table 2 of this report meet the wall and ceiling finish requirements of Sections 803.1 and 803.4 of the 2021, 2018, 2015, 2012, and 2009 IBC®; Sections R302.9 and R302.10.1 of the 2021, 2018, 2015, 2012, and 2009 IRC®. Also, as shown in Table 2 of this report, No-Burn® Plus provides an alternative thermal barrier assembly for walls and ceilings when applied to Structural Insulated Panels (SIPs) with a maximum combined thickness of $12^{3}/_{8}$ inches (314 mm), consisting of a composite of nominal 11½-inch (292 mm) thick expanded polystyrene foam plastic core, (1.0 pcf [16 kg/m^3], density) sandwiched between two $^{7}/_{16}$-inch-thick (11 mm) oriented strand board (OSB) sheets in accordance with Section 2603.9 of the 2021, 2018, and 2015 IBC®, Section 2603.10 of the 2012 IBC®, Section 2603.4 of the 2009; and Section R316.6 of the 2021, 2018, 2015, and 2012 IRC®, and Section R316.4 of the 2009 IRC®.

3.4 Alternative Ignition Barrier Assemblies: No-Burn® Plus, No-Burn® Plus XD and No-Burn® Plus ThB, when applied to the spray applied polyurethane foam insulations listed in Table 3 of this report, may be installed in an attic or crawl space without a prescriptive ignition barrier in accordance with Sections 2603.4.1.6 of the 2021, 2018, 2015, 2012, and 2009 IBC® and Sections R316.5.3 and R316.5.4 of the 2021, 2018, 2015, 2012, and 2009 IRC® . As shown in Table 3 of this report, No-Burn® Plus XD and ZIP System® R-Sheathing may be installed in an attic or crawl space without a prescriptive ignition barrier. ZIP System® R-Sheathing (Insulating Sheathing), consists of $^{1}/_{16}$-inch-thick (11 mm) ZIP System® Wall Sheathing with a layer of maximum 1 inch thick (25.4 mm) rigid polyisocyanurate foam plastic board laminated to its interior face using PVA adhesive. The ZIP System® Wall Sheathing is OSB complying with U.S. DOC PS 2 for wood structural panels as Exposure 1 with a 24/0, 24/16, or Wall 24 span rating and is overlaid on the exterior side with a Grade D water-resistive barrier. The foam plastic insulation boards have a nominal density of 2.0 pcf (32 kg/m^3), compressive strengths of 22 psi (152 kPa) and 20 psi (138 kPa), respectively, vapor permeance of less than 1.1 perm, flame-spread indices of 75 or less and smoke-developed indices of 450 or less. The ZIP System® R- Sheathing panels are nominally 4 feet (1219 mm) wide by 8, 9, 10, 11, or 12 feet (2438, 2743, 3048, 3353, or 3658 mm) long and have square-finished-edge or machined-edge profile.

No-Burn® Plus, No-Burn® Plus XD and No-Burn® Plus ThB may be installed in an attic or crawl space without a prescriptive ignition barrier when all of the following conditions are met:

- Entry to the attic or crawl space is only to repair, maintain, and service utilities, and no storage is permitted.
- There are no interconnected attic or crawl space areas.
- Air in the attic or crawl space is not circulated to other parts of the building.
- Attic ventilation is provided when required by Section 1202.2 of the 2021 and 2018 IBC® and Section 1203.2 of the 2015, 2012, and 2009 IBC® or Section R806 of the 2021, 2018, 2015, 2012, and 2009 IRC®, except when air impermeable insulation is permitted in unvented attics in accordance with Section R806.5 of the 2021, 2018, 2015, and 2012 IRC®, and Section R806.4 of the 2009 IRC®. Under-floor (crawl space) ventilation is provided, when required, by Section 1202.4 of the 2021 and 2018 IBC® and Section1203.4 of the 2015 IBC®, Section 1203.3 of the 2012 and 2009 IBC® or Section R408.1 of the 2021, 2018, 2015, 2012, and 2009, as applicable.
- The foam plastic insulation is limited to the maximum thickness and density tested, shown in Table 3 of this report.
- Combustion air is provided in accordance with Section 701 of the 2021, 2018, 2015, 2012, and 2009 IMC®.

3.5 Fire Resistance (Table 4): As shown in Table 4 of this report, No-Burn® Plus provides fire resistance to engineered wood framing members or components when applied to both sides of the web and top and bottom flanges and the interior facing side of the subfloor, once the components are installed, as an alternative to the 2-by-10 dimension lumber prescribed in Section R302.13, Exception 4 of the 2021, 2018, and 2015 IRC® and Section R501.3, Exception 4 of the 2012 IRC®. At a minimum, the assembly shall be constructed with the framing members or components in accordance with Table 4 of this report affixed to the rim board with 16d common or 10d box nails or fasteners in accordance with Table R602.3(1) of the 2021, 2018, and 2015 IRC®, or 8d nails or fasteners in accordance with the 2012 and 2009 IRC®, 23/32" tongue and groove oriented strand board subfloor affixed with 8d common nails or fasteners in accordance with Table R602.3(1).

3.6 Fire Resistance (Table 5): As shown in Table 5 of this report, No-Burn® Plus provides fire resistance to engineered wood framing members or components when applied to both sides of the web and top and bottom flanges, once the components are installed, as an alternative to the 2-by-10 dimension lumber prescribed in Section R302.13, Exception 4 of the 2021, 2018, and 2015 IRC®, and Section R501.3, Exception 4 of the 2012 IRC®.

3.7 Foam Plastic in Plenums as Interior Finish or Interior Trim (Table 2): No-Burn® Plus ThB, when applied to spray-applied polyurethane foam insulation listed in Table 2 of this report, may be installed as an interior finish or interior trim in plenums as required by Section 2603.7 of the 2021, 2018, 2015, 2012, and 2009 IBC®, Section 602.2.1.6 of the 2021, 2018, 2015, IMC®, and Section 602.2.1.5 of the 2012 and 2009 IMC®.

3.8 Exterior Walls in Types I, II, III and IV Construction (Table 6): No-Burn® Plus ThB, when applied to spray-applied polyurethane foam insulation listed in Table 6, may be installed in or on exterior walls of buildings of Type I, II, III and IV construction complying with Section 2603.5 of the 2021, 2018, 2015, 2012, and 2009 IBC® , and as described in this section. The maximum thickness of the foam plastic installed on the exterior of the sheathing or installed in stud cavities must be as described in Table 6.

4.0 DESIGN AND INSTALLATION

4.1 General: The coatings shall be field-applied to substrates in accordance with this report and the No-Burn®, Inc. published processes. When coatings are applied in accordance with Section 3.5 or Section 3.6 for Fire Resistance, the applicator shall be certified by No-Burn®, Inc. Copies of this report and the No-Burn®, Inc. instructions shall be available at the jobsite. Where conflicts occur, the more restrictive shall govern. Before and during coating application, substrate surfaces shall be dry, clean and free from loose debris, dirt, grease, oil, and all prior coating materials such as paint, stains, and sealers. The substrate shall not have, nor have been exposed to, treatments, chemicals, coatings, etc. Visual observation of the applied coatings varies. Opaque coatings will result in a distinctive white color. Transparent coatings may result in a distinctive color dye on the substrate. For verification of the wet applied thickness, a standard painter's thickness gauge shall be used during the application. The finished dry mil thickness will be 0.40-0.70 times the wet mil thickness. When verification of transparent coatings is required by the building official, field testing shall be conducted as follows: flame from a propane-fueled torch shall be applied to the coated area and to a sample of uncoated substrate for a minimum of 10 seconds. The presence of the coating shall be observable through the comparison of the reactions of the coated and uncoated substrates to the flame.

The coatings shall be applied only to the specific substrates listed in Tables 1 through 6 of this report. Immediately before placing the coatings, the applicator shall verify the moisture content of the substrates, as applicable, in accordance with Table 1, Table 2 (SIPs only), Table 4 or Table 5 of this report. Substrates shall be in their final position in the building, directly exposed to the interior, protected from the weather, in conditioned and unconditioned locations. Surface and ambient temperatures before and during application shall be 40°F (4.4°C) minimum. Surface temperatures shall not exceed 100°F (37.7°C) during application. Cure time is 24 hours minimum.

The coatings shall be applied at an application rate set forth in Table 1, Table 2, Table 3, Table 4, Table 5, or Table 6 of this report by spraying, roller, or brush. When coatings are applied in accordance with Section 3.5 and Table 4 or Section 3.6 and Table 5, the frequency of thickness measurements with a wet film thickness gauge during the application of each coat shall be at a minimum, measured once every 100 ft^2 (9.29 m^2) of surface area.

4.2 Design: No-Burn® Plus, No-Burn® Plus ThB, No-Burn® Plus XD, No-Burn® Plus Mih, No-Burn® Original, No-Burn® Original Mih, No-Burn® Wood Gard, and No-Burn® Wood Gard Mih shall be applied in one coat and may be overcoated with latex paint per manufacturer's instructions.

5.0 LIMITATIONS

The No-Burn® coatings described in this report comply with, or are suitable alternatives to what is specified in those codes listed in Section 1.0 of this report, subject to the following conditions:

5.1 The coatings shall be applied in accordance with this report, the manufacturer's instructions and the applicable code. In the event of a conflict between the manufacturer's instructions and this report, the more restrictive shall prevail.

5.2 Application is limited to the substrates listed in Tables 1 through 6 of this report.

5.3 When coatings are applied in accordance with Section 3.5 or Section 3.6 of this report for Fire Resistance, the coatings shall be applied prior to installation of mechanical, electrical, and plumbing components.

5.4 When coatings are applied in accordance with Section 3.5 or Section 3.6 of this report for Fire Resistance, the No-Burn® qualified applicator shall affix a No-Burn®, Inc. issued label, shown in Figure 1 of this report, to the substrate where the coating has been applied; at a minimum, one No-Burn®, Inc. issued label shall be affixed every 10,000 $feet^2$ (929.03 m^2) of floor area.

5.5 When coatings are applied in accordance with Section 3.5 or Section 3.6 of this report for Fire Resistance, an installation certificate as shown in Figure 2 of this report shall be completed by the certified applicator and submitted to the building official and No-Burn®, Inc.

5.6 No-Burn® coatings shall be applied to areas within the weatherproofing membrane or surfaces not exposed to weather, where the substrate's in-service dry-use moisture content conditions are expected to be at or less than the recommended levels in accordance with Table 1, Table 2 (SIPs only), Table 4 or Table 5 of this report.

5.7 Other inspections may be required when determined to be necessary by the building official in accordance with Section R109.1.5 of the 2021, 2018, 2015, 2012, and 2009 IRC®. Special inspection shall be required when determined to be necessary by the building official in accordance with Section 1705.1.1 of the 2021, 2018, 2015, and 2012 IBC®, or Section 1704.15 of the 2009 IBC®. A statement of special inspection in accordance with Section 1704.2.3 of the 2021, 2018, 2015, and 2012 IBC®, or Section 1705 of the 2009 shall be submitted.

5.8 The coatings are manufactured in Sandusky, Ohio.

6.0 SUBSTANTIATING DATA

6.1 Data in accordance with the IAPMO UES Evaluation Criteria for Field-Applied Fire Protective Coatings (EC017) adopted February 2014 (editorially revised February 2023).

6.2 Data in accordance with ICC-ES AC377 Acceptance Criteria for Spray-Applied Foam Plastic Insulation, dated April 2020, (editorially revised July 2020) including test reports in accordance with Appendix X of AC377.

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

6.4 Date in accordance with IAPMO ES1000 Standard for Building Code Compliance of Spray-Applied Polyurethane Foam, published August 2020.

6.5 Data in accordance with ICC 1100-18 Standard for Spray-applied Polyurethane Foam Plastic Insulation.

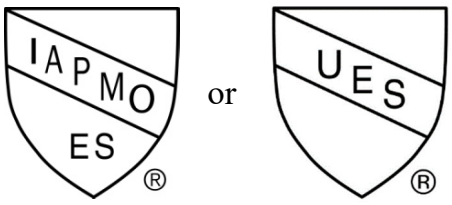
6.6 Reports of fire tests conducted in accordance with ASTM E84, ASTM E119, NFPA 285, NFPA 286 (AC377, Appendix X), UL 723, and UL 1715.

6.7 Third-party engineering analysis for extension of NFPA 285 results.

6.8 Test Reports are from laboratories in compliance with ISO/IEC 17025.

7.0 IDENTIFICATION

Containers of the coatings are identified by a label affixed on product packaging. The label shall include the No Burn®, Inc., name and address, product name, batch number, expiration date, application instructions, name or logo of the inspection agency, and the Evaluation Report Number (ER-305) to identify the products recognized in this report. A die-stamp label may also substitute for the label. Either IAPMO UES Mark of Conformity may also be used as shown below:



IAPMO UES ER-305

8.0 STATEMENT OF RECOGNITION

This evaluation report describes the results of research completed by IAPMO Uniform Evaluation Service on No-Burn® Plus, No-Burn® Plus ThB, No-Burn® Plus XD, No-Burn® Plus Mih, No-Burn® Original, No-Burn® Original Mih, No-Burn® Wood Gard, and No-Burn® Wood Gard Mih to assess conformance to the codes shown in Section 1.0 of this report and serves as documentation of the product certification. Coatings are produced at locations noted in Section 5.8 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

NO-BURN® INSTALLATION LABEL

Product Name:

Certified Applicator Number:

X00000000NB0000

IAPMO UES ER 305

NO-BURN® INC.

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FIGURE 1

TABLE 1 - CLASS A INTERIOR FINISH

SUBSTRATE	MAX MOISTURE CONTENT	NO-BURN® PRODUCT NAME						
		Plus[2]	Plus ThB	Plus Mih	Original	Original Mih	Wood Gard	Wood Gard Mih
Douglas Fir	19%	6 mils wet (4 mils dry) 275 sq. ft. per gallon	NR	6 mils wet (4 mils dry) 275 sq. ft. per gallon	5 mils wet (2 mils dry) 300 sq. ft. per gallon	NR	5 mils wet (3 mils dry) 300 sq. ft. per gallon	5 mils wet (3 mils dry) 300 sq. ft. per gallon
Red Oak	19%	6 mils wet (4 mils dry) 275 sq. ft. per gallon	NR	NR	NR	NR	NR	NR
Oriented Strand Board	16%	8 mils wet (5 mils dry) 200 sq. ft. per gallon	8 mils wet (5 mils dry) 200 sq. ft. per gallon	NR	5 mils wet (2 mils dry) 300 sq. ft. per gallon	NR	NR	5 mils wet (3 mils dry) 300 sq. ft. per gallon
Southern Yellow Pine	19%	NR	NR	NR	NR	5 mils wet (2 mils dry) 300 sq. ft. per gallon	NR	NR
Hardboard Masonite	16%	8 mils wet (5 mils dry) 200 sq. ft. per gallon	NR	NR	NR	NR	NR	NR

[1]NR = Not Recognized
[2]Coating may be overcoated with up to seven coats of latex paint with a pH of 7 to 8

TABLE 2 – ALTERNATIVE THERMAL BARRIER ASSEMBLIES

SUBSTRATE	NO-BURN® DUCT NAME	MAXIMUM THICKNESS (in) Walls & Vertical Surfaces	MAXIMUM THICKNESS (in) Ceilings, Underside of Roof Sheathing/Rafters & Floors	APPLICATION OF NO-BURN® COATING				Evaluation Report [1, 4]
				MINIMUM INSTALLED THICKNESS (mils)		THEORETICAL APPLICATION RATE		
				Wet Film	Dry Film	Square Feet Per Gallon	Gallons Per 100 Square Feet	
AMBIT Ambi-Seal 5.0 Open Cell Spray Foam	Plus ThB[2]	9	14	14	9	115	0.87	CCRR-0393
AMBIT Ambi-Tite 201 (245fa) Closed Cell Spray Foam	Plus ThB[2]	8	12	14	9	115	0.87	ESR-4426
AMBIT Ambi-Tite 204 HFO Closed Cell Spray Foam	Plus ThB[2]	8	12	14	9	115	0.87	ESR-4427
AMD Diamondback Closed Cell Spray Foam	Plus ThB[2]	6.5	9.5	16	11	100	1.0	ESR-4438
BASF Enertite G Open Cell Spray Foam	Plus ThB[2]	8	14	14	9	115	0.87	CCRR-1032
BASF Enertite Max Open Cell Spray Foam	Plus ThB[2]	8	14	14	9	115	0.87	CCRR-1032
BASF Spraytite SP Closed Cell Spray Foam	Plus ThB[2]	6	8	14	9	115	0.87	CCRR-1031
BASF Spraytite 158 Closed Cell Spray Foam	Plus ThB[2]	6	8	14	9	115	0.87	CCRR-1031
BASF Spraytite 178 Closed Cell Spray Foam	Plus ThB[2]	6	8	17	11	94	1.06	CCRR-1031
BASF Spraytite 81206 Closed Cell Spray Foam	Plus ThB[2]	6	8	17	11	94	1.06	CCRR-1031
BASF Walltite US Closed Cell Spray Foam	Plus ThB[2]	6	8	17	11	94	1.06	CCRR-1031
BASF Spraytite Comfort Closed Cell Spray Foam	Plus ThB[2]	6	8	14	9	115	0.87	CCRR-0374
BASF Spraytite Comfort XL Closed Cell Spray Foam	Plus ThB[2]	6	8	14	9	115	0.87	CCRR-0374
BASF Spraytite LWP-L Closed Cell Spray Foam	Plus ThB[2]	6	8	14	9	115	0.87	CCRR-0374
BASF Walltite LWP Closed Cell Spray Foam	Plus ThB[2]	6	8	14	9	115	0.87	CCRR-0374
BASF Walltite Plus Closed Cell Spray Foam	Plus ThB[2]	6	8	14	9	115	0.87	CCRR-0374
Carlisle SealTite Pro Open Cell Spray Foam	Plus ThB[2]	8.5	14	14	9	115	0.87	ER-624
Carlisle Foamsulate 50 HY Open Cell Spray Foam	Plus ThB[2]	8.5	14	14	9	115	0.87	ER-540
Carlisle SealTite Pro High Yield Open Cell Spray Foam	Plus ThB[2]	8.5	14	14	9	115	0.87	ER-623
Carlisle Foamsulate 50 Open Cell Spray Foam	Plus ThB[2]	8.5	14	14	9	115	0.87	ER-351
Carlisle SealTite Pro No Mix Open Cell Spray Foam	Plus ThB[2]	8.5	14	14	9	115	0.87	ER-616
Carlilse SealTite Pro Closed Cell Spray Foam	Plus ThB[2]	6.5	9.5	14	9	115	0.87	ER-621
Carlisle Foamsulate Closed Cell Spray Foam	Plus ThB[2]	6.5	9.5	14	9	115	0.87	ER-626
Carlisle SealTite Pro HFO Closed Cell Spray Foam	Plus ThB[2]	8.5	14	14	9	115	0.87	ER-720
Carlisle Foamsulate HFO 2.0 Closed Cell Spray Foam	Plus ThB[2]	8.5	14	14	9	115	0.87	ER-841
Carlisle SealTite Pro One Zero Closed Cell Spray Foam	Plus ThB[2]	6.5	9.5	14	9	115	0.87	ER-640
Carlisle Foamsulate HFO Closed Cell Spray Foam	Plus ThB[2]	6.5	9.5	14	9	115	0.87	ER-650
Central Urethane X-Press Seal 200 Closed Cell Spray Foam	Plus ThB[2]	8	10	14	9	115	0.87	ER-834
Creative Polymer Solutions Accufoam 2.0 HFO Closed Cell Foam	Plus ThB[2]	7.5	9.5	14	9	115	0.87	ER-833
Elastochem Specialty Chemicals Insulthane Extreme ccSPF	Plus ThB[2]	8	10	14	9	115	0.87	CCRR-0396
Energy One America EOA 500 Open Cell Spray Foam	Plus ThB[2]	9	14	14	9	115	0.87	ESR-3686
Energy One America EOA 2000 Closed Cell Spray Foam	Plus ThB[2]	6	9.5	14	9	115	0.87	ER-443
Foam Supplies genfoam™ Open Cell Spray Foam	Plus ThB[2]	8.5	14	14	9	115	0.87	CCRR-0389
Foam Supplies genX™ Open Cell Spray Foam	Plus ThB[2]	8.5	14	14	9	115	0.87	CCRR-0390
Foam Supplies ecostar™ Closed Cell Spray foam	Plus ThB[2]	6.5	9.5	14	9	115	0.87	CCRR-0388
Gaco Western EZSpray F4500 Open Cell Spray Foam	Plus ThB[2]	12	16	14	9	115	0.87	CCRR-1107
Gaco Western 183M Closed Cell Spray Foam	Plus ThB[2]	6.5	9	14	9	115	0.87	CCRR-1002
Gaco Western OnePass F1850 Closed Cell Spray Foam	Plus ThB[2]	6.5	9.5	14	9	115	0.87	CCRR-1043
Gaco Western OnePass HFO F1860 Closed Cell Spray Foam	Plus ThB[2]	6	9.5	14	9	115	0.87	ER-859
Gaco Western OnePass Low GWP F1880 Closed Cell Spray Foam	Plus ThB[2]	9	12.5	14	9	115	0.87	CCRR-1106
General Coatings Ultra-Thane 050 Open Cell Spray Foam	Plus ThB[2]	8.5	14	14	9	115	0.87	CCRR-0358
General Coatings Ultra-Thane 050 Max Open Cell Spray Foam	Plus ThB[2]	8.5	14	14	9	115	0.87	CCRR-0358
General Coatings Ultra-Thane 050 Max Pro Open Cell Spray Foam	Plus ThB[2]	8.5	14	14	9	115	0.87	CCRR-0358
General Coatings Ultra-Thane 050X Open Cell Spray Foam	Plus ThB[2]	8.5	14	14	9	115	0.87	CCRR-0362
General Coatings Ultra-Thane 170 Closed Cell Spray Foam	Plus ThB[2]	6.5	9.5	14	9	115	0.87	CCRR-0345
General Coatings Ultra-Thane 202 Closed Cell Spray Foam	Plus ThB[2]	6.5	9.5	14	9	115	0.87	CCRR-0345

TABLE 2 continued – ALTERNATIVE THERMAL BARRIER ASSEMBLIES

SUBSTRATE	NO-BURN® PRODUCT NAME	MAXIMUM THICKNESS (in) Walls & Vertical Surfaces	MAXIMUM THICKNESS (in) Ceilings, Underside of Roof Sheathing/Rafters & Floors	APPLICATION OF NO-BURN® COATING				Evaluation Report [1, 4]
				MINIMUM INSTALLED THICKNESS (mils)		THEORETICAL APPLICATION RATE		
				Wet Film	Dry Film	Square Feet Per Gallon	Gallons Per 100 Square Feet	
General Coatings Ultra-Thane 202 High-Lift Closed Cell Spray Foam	Plus ThB[2]	6.5	9.5	14	9	115	0.87	CCRR-0345
General Coatings Ultra-Thane 205 HFO Closed Cell Spray Foam	Plus ThB[2]	8	12	14	9	115	0.87	CCRR-0375
General Coatings Ultra-Thane 205 HFO High Lift Closed Cell Spray Foam	Plus ThB[2]	8	12	14	9	115	0.87	CCRR-0375
Huntsman (Demilec) Sealection 500 Open Cell Spray Foam	Plus ThB[2]	8	14	16	11	100	1.0	CCRR-1063
Huntsman (Demilec) Sealection NM Open Cell Spray Foam	Plus ThB[2]	8	14	16	11	100	1.0	ESR-2668
Huntsman (Demilec) Agribalance Open Cell Spray Foam	Plus ThB[2]	8	14	16	11	100	1.0	ESR-2600
Huntsman (Demilec) APX 1.2 Open Cell Spray Foam	Plus ThB[2]	8	14	16	11	100	1.0	ESR-3470
Huntsman (Demilec) Heatlok HFO High Lift Closed Cell Spray Foam	Plus ThB[2]	6.5	9.5	16	11	100	1.0	ESR-4073
Huntsman (Demilec) Heatlok HFO Pro Closed Cell Spray Foam	Plus ThB[2]	6.5	9.5	16	11	100	1.0	ER-565
Huntsman (Demilec) Heatlok XT-s Closed Cell Spray Foam	Plus ThB[2]	6.5	9.5	16	11	100	1.0	ESR-3824
Huntsman (Demilec) Heatlok XT-w Closed Cell Spray Foam	Plus ThB[2]	6.5	9.5	16	11	100	1.0	ESR-3883
Huntsman (Demilec) Heatlok ECO Closed Cell Spray Foam	Plus ThB[2]	6.5	9.5	16	11	100	1.0	ESR-3198
Huntsman (Demilec) Heatlok HFO EZ Closed Cell Spray Foam	Plus ThB[2]	6.5	9.5	16	11	100	1.0	ER-871
Huntsman (Icynene) Classic Open Cell Spray Foam	Plus ThB[2]	6	14	16	11	100	1.0	ESR-1826
Huntsman (Icynene) Classic Ultra Open Cell Spray Foam	Plus ThB[2]	6	14	16	11	100	1.0	ESR-1826
Huntsman (Icynene) Classic Ultra Select Open Cell Spray Foam	Plus ThB[2]	6	14	16	11	100	1.0	ESR-1826
Huntsman (Icynene) Classic Plus Open Cell Spray Foam	Plus ThB[2]	6	14	16	11	100	1.0	ESR-1826
Huntsman (Icynene) Prime Gold Open Cell Spray Foam	Plus ThB[2]	6	14	16	11	100	1.0	ESR-4323
Huntsman (Icynene) No Mix Open Cell Spray Foam	Plus ThB[2]	8 ½	14	14	9	115	0.87	CCRR-1123
Huntsman (Icynene) ProSeal Closed Cell Foam	Plus ThB[2]	4	8	14	9	115	0.87	ESR-3500
Huntsman (Icynene) ProSeal LE Closed Cell Foam	Plus ThB[2]	4	8	14	9	115	0.87	ESR-3500
Huntsman (Icynene) ProSeal Eco Closed Cell Foam	Plus ThB[2]	4	8	14	9	115	0.87	ESR-3493
Huntsman (Icynene) ProSeal HFO Closed Cell Foam	Plus ThB[2]	4	8	14	9	115	0.87	CCRR-1108
Huntsman (Icynene) ProSeal HFO CW Closed Cell Foam	Plus ThB[2]	4	8	14	9	115	0.87	CCRR-1108
Huntsman (Icynene) MD-C-200 Closed Cell Foam	Plus ThB[2]	4	8	14	9	115	0.87	ESR-3199
Huntsman (Lapolla) Foam-Lok FL 450 Open Cell Spray Foam	Plus ThB[2]	6	14	16	11	100	1.0	ESR-4242
Huntsman (Lapolla) Foam-Lok FL 500 Open Cell Spray Foam	Plus ThB[2]	8 ½	14	14	9	115	0.87	CCRR-1091
Huntsman (Lapolla) Foam-Lok FL 750 Open Cell Spray Foam	Plus ThB[2]	6	14	16	11	100	1.0	ESR-4322
Huntsman (Lapolla) Foam-Lok FL 2000-3G Closed Cell Spray Foam	Plus ThB[2]	6	9	14	9	115	0.87	ESR-3198
Huntmsan (Lapolla) Foam-Lok FL 2000-4G Closed Cell Spray Foam	Plus ThB[2]	6	9	14	9	115	0.87	CCRR-1025
Huntmsan (Lapolla) Foam-Lok FL 2000 Closed Cell Spray Foam	Plus ThB[2]	6	9	14	9	115	0.87	ESR-2629
ICP Handi-Foam HVLP LD Open Cell Spray Foam	Plus ThB[2]	8	14	14	9	115	0.87	CCRR-1124
ICP Handi-Foam HVLP MD Closed Cell Spray Foam	Plus ThB[2]	12	14	14	9	115	0.87	ER-728
Johns Manville JM Corbond Open Cell Spray Foam	Plus ThB[2]	8	14	14	9	115	0.87	CCRR-1079
Johns Manville JM Corbond HY Open Cell Spray Foam	Plus ThB[2]	8	14	14	9	115	0.87	CCRR-1079
Johns Manville JM Corbond OCX Open Cell Spray Foam	Plus ThB[2]	8	14	14	9	115	0.87	ER-372
Johns Manville JM Corbond III Closed Cell Spray Foam	Plus ThB[2]	6	8	14	9	115	0.87	ER-146
Johns Manville JM Corbond IV Closed Cell Spray Foam	Plus ThB[2]	6	8	14	9	115	0.87	ER-146
Johns Manville JM GEN IV Closed Cell Spray Foam	Plus ThB[2]	6.5	9.5	14	9	115	0.87	ER-700
Johns Manville JM Corbond MCS Closed Cell Spray Foam	Plus ThB[2]	6	8	14	9	115	0.87	ESR-3159
Natural Polymers Natural-Therm 2.0 Closed Cell Spray Foam	Plus ThB[2]	12	14	14	9	115	0.87	ER-714
NCFI InsulStar Light 12-008 Open Cell Spray Foam	Plus ThB[2]	8.5	14	14	9	115	0.87	CCRR-0323
NCFI InsulStar Light 12-075 Open Cell Spray Foam	Plus ThB[2]	8.5	14	14	9	115	0.87	CCRR-0323
NCFI InsulStar 11-036 Closed Cell Spray Foam	Plus ThB[2]	8.5	14	14	9	115	0.87	ER-340
NCFI InsulBloc 11-037 Closed Cell Spray Foam	Plus ThB[2]	8.5	14	14	9	115	0.87	ER-340
PSI Staycell 505 Open Cell Spray Foam	Plus ThB[2]	8.5	14	14	9	115	0.87	QAI B1020
PSI Staycell 508 Open Cell Spray Foam	Plus ThB[2]	8.5	14	14	9	115	0.87	QAI B1020

TABLE 2 continued – ALTERNATIVE THERMAL BARRIER ASSEMBLIES

SUBSTRATE	NO-BURN® PRODUCT NAME	MAXIMUM THICKNESS (in) Walls & Vertical Surfaces	MAXIMUM THICKNESS (in) Ceilings, Underside of Roof Sheathing/Rafters & Floors	APPLICATION OF NO-BURN® COATING				Evaluation Report [1, 4]
				MINIMUM INSTALLED THICKNESS (mils)		THEORETICAL APPLICATION RATE		
				Wet Film	Dry Film	Square Feet Per Gallon	Gallons Per 100 Square Feet	
PSI Staycell 504-2 Closed Cell Spray Foam	Plus ThB[2]	8.5	14	14	9	115	0.87	QAI B1020
SES EasySeal 0.5 Open Cell Spray Foam	Plus ThB[2]	10	14	14	9	115	0.87	ER-492
SES SucraSeal 0.5 Open Cell Spray Foam	Plus ThB[2]	9	14	14	9	115	0.87	ESR-3375
SES Nexseal 2.0 Closed Cell Spray Foam	Plus ThB[2]	6	9.5	14	9	115	0.87	ER-374
SES Nexseal 2.0 LE Closed Cell Spray Foam	Plus ThB[2]	6	9.5	14	9	115	0.87	ER-374
SWD Quik-Shield 108 Open Cell Spray Foam	Plus ThB[2]	8	14	14	9	115	0.87	CCRR-1051
SWD Quik-Shield 108YM Open Cell Spray Foam	Plus ThB[2]	8	14	14	9	115	0.87	CCRR-1051
SWD Quik-Shield 112XC Closed Cell Spray Foam	Plus ThB[2]	5	8	14	9	115	0.87	CCRR-1011
SWD Quik-Shield 118 Closed Cell Spray Foam	Plus ThB[2]	5	8	14	9	115	0.87	CCRR-1093
SWD Quik-Shield 133 Closed Cell Spray Foam	Plus ThB[2]	9	12.5	14	9	115	0.87	CCRR-0368
SWD Quik-Shield 144 Closed Cell Spray Foam	Plus ThB[2]	5	8	14	9	115	0.87	CCRR-0391
SWD Quik-Shield YETI Closed Cell Spray Foam	Plus ThB[2]	5	8	14	9	115	0.87	CCRR-0478
ThermoSeal OCX Open Cell Spray Foam	Plus ThB[2]	8	14	16	11	100	1.0	CCRR-1095
ThermoSeal CCX Closed Cell Spray Foam	Plus ThB[2]	6.5	9.5	16	11	100	1.0	ESR-4137
ThermoSeal 2000/2000W Closed Cell Spray Foam	Plus ThB[2]	6.5	9.5	14	9	115	0.87	ER-581
UPC 500 Open Cell Spray Foam	Plus ThB[2]	8.5	14	14	9	115	0.87	CCRR-0358
UPC 500 Max Open Cell Spray Foam	Plus ThB[2]	8.5	14	14	9	115	0.87	CCRR-0358
UPC 500 Max Pro Open Cell Spray Foam	Plus ThB[2]	8.5	14	14	9	115	0.87	CCRR-0358
UPC 500 OCX Open Cell Spray Foam	Plus ThB[2]	8.5	14	14	9	115	0.87	CCRR-0362
UPC 1.7 Closed Cell Spray Foam	Plus ThB[2]	6.5	9.5	14	9	115	0.87	CCRR-0345
UPC 2.0 Closed Cell Spray Foam	Plus ThB[2]	6.5	9.5	14	9	115	0.87	CCRR-0345
UPC 2.0 HL Closed Cell Spray Foam	Plus ThB[2]	6.5	9.5	14	9	115	0.87	CCRR-0345
UPC 2.0 MAX Closed Cell Spray Foam	Plus ThB[2]	6.5	9.5	14	9	115	0.87	CCRR-0345
UPC 2.0 HFO Closed Cell Spray Foam	Plus ThB[2]	8	12	14	9	115	0.87	CCRR-0375
UPC 2.0 HFO High Lift Closed Cell Spray Foam	Plus ThB[2]	8	12	14	9	115	0.87	CCRR-0375
Victory Polymers VPC-50 Open Cell Spray Foam	Plus ThB[2]	8.5	14	14	9	115	0.87	ER-674
Victory Polymers VPC-CC SuperLift Closed Cell Foam	Plus ThB[2]	6.5	9.5	16	11	100	1.0	ESR-4334
Victory Polymers VPC-CC SuperYield Closed Cell Foam	Plus ThB[2]	6.5	9.5	16	11	100	1.0	ESR-4334
Xtremeseal 0.4 LX Shield Open Cell Spray Foam	Plus ThB[2]	8.0	14	14	9	115	0.87	CCRR-1112
Xtremeseal 0.5 LX Open Cell Spray Foam	Plus ThB[2]	10	14	14	9	115	0.87	ER-538
XtremeSeal 2.0 LE Closed Cell Spray Foam	Plus ThB[2]	6	9.5	14	9	115	0.87	ER-537
Structural Insulated Panel (SIPs)[3]	Plus[2]	N/A	N/A	12	7	134	0.75	N/A

For **SI:** 1 mil = 0.0254 mm, 1 inch = 25.4 mm, 1 gal= 3.79 L

[1]Use of No-Burn® Plus ThB for use with any insulation product listed herein is conditional upon that insulation product's compliance to AC377 in an evaluation report by an approved evaluation entity. Users shall 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, and ESR-Evaluation Service Reports from ICC-ES.

[2]No-Burn® Plus ThB or Plus may be overcoated or undercoated with latex paint with a pH of 7 to 8.

[3]The maximum moisture content is limited to 16%.

[4]Approval of the use of Plus ThB for use over any insulation product listed in Table 2 is subject to the insulation meeting the requirements in the appropriate evaluation report.

[5]When coatings are applied in accordance with Table 2, the Spray Polyurethane Foam Insulation Certificate (SPFA-148), or a spray polyurethane foam insulation manufacturer insulation certificate, may be completed by the intumescent coating installer and submitted upon request.

TABLE 3 – ALTERNATIVE IGNITION BARRIER ASSEMBLIES[2]

SUBSTRATE	NO-BURN® PRODUCT NAME[1]	MAXIMUM THICKNESS (in) Walls, Vertical Surfaces & Attic Floors	MAXIMUM THICKNESS (in) Ceilings, Underside of Roof Sheathing/Rafters & Floors	APPLICATION OF NO-BURN® COATING			
				MINIMUM INSTALLED THICKNESS (mils)		THEORETICAL APPLICATION RATE	
				Wet Film	Dry Film	Square Feet Per Gallon	Gallons Per 100 Square Feet
AMBIT Ambi-Seal 5.0 Open Cell Spray Foam	Plus ThB	9	14	6	4	267	0.37
BASF ENERTITE® G Open Cell Spray Foam	Plus XD or Plus ThB	11 ¼	16	6	4	267	0.37
BASF ENERTITE® Max Open Cell Spray Foam	Plus XD or Plus ThB	11 ¼	16	6	4	267	0.37
BASF SPRAYTITE® 158 Closed Cell Spray Foam	Plus XD or Plus ThB	8	8	6	4	267	0.37
BASF SPRAYTITE® SP Closed Cell Spray Foam	Plus XD or Plus ThB	8	8	6	4	267	0.37
BASF Spraytite Comfort Closed Cell Spray Foam	Plus XD or Plus ThB	8	8	6	4	267	0.37
BASF Spraytite Comfort XL Closed Cell Spray Foam	Plus XD or Plus ThB	8	8	6	4	267	0.37
BASF Spraytite LWP-L Closed Cell Spray Foam	Plus XD or Plus ThB	8	8	6	4	267	0.37
BASF SPRAYTITE® 178 and 81206 Closed Cell Spray Foam	Plus, Plus XD or Plus ThB	9 1/4	11 ¼	12	7	134	0.75
BASF WALLTITE® US Closed Cell Spray Foam	Plus, Plus XD or Plus ThB	9 1/4	11 ¼	12	7	134	0.75
BASF Walltite® LWP Closed Cell Spray Foam	Plus, Plus XD or Plus ThB	8	8	6	4	267	0.37
BASF Walltite® Plus Closed Cell Spray Foam	Plus, Plus XD or Plus ThB	8	8	6	4	267	0.37
Carlisle SealTite Pro Open Cell Spray Foam	Plus XD or Plus ThB	11 ¼	16	6	4	267	0.37
Carlisle Foamsulate 50 HY Open Cell Spray Foam	Plus XD or Plus ThB	11 ¼	16	6	4	267	0.37
Carlisle SealTite Pro High Yield Open Cell Spray Foam	Plus XD or Plus ThB	11 ¼	16	6	4	267	0.37
Carlisle Foamsulate 50 Open Cell Spray Foam	Plus XD or Plus ThB	11 ¼	16	6	4	267	0.37
Carlisle SealTite Pro No Mix Open Cell Spray Foam	Plus XD or Plus ThB	11 ¼	16	6	4	267	0.37
Convenience Touch 'n Seal® 2.0 PCF Closed Cell Spray Foam	Plus XD or Plus ThB	2	2	8	5	200	0.5
Creative Polymer Accufoam Open Cell Spray Foam	Plus XD or Plus ThB	8	14	6	4	267	0.37
DAP Touch N' Seal Class I FR Closed Cell Spray Foam	Plus XD or Plus ThB	2	2	8	5	200	0.5
Franklin Titebond Weathermaster Superfoam Closed Cell Spray Foam	Plus XD or Plus ThB	2	2	10	6	160	0.63
Gaco Western EZ Spray F4500 Open Cell Spray Foam	Plus ThB	12	16	6	4	267	0.37
Holcim EasySeal ULD	Plus ThB	10	16	6	4	267	0.37
Huber ZIP System® R-Sheathing Panel (R-3 & R-6)	Plus XD or Plus ThB	N/A	N/A	10	6	160	0.63
Huntsman (Demilec) SEALECTION® 500 Open Cell Spray Foam	Plus XD or Plus ThB	9 1/4	11 ¼	6	4	267	0.37
Huntsman (Demilec) Sealection NM Open Cell Spray Foam	Plus XD or Plus ThB	9 1/4	11 ¼	6	4	267	0.37
Huntsman (Demilec) Agribalance® Open Cell Spray Foam	Plus XD or Plus ThB	9 1/2	11 ½	10	6	160	0.63
Huntsman (Icynene) Classic Open Cell Spray Foam	Plus XD or Plus ThB	5 1/2	14	6	4	267	0.37
Huntsman (Icynene) Classic Ultra Open Cell Spray Foam	Plus XD or Plus ThB	5 1/2	14	6	4	267	0.37
Huntsman (Icynene) Classic Ultra Select Open Cell Spray Foam	Plus XD or Plus ThB	5 1/2	14	6	4	267	0.37
Huntsman (Icynene) Classic Plus Open Cell Spray Foam	Plus XD or Plus ThB	8	14	6	4	267	0.37
Huntsman (Icynene) Prime Gold Open Cell Spray Foam	Plus XD or Plus ThB	5 1/2	14	6	4	267	0.37
Huntsman (Icynene) ProSeal Eco Closed Cell Spray Foam	Plus XD or Plus ThB	7 1/4	9 ¼	5	3	320	0.31
Huntsman (Icynene) MD-C-200 Closed Cell Spray Foam	Plus, Plus XD or Plus ThB	11 1/4	11 1/4	16	10	100	1.0
Huntsman (Lapolla) FL 450 Open Cell Spray Foam	Plus XD or Plus ThB	5 1/2	14	6	4	267	0.37
Huntsman (Lapolla) FL 750 Open Cell Spray Foam	Plus XD or Plus ThB	8	14	6	4	267	0.37
ICP Handi-Foam HVLP LD Open Cell Spay Foam	Plus XD or Plus ThB	11 ¼	16	6	4	267	0.37
ICP Handi-Foam® E-84 Class 1(A) Closed Cell Spray Foam	Plus XD or Plus ThB	2	2	10	6	160	0.63
Johns Manville JM Corbond HY Open Cell Spray Foam	Plus ThB	8	12	6	4	267	0.37
SWD Quik-Shield 106 Open Cell Spray Foam	Plus ThB	8	14	6	4	267	0.37
ThermoSeal TS 360 Open Cell Spray Foam	Plus ThB	10	14	4	3	400	0.25
ThermoSeal TS 500 Open Cell Spray Foam	Plus ThB	10	14	4	3	400	0.25
ThermoSeal TS 800 Open Cell Spray Foam	Plus ThB	10	14	4	3	400	0.25
ThermoSeal OCX Open Cell Spray Foam	Plus XD or Plus ThB	9 1/2	11 ¼	6	4	267	0.37
Tiger Foam® E-84 Fire Rated SPF Class 1 Spray Foam	Plus XD or Plus ThB	2	2	10	6	160	0.63
Victory Polymers VPC-50 Open Cell Spray Foam	Plus XD or Plus ThB	11 1/4	16	6	4	267	0.37

Footnotes for Table 3 on next page

Footnotes for Table 3:
For **SI:** 1 mil = 0.0254 mm, 1 inch = 25.4 mm, 1 gal = 3.79 L
[1] No-Burn® Plus, Plus XD or Plus ThB may be overcoated with latex paint with a pH of 7 to 8
[2] When coatings are applied in accordance with Table 3, the Spray Polyurethane Foam Insulation Certificate (SPFA-148), or a spray polyurethane foam insulation manufacturer insulation certificate, may be completed by the intumescent coating installer and submitted upon request.

TABLE 4 - FIRE RESISTANCE (See Section 3.5)

SUBSTRATE	MAX MOISTURE CONTENT	MINIMUM DESIGN						NO-BURN® PLUS[1]
		Minimum Depth (in)	Web Thickness (in)	Flange Depth x Width (in)	Moment (ft-lbs)	EI x 106 (in2-lbs)	Vertical Shear (lbs)	
I-joist: solid sawn flange	16%	9 ½	3/8	1.5 x 2	2725	170	1475	15 mils wet (9 mils dry) 107 sq. ft. per gallon
I-joist: structural composite lumber	16%	9 ½	3/8	1.125 x 2	2725	170	1475	15 mils wet (9 mils dry) 107 sq. ft. per gallon
I-joist: structural composite lumber	16%	11 7/8	3/8	1.125 x 1.75	3025	260	1625	15 mils wet (9 mils dry) 107 sq. ft. per gallon

For **SI:** 1 mil = 0.0254 mm, 1 inch = 25.4 mm, 1 gal = 3.79 L, 1 lb = 0.45 kg
[1]No-Burn® Plus may be overcoated with latex paint with a pH of 7 to 8

TABLE 5 - FIRE RESISTANCE (See Section 3.6)

SUBSTRATE	MAX MOISTURE CONTENT	MINIMUM DESIGN						NO-BURN® PLUS[1]
		Minimum Depth (in)	Web Thickness (in)	Flange Depth x Width (in)	Moment (ft-lbs)	EI x 10^6 (in^2-lbs)	Vertical Shear (lbs)	
I-joist: solid sawn flange	16%	9 ½	3/8	1.5 x 2.5	2800	198	1185	23 mils wet (14 mils dry) 70 sq. ft. per gallon
I-joist: structural composite lumber	16%	11 7/8	3/8	1.125 x 1.75	3025	260	1625	23 mils wet (14 mils dry) 70 sq. ft. per gallon

For **SI:** 1 mil = 0.0254 mm, 1 inch = 25.4 mm, 1 gal = 3.79 L, 1 lb = 0.45 kg
[1]No-Burn® Plus may be overcoated with latex paint with a pH of 7 to 8

TABLE 6 – NFPA 285 COMPLYING EXTERIOR WALL ASSEMBLIES (See Section 3.8)	
Wall Component	**Allowable Substitutions**
Base Wall Use any Item 1, 2, 3 or 4	1) Cast Concrete Walls 2) Concrete Masonry Units (CMU) 3) Min. 20 GA, 1.5 in. x 3 5/8 in. deep or 6-inch-deep steel with 5/8-inch Type X Gypsum Wallboard interior with long dimension perpendicular to the steel studs 4) FRT wood studs spaced 24 inches OC (max.) with 5/8-inch Type X Gypsum Wallboard interior
Floor Line Firestopping	Minimum 4-inch-thick, 4 pcf mineral fiber (wool) safing insulation in each framing cavity (thickness to match framing depth), at each floorline.
Cavity or Interior Insulation Use any Item 1 - 7	1) None 2) Any noncombustible insulation per ASTM E136 for Base Wall 3 or 4 3) Any Mineral Fiber (Board type Class A ASTM E84 faced or unfaced) for Base Wall 3 or 4 4) Any Fiberglass Batt Insulation (Class A Faced or Unfaced) for Base Wall 3 or 4. 5) BASF WALLTITE US and SPRAYTITE COMFORT ($3^{5}/_{8}$-inch maximum thickness)– cavity may be partially or fully filled, leaving a maximum 4-inch air cavity between the polyurethane foam insulation and the 5/8-inch Type X Gypsum Wallboard for Base Wall 3 or 4. Use minimum $^{5}/_{8}$-inch exterior sheathing for base wall 6) BASF Enertite G- up to full stud cavity depth thickness for Base Wall 3 or 4 7) BASF WallTite LWP up to $5^{1}/_{2}$ inches thick with up to 6-inch-deep studs. **Note**: For Cavity Insulations 5, 6, and 7, must use fire stopping at floor lines and 5/8-inch exterior gypsum sheathing except Item 7 may use ½ inch exterior gypsum sheathing. SPF is applied to the interior face of exterior gypsum sheathing of base wall 3 or 4 as the substrate and covering the cavity's width and the inside of the wall stud framing flange.
Exterior Sheathing	½-inch-thick fiberglass mat, exterior gypsum board with long dimension perpendicular to the Base Wall studs.
WRB over Sheathing Use any Item 1 or 2	1) None 2) BASF MasterSeal AWB 660 or equivalent WRB with lower heat release rate when tested to ASTM E1354
Z Girts **Use Item 1, 2, or 3 for claddings requiring girts.**	1) Vertical or Horizontal metallic Z 2) Horizontal Smart Ci-GreenGirt 3) Horizontal Armatherm FRR Z Girt **Note:** Girt spacing shall be able to comply with required wind load per manufacturer's instructions.
WRB over Exterior Insulation	None
Exterior Insulation	Max. 3 ½-inch BASF WALLTITE LWP or WALLTITE US directly on the Exterior Sheathing coated with No-Burn Plus ThB (15 wet mils) + Behr Premium Plus Exterior Paint (6 wet mils) or equivalent exterior paint. Z-girts[1,5] may be oriented vertically or horizontally. Use Z-girts made of 20 GA galvanized steel with 4-inch web and 2- inch legs. Vertical Z-girts shall be installed on the Exterior Sheathing spaced 24 inches o.c. A horizontal Z-girt, with the outer leg oriented downward, shall be installed on the Exterior Sheathing at the top and bottom of the wall, and at each floorline as a through wall flashing. Closures[2, 5] made of a minimum 20 GA aluminum with 3-inch web by 3-inch leg by 2-inch leg. Closures shall be installed over the Exterior Wall System around the perimeter of wall at floorlines and around window openings. At the floorlines, J-trim and Z-flashings are utilized to finish the cut ends.
Exterior Cladding Use any Item 1 - 9	1) Max. 20 GA aluminum or steel cladding oriented vertically or horizontally[2] 2) Natural Stone Veneer – minimum 2 inches thick 3) Brick – Nominal 4-inch clay brick with maximum 2-inch air gap between exterior insulation and brick. Standard brick ties/anchors installed 24 inches o.c. vertically on each stud. 4) Cast Artificial Stone, such as Cultured Stone and Masonry, min. 1½ inches thick complying with AC51 5) Uninsulated Fiber Cement siding minimum. ¼ inches thick. 6) Stucco ¾-inch minimum exterior cement plaster and lath. 7) Limestone 2-inch minimum using standard non-open joint installation 8) Terra Cotta Cladding 1¼-inch minimum using standard installation technique 9) Autoclaved-aerated-concrete (AAC) panels (minimum $1^{1}/_{2}$ inches thick) Combining the Exterior Cladding[2] and Hat Channels[3] create an air cavity that allows for an overall max. air cavity of 3 inches
Window Perimeter	20 GA (0.032 inch) aluminum flashing (minimum)

For **SI:** 1 mil = 0.0254 mm, 1 inch = 25.4 mm Notes to table on next page.

[1] Use drip caps made of min. 20 GA aluminum. The drip caps shall be installed horizontally, at the top of the wall assembly, at the bottom of the wall assembly, and at openings using one min. Type-S, #8 by ¾ in. long self-tapping pan-head screw on both the upper and lower flange of the Hat Channel. When installed horizontally, the 3 in. leg is fastened to the Z-girts using one min. Type-S, #8 by ¾" long self-tapping pan-head screw at each Z-girt location. When installed vertically, the 3 in. leg is fastened to the Z-girts using min. Type-S #8 by ¾ in. long self-tapping pan-head screws spaced 12 in. OC.

[2] Vertical or horizontal cladding shall have no opening between adjacent cladding. Once installed vertically or horizontally fastened on one edge with the opposite edge interlocked to the adjacent cladding edge. Cladding fasteners are a min. Type-S #8 by 3/4 in. long self-tapping pan-head screw.

[3] Use Hat Channels made of 18 GA galvanized steel. Hat Channels may be vented or unvented. Hat Channels may be installed vertically or horizontally over the Exterior Wall System spaced with max. 24" OC and fastened at each Z-girt location across the span of Hat Channel using one min. Type-S, #8 by ¾ in. long self-tapping pan-head screw on both the upper and lower flange of the Hat Channel.

[4] Sealant is silicone-based and installed as a bead in typical locations (for moisture control) along all the interfaces between the Closures, Exterior Cladding, Drip Cap, etc. Weep hole openings in the sealant are permitted. Where sealing of vertical joints between adjacent Exterior Cladding panels is required, only use 100% silicone sealant.

NO-BURN® PRODUCT APPLICATION CERTIFICATE

LOCATION OF BUILDING:

Address **Lot #** **City** **State** **Zip**

DESCRIPTION AND USE OF BUILDING:

Certified Applicator Name **Company** **Certified Applicator Number**

Moisture Meter Reading (Max % Noted in Tables 4 or 5)	Temp Reading (°F)	Describe Area Treated	Size of Area Treated (Footprint SqFt)	Product Applied	I-joist (Series, depth and OC spacing)	Qty. (Wet film thickness and total gallons applied)	Date Applied

Certified Applicator Signature **Date of Service**

FIGURE 2