



Code Compliance Research Report CCRR-1076

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DIVISION: 09 00 00 – Finishes
Section: 09 96 43 – Fire-Retardant Coatings

DIVISION: 07 00 00 – Thermal and Moisture Protection
Section: 07 21 00 – Thermal Insulation

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REPORT SUBJECT:
DC315 Intumescent Coating

1.0 SCOPE OF EVALUATION

1.1 This Research Report addresses compliance with the following Codes:

- 2015 and 2012 *International Building Code*® (IBC)
- 2015 and 2012 *International Residential Code*® (IRC)

NOTE: This report references 2015 Code sections with earlier Code sections shown in [brackets] where they differ.

1.2 DC315 has been evaluated for the following properties (see Table 1):

- Physical properties
- Surface burning characteristics

1.3 DC315 has been evaluated for the following uses (see Table 1):

- Application to the surface of spray-applied foam plastic insulation within building interiors
- Coated foam plastic left exposed without Code-prescribed thermal barriers
- Coated foam plastic left exposed as interior finish

2.0 STATEMENT OF COMPLIANCE

DC315 complies with the Codes listed in Section 1.1, for the properties stated in Section 1.2, and uses stated in

Section 1.3, when installed as described in this report, including the Conditions of Use stated in Section 6.0.

3.0 DESCRIPTION

DC315 is a single-component, water-based, liquid-applied intumescent fire-protective coating. The coating is supplied in 5-gallon pails and 55-gallon drums with a shelf-life of 1 year when stored in factory-sealed packages between 50°F and 80°F. The coating must be protected from freezing.

4.0 PERFORMANCE CHARACTERISTICS

4.1 When DC315 is applied to spray-applied foam plastic insulation installed in assemblies conforming to one of the configurations described in Table 2, the 15 minute thermal barrier prescribed in IBC Section 2603.4 and IRC Section R316.4 may be omitted.

4.2 When DC315 is applied to spray-applied foam plastic insulation installed in assemblies conforming to one of the configurations described in Table 2, the coated foam plastic assembly meets the requirements for interior finish in IBC Section 803.1 and IRC Section R302.9, and may be left exposed to the interior of the building.

5.0 INSTALLATION

5.1 General:

DC315 must be installed in accordance with IFTI's published installation instructions, the applicable Code, and this Research Report. A copy of the manufacturer's instructions must be available on the jobsite during installation.

5.2 Application:

DC315 must be thoroughly mixed prior to application. Foam plastic surfaces to receive the coating must be inspected in accordance with IFTI's installation guidelines.

The coating may be applied using high-pressure spray equipment, rollers, or brushes up to a maximum thickness of 24 mils wet film thickness (WFT) per coat. IFTI's installation instructions must be followed if either a primer coat of DC315 or multiple coats of DC315 are required to conform with assemblies, as described in

Table 2. Substrates must be free of debris or substances that may compromise adhesion of the coating.

The application window of the coating is between 50°F and 90°F with a Relative Humidity below 85%. Consult the manufacturer for ambient conditions outside of the recommended application window or if the temperature is within 5°F of the dew point.

6.0 CONDITIONS OF USE

6.1 Installation must comply with this Research Report, the manufacturer's published installation instructions, and the applicable Code. In the event of a conflict, this report governs.

6.2 The application of any additional interior finish over the DC315 coating is outside the scope of this Research Report.

6.3 Recognitions provided in this Research Report are limited to the specific assemblies and spray-applied foam plastic insulation products described in Table 2.

6.4 The spray-applied foam plastic insulations identified in Table 2 must be installed in accordance with the requirements described in the identified Code Evaluation Research Report.

6.5 The DC315 coating is manufactured in Irvine, CA (USA) and Taoyuan, Taiwan (R.O.C).

6.6 The DC315 coating is manufactured under a quality control program with inspections by Intertek Testing Services NA, Inc. (AA-647).

7.0 SUPPORTING EVIDENCE

7.1 Reports of tests in accordance with ASTM E84, ASTM D2697, ASTM D1475, ASTM D2196, and NFPA 286.

7.2 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.

7.3 Published Code Evaluation Research Reports recognizing compliance of specific spray-applied foam plastic insulations with the requirements of ICC-ES Acceptance Criteria for Spray-Applied Foam Plastic Insulation (AC377), dated April 2016.

7.4 Intertek Listing Reports "[IFTI - DC315 Water-based Fireproof Paint](#)" and "[INCA - International Carbide Technology DC315](#)", on the Intertek Directory of Listed Products.

8.0 IDENTIFICATION

Containers of the DC315 coating are identified with the manufacturer's name [International Fireproof Technology, Inc. (IFTI) or International Carbide Technology Co., Ltd. (INCA)], address and telephone number, the product name (DC315), the Intertek Mark, and the Code Compliance Research Report number (CCRR-1076).

9.0 OTHER CODES

This section is not applicable.

10.0 CODE COMPLIANCE RESEARCH REPORT USE

10.1 Approval of building products and/or materials can only be granted by a building official having legal authority in the specific jurisdiction where approval is sought.

10.2 Code Compliance Research Reports shall not be used in any manner that implies an endorsement of the product by Intertek.

10.3 Reference to the Intertek website address: <https://bpdirectory.intertek.com> is recommended to ascertain the current version and status of this report.

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TABLE 1 – PROPERTIES EVALUATED

PROPERTY	IBC SECTION ¹	IRC SECTION ¹
Physical properties	Not required	Not required
Alternative to thermal barriers	803.1; 2603.4; 2603.9 [2012 - 2603.10]	R302.9; R316.4 [2006 - R314.4]; R316.6 [2006 - R314.6]

¹ Section numbers in parentheses refer to the 2012 and earlier Code editions

TABLE 2 – COATING AND FOAM ASSEMBLIES WITHOUT A CODE-PRESCRIBED THERMAL BARRIER

Insulation Supplier	Insulation Product	Insulation Code Evaluation Research Report	Assembly Details					Test Method
			Insulation Details		DC315 Coating Details			
			Maximum Thickness, in.		Minimum Thickness, mils		Theoretical Application Rate	
			Vertical (e.g. Wall)	Overhead (e.g. Ceiling)	Wet Film (WFT)	Dry Film (DFT)	gal/100 ft ²	
Accella Polyurethane Systems dba Premium Spray Products	Foamsulate 210	ER-0381	8	12	20	13	1.3	NFPA 286
Accella Polyurethane Systems dba Premium Spray Products	Foamsulate 220	ER-0352	7.5	11.5	18	12	1.1	NFPA 286
Accella Polyurethane Systems dba Premium Spray Products	Foamsulate 50	ESR-3081; ER-0351	8	12	20	13	1.3	NFPA 286
Accella Polyurethane Systems dba Premium Spray Products	Foamsulate 50 N-IB	ER-0394	7.5	11.5	18	12	1.1	NFPA 286
Accella Polyurethane Systems dba Premium Spray Products	NatureSeal OCX	ER-0285	7.5	11.5	18	12	1.1	NFPA 286
Accella Polyurethane Systems dba Quadrant Urethane Technologies	QuadFoam 2.0	ESR-3459; ER-0272	7.5	11.5	18	13	1.1	NFPA 286
Accella Polyurethane Systems dba Quadrant Urethane Technologies	QuadFoam 500	ESR-3458; ER-0271	8	12	4 (Primer ¹) + 16 (Finish)	3 (Primer ¹) + 11 (Finish)	0.25 (Primer ¹) + 1.0 (Finish)	NFPA 286
Barnhardt Manufacturing Company dba NCFI Polyurethanes	InsulBloc	ESR-1615	7.25	7.25	18	12	1.1	NFPA 286
Barnhardt Manufacturing Company dba NCFI Polyurethanes	InsulStar	ESR-1615	7.25	7.25	18	12	1.1	NFPA 286
Barnhardt Manufacturing Company dba NCFI Polyurethanes	Sealite OCX	ESR-3826	10	14	18	12	1.1	NFPA 286
BASF Corporation	ENERTITE NM	CCRR-1032; ESR-3102	7.5	14.5	18	12	1.1	NFPA 286
BASF Corporation	Spraylite 158	CCRR-1031; ESR-2642	5.5	7.5	20	13	1.3	NFPA 286

¹ Primer coat of DC315 / DC315 Primer

Insulation Supplier	Insulation Product	Insulation Code Evaluation Research Report	Assembly Details					Test Method
			Insulation Details		DC315 Coating Details			
			Maximum Thickness, in.		Minimum Thickness, mils		Theoretical Application Rate	
			Vertical (e.g. Wall)	Overhead (e.g. Ceiling)	Wet Film (WFT)	Dry Film (DFT)	gal/100 ft ²	
BASF Corporation	Spraytite 178	CCRR-1031; ESR-2642	7.5	11.5	4 (Primer ²) + 16 (Finish)	3 (Primer) + 11 (Finish)	0.25 (Primer) + 1.0 (Finish)	NFPA 286
BASF Corporation	Spraytite 81205	CCRR-1031; ESR-2642	5.5	7.5	20	13	1.3	NFPA 286
BASF Corporation	Spraytite 81206	CCRR-1031; ESR-2642	7.5	11.5	4 (Primer ²) + 16 (Finish)	3 (Primer) + 11 (Finish)	0.25 (Primer) + 1.0 (Finish)	NFPA 286
BASF Corporation	Spraytite SP	CCRR-1031; ESR-2642	5.5	7.5	20	13	1.3	NFPA 286
BASF Corporation	Walltite HP+	CCRR-1031; ESR-2642	7.5	11.5	4 (Primer ²) + 16 (Finish)	3 (Primer) + 11 (Finish)	0.25 (Primer) + 1.0 (Finish)	NFPA 286
BASF Corporation	Walltite US	CCRR-1031; ESR-2642	7.5	11.5	4 (Primer ²) + 16 (Finish)	3 (Primer) + 11 (Finish)	0.25 (Primer) + 1.0 (Finish)	NFPA 286
BASF Corporation	Walltite US-N	CCRR-1031; ESR-2642	7.5	11.5	4 (Primer ²) + 16 (Finish)	3 (Primer) + 11 (Finish)	0.25 (Primer) + 1.0 (Finish)	NFPA 286
CertainTeed Corporation	CertaSpray CC	ESR-3758	5.5	9.5	22	14	1.3	NFPA 286
Covestro, LLC	Bayseal CC	ESR-3999	7.25	7.25	18	12	1.1	NFPA 286
Covestro, LLC	Bayseal CC Polar	ESR-3999	7.25	7.25	18	12	1.1	NFPA 286
Covestro, LLC	Bayseal OC	ESR-1655	10	11.5	22	14	1.3	NFPA 286
Covestro, LLC	EcoBay CC	ESR-3076	7.25	7.25	18	12	1.1	NFPA 286
DAP Foam, Inc.	Touch 'n Seal Class I FR	ESR-3052	3.5	3.5	20	13	1.3	NFPA 286

² Primer coat of DC315

Insulation Supplier	Insulation Product	Insulation Code Evaluation Research Report	Assembly Details					Test Method
			Insulation Details		DC315 Coating Details			
			Maximum Thickness, in.		Minimum Thickness, mils		Theoretical Application Rate	
			Vertical (e.g. Wall)	Overhead (e.g. Ceiling)	Wet Film (WFT)	Dry Film (DFT)	gal/100 ft ²	
DAP Foam, Inc.	Touch 'n Foam Professional Class I FR	ESR-3052	3.5	3.5	20	13	1.3	NFPA 286
Demilec (USA), Inc.	Agribalance	ESR-2600	7.5	11.5	18	12	1.1	NFPA 286
Demilec (USA), Inc.	APX	ESR-3470	8	10	20	13	1.3	NFPA 286
Demilec (USA), Inc.	Heatlok Soy 200 Plus	ESR-3210	7.5	11.5	18	12	1.1	NFPA 286
Demilec (USA), Inc.	Heatlok XT-s	ESR-3824	7.5	11.5	18	12	1.1	NFPA 286
Demilec (USA), Inc.	Heatlok XT-w	ESR-3883	7.5	11.5	18	12	1.1	NFPA 286
Demilec (USA), Inc.	Sealection 500	CCRR-1063; ESR-1172	7.5	11.5	18	12	1.1	NFPA 286
The DOW Chemical Company	Styrofoam CM 2045	ESR-2670	9.25	9.25	4 (Primer ³) + 18 (Finish)	3 (Primer) + 12 (Finish)	0.25 (Primer) + 1.1 (Finish)	NFPA 286
Elastochem Specialty Chemicals, Inc.	Insulthane Extreme	ESR-3809	7.25	7.25	18	12	1.1	NFPA 286
Gaco Western, LLC	F1850	CCRR-1043	7.5	9.5	18	12	1.1	NFPA 286
Gaco Western, LLC	183M	CCRR-1002	5.25	7.25	20	13	1.3	NFPA 286
Gaco Western, LLC	GacoGreen 052N	CCRR-1075	11.25	11.25	20	13	1.3	NFPA 286
Gaco Western, LLC	GacoFireStop2 F5001	CCRR-1009	18	18	18	12	1.1	NFPA 286

³ Primer coat of DC315

Insulation Supplier	Insulation Product	Insulation Code Evaluation Research Report	Assembly Details					Test Method
			Insulation Details		DC315 Coating Details			
			Maximum Thickness, in.		Minimum Thickness, mils		Theoretical Application Rate	
			Vertical (e.g. Wall)	Overhead (e.g. Ceiling)	Wet Film (WFT)	Dry Film (DFT)	gal/100 ft ²	
General Coatings Manufacturing Corp.	Ultra-Thane 230 Wall	ESR-3033	5.5	7.5	4 (Primer ⁴) + 18 (Finish)	1.7 (Primer) + 12 (Finish)	0.25 (Primer) + 1.1 (Finish)	NFPA 286
Henry Company	Permax 1.8 (RT-2045-1.8)	ESR-3024	11.25	11.25	21	14	1.3	NFPA 286
Henry Company	Permax 2.0 (RT-2045-2.0)	ESR-3024	11.25	11.25	21	14	1.3	NFPA 286
Henry Company	Permax 0.5LV	ESR-3646	11.5	11.5	18	12	1.3	NFPA 286
ICP Adhesives & Sealants, Inc.	Handi-Foam E84 Class 1	ESR-2717	3.5	3.5	20	13	1.3	NFPA 286
Icynene, Inc.	Classic Plus	ESR-1826	6.5	11.5	20	13	1.3	NFPA 286
Icynene, Inc.	Classic	ESR-1826	6	14	20	13	1.3	NFPA 286
Icynene, Inc.	Classic Max Select	ESR-1826	6	14	20	13	1.3	NFPA 286
Icynene, Inc.	MD-C-200	ESR-3199	6	10	22	14	1.4	NFPA 286
Icynene, Inc.	ProSeal	ESR-3500	8	14	24	16	1.5	NFPA 286
Icynene, Inc.	ProSeal ECO	ESR-3493	8	10	22	15	1.4	NFPA 286
Johns Manville	Corbond III	ER-0146	7.5	11.5	18	12	1.1	NFPA 286
Johns Manville	Corbond MCS	ESR-3159	7.25	9.25	22	14	1.4	NFPA 286

⁴ DTM Bonding Primer manufactured by Sherwin Williams

Insulation Supplier	Insulation Product	Insulation Code Evaluation Research Report	Assembly Details					Test Method
			Insulation Details		DC315 Coating Details			
			Maximum Thickness, in.		Minimum Thickness, mils		Theoretical Application Rate	
			Vertical (e.g. Wall)	Overhead (e.g. Ceiling)	Wet Film (WFT)	Dry Film (DFT)	gal/100 ft ²	
Johns Manville	Corbond OC	ESR-3776	7.5	11.5	18	12	1.1	NFPA 286
Johns Manville	Corbond OCX	ESR-3777	7.5	11.5	18	12	1.1	NFPA 286
Lapolla Industries, Inc.	FoamLok FL2000	ESR-2629	7.5	7.5	18	12	1.1	NFPA 286
Lapolla Industries, Inc.	FoamLok FL2000-4G	CCRR-1025	8	12	18	12	1.1	NFPA 286
Lapolla Industries, Inc.	FoamLok FL500	ESR-2847	5.25	11.25	20	13	1.3	NFPA 286
Natural Polymers, LLC	NaturalTherm 0.5	ER-0336; ESR-3136	8	10	20	14	1.3	NFPA 286
Natural Polymers, LLC	NaturalTherm 2.0W	ER-0336; ESR-3136	11.25	11.25	21	14	1.3	NFPA 286
NuWoll Company Incorporated	Nu-Seal 0.5	ESR-3136	8	10	20	14	1.3	NFPA 286
NuWoll Company Incorporated	Nu-Seal 2.0W	ESR-3136	8	10	20	14	1.3	NFPA 286
Patriot Spray Foam, Inc.	Patriot 200	ESR-4065	8	14	24	16	1.5	NFPA 286
Patriot Spray Foam, Inc.	Patriot 200 ECO	ESR-4063	8	10	22	15	1.4	NFPA 286
Patriot Spray Foam, Inc.	Patriot 500	ESR-4064	6	14	20	13	1.3	NFPA 286
Patriot Spray Foam, Inc.	Patriot 500 HY	ESR-4064	6	14	20	13	1.3	NFPA 286

Insulation Supplier	Insulation Product	Insulation Code Evaluation Research Report	Assembly Details					Test Method
			Insulation Details		DC315 Coating Details			
			Maximum Thickness, in.		Minimum Thickness, mils		Theoretical Application Rate	
			Vertical (e.g. Wall)	Overhead (e.g. Ceiling)	Wet Film (WFT)	Dry Film (DFT)	gal/100 ft ²	
Rhino Linings USA, Inc.	ThermalGuard CC2	ESR-2100	8	10	18	13	1.1	NFPA 286
Rhino Linings USA, Inc.	ThermalGuard OC.5	ESR-2100	7.5	11.5	18	13	1.1	NFPA 286
SES Foam LLC	Nexseal 2.0	ER-0374	8.25	10.25	18	12	1.1	NFPA 286
SES Foam LLC	Nexseal 2.0 LE	ER-0374	8.25	10.25	18	12	1.1	NFPA 286
SES Foam LLC	SES 2.0	ER-0374	8.25	10.25	18	12	1.1	NFPA 286
SES Foam LLC	SES 2.0 LE	ER-0374	8.25	10.25	18	12	1.1	NFPA 286
SES Foam LLC	SES Foam 0.5	ER-0492	9.5	11.5	18	12	1.1	NFPA 286
SES Foam LLC	SucraSeal 0.5	ESR-3375	11.5	11.5	18	12	1.1	NFPA 286
SWD Urethane	QuickShield QS100X	CCRR-1050	7	11	18	12	1.1	NFPA 286
SWD Urethane	QuickShield QS106	CCRR-1011	11.25	11.25	24	15	1.5	NFPA 286
SWD Urethane	QuickShield QS108	CCRR-1051	8	14	18	12	1.1	NFPA 286
SWD Urethane	QuickShield QS112	CCRR-1011	11.25	11.25	4 (Primer ⁵) + 22 (Finish)	3 (Primer) + 15 (Finish)	0.25 (Primer) + 1.4 (Finish)	NFPA 286
SWD Urethane	QuickShield QS112XC	CCRR-1011	11.25	11.25	20	13	1.3	NFPA 286

⁵ Primer coat of DC315



INTERNATIONAL CARBIDE TECHNOLOGY CO., LTD

ADDITIONAL LISTEE: INTERNATIONAL FIREPROOF TECHNOLOGY, INC

DC315 FIELD APPLIED INTUMESCENT COATINGS

CSI Section:

09 96 43 Fire-Retardant Coatings

1.0 RECOGNITION

DC315 has been evaluated for use as a fire-protective coating for foam plastic products. The coating has been evaluated for the evaluation 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. The coating has also been evaluated as an alternate to the prescriptive ignition barriers required in Section 2603.4.1.6 of the IBC and Sections R316.5.3 and R316.5.4 of the IRC. DC315 evaluated in this report is a satisfactory alternative to the following codes and regulations:

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

2.0 LIMITATIONS

Use of DC315 recognized in this report is subject to the following:

2.1 The application of any additional interior finish over the fire-protective coating is outside 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 DC315 for use with any insulation product listed herein is conditional upon that insulation products' current approval for use with DC315. Users must independently verify the current validity of any evaluation report referenced herein.

3.0 PRODUCT USE

3.1 Design

3.1.1 Application as an Alternative Thermal Barrier: DC315 for use as an alternate to the prescriptive thermal barrier required in Section 2603.4 of the IBC and

Section R316.4 of the IRC shall be applied in the minimum thickness as shown in Table 1 of this report.

3.1.2 Application as an Alternative Ignition Barrier: DC315 for use as an alternate to the prescriptive ignition barrier required in Section 2603.4.1.6 of the IBC and item 3 of Sections R316.5.3 and R316.5.4 of the IRC shall be applied in the minimum thickness as shown in Table 2 of this report.

3.1.3 Interior Finish: The foam plastic insulation with DC315 coating installed as shown in Tables 1 and 2 of this report has a flame spread index of 25 or less and a smoke-developed index of 450 or less when tested to ASTM E84. The combinations shown in Tables 1 and 2 have a Class A finish as applied to Sections 803.1.1 and 803.11 of the IBC (Sections 803.1.1 and 803.9 of the 2012 IBC).

3.1.4 Use as an interior finish or interior trim in plenums: Foam plastic insulations installed as shown in Table 1 of this report have been evaluated for use as an interior finish or interior trim in plenums as required by Section 2603.7 of the IBC and shall exhibit a flame spread index of 75 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E84 and meets the acceptance criteria of Section 803.1.2 of the IBC when tested to NFPA 286.

3.2 Application

3.2.1 General: DC315 shall be applied in accordance with International Fireproof Technology'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 and strictly adhered to at all times at the jobsite during application.

3.2.2 Application: The minimum installed thickness of DC315 shall be applied to the applicable foam plastic insulation as shown in Table 1 or Table 2 of this report, as applicable. Before application of DC315, the 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 clean, firm and dry before application. DC315 shall be thoroughly mixed before application.

4.0 PRODUCT DESCRIPTION

DC315 intumescent coating is manufactured by International Fireproof Technology, Inc. and International Carbide Technology. The coating is water-based and supplied in 5-



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gallon (18.9 L) pails weighing 58 lbs. (26.3 kg) and 55-gallon (208 L) drums weighing 640 lbs. (290 kg). The coating material has a maximum shelf life of 12 months when stored in factory-sealed containers at temperatures between 50°F and 90°F (10°C and 32°C). DC315 has a minimum 24-hour curing time.

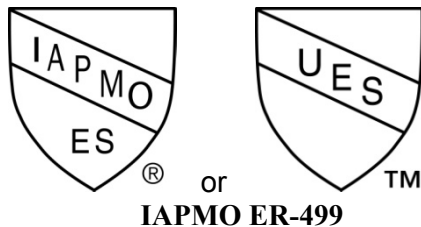
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5.0 IDENTIFICATION

DC315 pails and drums are identified by the International Carbide Technology or International Fireproof Technology name and address, product name (DC315), date of manufacture, product shelf life, conditions for storage and evaluation report number (ER-499). The container identification also includes the IAPMO Uniform Evaluation Service Mark of Conformity. Either Mark of Conformity may be used as shown below:

8.0 STATEMENT OF RECOGNITION

This evaluation report describes the results of research carried out by IAPMO Uniform Evaluation Service on DC315 field applied intumescent coatings to the conformance to the codes shown in Section 1.0 of this report and documents the product's certification.



6.0 SUBSTANTIATING DATA

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

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6.2 Data in accordance with the ICC-ES Acceptance Criteria for Spray-applied Foam Plastic Insulation, AC377, dated April 2016, including test reports in accordance with Appendix X of AC377.

6.3 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.

6.4 Testing in accordance with ASTM E84, ASTM D2697, ASTM D1475 and ASTM D2196.

6.5 Testing in accordance with NFPA 286.

7.0 CONTACT INFORMATION

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



**TABLE 1
FOAM PLASTIC PRODUCTS APPROVED FOR USE WITH DC315 AS ASSEMBLIES NOT REQUIRING
A PRESCRIPTIVE 15-MINUTE THERMAL BARRIER**

Manufacturer's Name	Product Name	Product Density	Evaluation Report ^{1,2}	Application of DC315			Maximum Thickness of Spray Foam (inches)	
				Minimum Installed Thickness (mils)		Theoretical Application Rate (gallons/100 square feet) ³	Vertical	Overhead
				Wet Film	Dry Film			
Accella Polyurethane Systems dba Bayseal	Bayseal CC	2.0 pcf	ESR-3999	18	12	1.1	8.25	8.25
Accella Polyurethane Systems dba Bayseal	Bayseal CC Polar	2.0 pcf	ESR-3999	18	12	1.1	8.25	8.25
Accella Polyurethane Systems dba Bayseal	Bayseal OC	0.5 pcf	ESR-1655	22	14	1.3	10	11.5
Accella Polyurethane Systems dba Bayseal	EcoBay CC	2.0 pcf	ESR-3076	18	12	1.1	7.25	7.25
Accella Polyurethane Systems dba Premium Spray Products	Foamsulate 210	2.0 pcf	ESR-3081	20	13	1.3	8	12
Accella Polyurethane Systems	NatureSeal OCX	0.5 pcf	ER-285	18	12	1.1	7.5	11.5
Accella Polyurethane Systems	Foamsulate™ 220	2.2 pcf	ER-352	18	12	1.1	7.5	11.5
Accella Polyurethane Systems	Foamsulate™ 50	0.5 pcf	ER-351	20	13	1.3	8	11.5
Accella Polyurethane Systems	Foamsulate™ 50-NIB	0.5 pcf	ER-394	21	14	1.4	8	12
Accella Polyurethane Systems	QuadFoam® 500	0.5 pcf	ER-271; ESR-3458	4 (Primer ¹) +	3 (Primer) +	0.25 (Primer) +	8	12
				16 (Finish)	11 (Finish)	1.0 (Finish)		
Accella Polyurethane Systems	QuadFoam® 2.0	2.0 pcf	ER-272	18	12	1.0	7.5	11.5
Accella Polyurethane Systems	QuadFoam® NatureSeal 500	0.5 pcf	ER-285	18	12	1.0	7.5	11.5



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Manufacturer's Name	Product Name	Product Density	Evaluation Report ^{1,2}	Application of DC315			Maximum Thickness of Spray Foam (inches)	
				Minimum Installed Thickness (mils)		Theoretical Application Rate (gallons/100 square feet) ³	Vertical	Overhead
				Wet Film	Dry Film			
Barnhardt Manufacturing Company dba NCFI Polyurethanes	InsulStar	2.0 pcf	ESR-1615	18	12	1.1	8.25	10.25
Barnhardt Manufacturing Company dba NCFI Polyurethanes	InsulBloc®	2.0 pcf	ESR-1615	18	12	1.1	8.25	10.25
Barnhardt Manufacturing Company dba NCFI Polyurethanes	Sealite OCX	0.5 pcf	ESR-3826	18	12	1.1	10	14
BASF Corporation	Enertite® NM	0.5 pcf	CCRR-1032; ESR-3102	18	12	1.1	7.5	14.5
BASF Corporation	Spraytite 158-DLDM	2.0 pcf	CCRR 1031; ESR-2642	20	13	1.3	5.5	7.5
BASF Corporation	Spraytite 178	2.1 pcf	CCRR 1031; ESR-2642	4 (Primer ¹) +	3 (Primer) +	0.25 (Primer) +	5.5	11.5
				16 (Finish)	11 (Finish)	1.0 (Finish)		
BASF Corporation	Spraytite 81205	2.0 pcf	CCRR-1031; ESR-2642	20	13	1.3	5.5	7.5
BASF Corporation	Spraytite 81206	2.0 pcf	CCRR-1031; ESR-2642	4 (Primer ¹) +	3 (Primer) +	0.25 (Primer) +	7.5	11.5
				16 (Finish)	11 (Finish)	1.0 (Finish)		
BASF Corporation	Spraytite SP	2.0 pcf	CCRR-1031; ESR-2642	20	13	1.3	5.5	7.5
BASF Corporation	Walltite HP+	2.0 pcf	CCRR-1031; ESR-2642	4 (Primer ¹) +	3 (Primer) +	0.25 (Primer) +	7.5	11.5
				16 (Finish)	11 (Finish)	1.0 (Finish)		
BASF Corporation	Walltite US-N	2.0 pcf	CCRR-1031; ESR-2642	4 (Primer ¹) +	3 (Primer) +	0.25 (Primer) +	7.5	11.5
				16 (Finish)	11 (Finish)	1.0 (Finish)		
Certainteed	Certaspray CC	2.0 pcf	ESR-3758	22	14		7.25	7.25
Certainteed	Certaspray OCX	0.5 pcf	ESR-3759	20	13	1.25	5.25	14
DAP Foam, Inc.	Touch 'n Seal Class 1	2.2 pcf	ESR-3052	20	13	1.3	3.5	3.5
DAP Foam, Inc.	Touch 'n Professional Class 1	2.2 pcf	ESR-3052	20	13	1.3	3.5	3.5
Demilec	Sealection 500 W/Topcoat	0.5 pcf	CCRR-1063; ESR-1172	18 + 8 Topcoat	12 + 5	1.1	7.5	11.5
Demilec	HeatLok Agribalance	0.6 pcf	ESR-2600	18	12	1.1	7.5	11.5



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				Minimum Installed Thickness (mils)		Theoretical Application Rate (gallons/100 square feet) ³	Vertical	Overhead
				Wet Film	Dry Film			
Demilec	APX	0.5 pcf	ESR-3470	20	13	1.3	8	10
Demilec	HeatLok Soy 200+	2.0 pcf	ESR-3210	18	12	1.1	7.5	11.5
Demilec	HeatLok XT-S	2.0 pcf	ESR 3824	18	12	1.1	7.5	11.5
Demilec	HeatLok XT-W	2.0 pcf	ESR 3883	18	12	1.1	7.5	11.5
Demilec	Sealection 500	0.5 pcf	CCRR-1063; ESR-1172	18	12	1.1	7.5	11.5
Dow	Styrofoam CM 2045	2.0 pcf	ESR-2670; ESR 1659	4 (primer) + 18 finish	3 (primer) + 12 finish	1.1	9.5	9.5
Elastochem Specialty Chemicals Inc.	Insulthane Extreme	2.0 pcf	ESR-3809	18	12	1.1	8.25	8.25
Elastochem Specialty Chemicals Inc	Insulthane Proline Plus	2.0 pcf	ESR-3541	18	12	1.1	7.25	7.25
Energy One America	EOA 2000	2.0 pcf	ER-443	18	12	1.1	8.25	10.25
Gaco Western	F1850	2.0 pcf	CCRR-1043	18	12	1.1	7.25	9.25
Gaco Western	183M	2.0 pcf	CCRR-1002	20	13	1.3	5.5	7.5
Gaco Western	Gaco Green 052N	0.5 pcf	CCRR-1075; ESR-2478	20	13	1.3	11.25	11.25
Gaco Western	Gaco Firestop2 F5001	0.5 pcf	CCRR-1009	18	12	1.1	13.25	13.25
General Coatings Manf. Corp.	Ultrathane 230	2.0 pcf	ESR-3033	4 (primer) + 18 DC315	3 (primer) + 12 DC315	1.1	5.5	7.5
Henry Company	Permax 1.8 (RT 2045 1.8)	1.8 pcf	ESR-3024	21	14	1.3	11.25	11.25
Henry Company	Permax 2.0 (RT 2045 2.0)	2.0 pcf	ESR-3024	21	14	1.3	11.25	11.25
Henry Company	Permax 2.0X Fast	2.0 pcf	ESR-3647	18	12	1.3	7.25	7.25
Henry Company	Permax 2.0X	2.0 pcf	ESR-3647	18	12	1.3	7.25	7.25



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				Minimum Installed Thickness (mils)		Theoretical Application Rate (gallons/100 square feet) ³	Vertical	Overhead
				Wet Film	Dry Film			
Henry Company	Permax 0.5LV	0.5 pcf	ESR-3646	18	12	1.3	11.5	11.5
ICP Adhesive and Sealants	Handi-foam E84 Class 1	2.0 pcf	ESR-2717	20	13	1.3	2	2
Icynene, Inc.	Classic Plus	0.7 pcf	ESR-1826	20	13	1.3	6.5	11.5
Icynene, Inc.	Classic	0.5 pcf	ESR-1826	20	13	1.3	6	14
Icynene, Inc.	Classic Max Select	0.5 pcf	ESR-1826	20	13	1.3	6	14
Icynene, Inc.	MD-C-200	2.4 pcf	ESR-3199	24	16	1.5	6	10
Icynene, Inc.	ProSeal	2.0 pcf	ESR-3500	24	16	1.5	8	14
Icynene, Inc.	ProSeal LE	2.0 pcf	ESR-3500	24	16	1.5	8	14
Johns Manville	JM Corbond [®] III Performance Insulation	2.0 pcf	ER-146	18	12	1.1	7.5	11.5
Johns Manville	JM Corbond [®] ocx SPF	0.5 pcf	ER-372; ESR-3777	16	11	1	7.5	11.5
Johns Manville	JM Corbond [®] MCS	2.0 pcf	ESR-3159	22	14	1.4	7.25	9.25
Johns Manville	JM Corbond [®] oc	0.5 pcf	ESR-3776	18	12	1.1	7.5	11.5
LaPolla Industries	FL500	0.5 pcf	ESR-2847	20	13	1.3	5.25	11.25
LaPolla Industries	FLX-500	0.5 pcf	ER-401	16	11	1	7.5	11.5
Lapolla Industries	FoamLok FL2000-4G	2.0 pcf	CCRR-1025	18	12	1.1	8	12
LaPolla Industries	FL 2000	2.0 pcf	ESR-2629	18	12	1.3	7.5	9.5
Natural Polymers, LLC	Natural-Therm [®] 0.50 pcf	0.5 pcf	ER-336	21	14	1.4	8	12
Natural Polymers, LLC	Natural-Therm [®] 2.0 IBW	2.0 pcf	ER-336	21	14	1.4	7.5	11.5
Natural Polymers, LLC	Natural-Therm [®] 2.0 IBS	2.0 pcf	ER-336	21	14	1.4	7.5	11.5
Natural Polymers, LLC	Natural-Therm [®] 2.0 W	2.0 pcf	ESR-3136	21	14	1.4	11.25	11.25



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				Minimum Installed Thickness (mils)		Theoretical Application Rate (gallons/100 square feet) ³	Vertical	Overhead
				Wet Film	Dry Film			
NuWool Company Incorporated	Nu-Seal 0.5	0.5 pcf	ESR-3136	20	14	1.3	8	10
NuWool Company Incorporated	Nu-Seal 2.0W	2.0 pcf	ESR-3136	21	14	1.3	11.25	11.25
Patriot Spray Foam, Inc.	Patriot 200	2.0 pcf	ESR-4065	24	16	1.5	8	14
Patriot Spray Foam, Inc.	Patriot 200 ECO	2.0 pcf	ESR-4063	22	15	1.4	8	10
Patriot Spray Foam, Inc.	Patriot 500	0.5 pcf	ESR-4064	20	13	1.3	6	14
Patriot Spray Foam, Inc.	Patriot 500 HY	0.5 pcf	ESR-4064	20	13	1.3	6	14
Profoam	Proseal 2.0	2.0 pcf	ESR-3835	21	14	1.3	5.5	5.5
Rhino Linings.	ThermalGuard OC.5	0.5 pcf	ESR-2100	18	13	1.1	7.5	11.5
Rhino Linings	Thermal Guard CC2	2.0 pcf	ESR-2100	18	12	1.1	8	10
SES Foam, LLC	Nexseal 2.0	2.0 pcf	ER-374	18	12	1.1	8.25	10.25
SES Foam, LLC	Nexseal 2.0 LE	2.0 pcf	ER-374	18	12	1.1	8.25	10.25
SES Foam, LLC	SES 2.0	2.0 pcf	ER-374	18	12	1.1	8.25	10.25
SES Foam, LLC	SES 2.0 LE	2.0 pcf	ER-374	18	12	1.1	8.25	10.25
SES Foam, LLC	SES Foam 0.5	0.5 pcf	ER-492; ESR-2100	18	12	1.1	9.5	11.5
SES Foam, LLC	SucraSeal 0.5	0.5 pcf	ESR-3375	18	12	1.1	11.5	11.5
Sustainable Polymer Products	Cell Tech OCX	0.5 pcf	ER-459	21	14	1.4	8	12
Sustainable Polymer Products	2.0 CC	2.0 pcf	ER-511	18	12	1.1	7.5	11.5
Sustainable Polymer Products	0.5 OCX	0.5 pcf	ER-512	20	13	1.3	7.5	11.5
Sustainable Polymer Products	.50 OC	0.5 pcf	ER-513	20	13	1.3	8	11.5
SWD Urethane	Quik-Shield 106	0.5 pcf	CCCR-1011	24	15	1.5	11.25	11.25



Manufacturer's Name	Product Name	Product Density	Evaluation Report ^{1, 2}	Application of DC315			Maximum Thickness of Spray Foam (inches)	
				Minimum Installed Thickness (mils)		Theoretical Application Rate (gallons/100 square feet) ³	Vertical	Overhead
				Wet Film	Dry Film			
SWD Urethane	Quik-Shield 108	0.5 pcf	CCRR-1051	18	12	1.1	5.5	11.25
SWD Urethane	Quik-Shield 100X	0.5 pcf	CCRR-1050	18	12	1.1	7.25	11.25
SWD Urethane	Quik-Shield 112	2.0 pcf	CCRR-1011	26	18	1.7	11.25	11.25
SWD Urethane	Quik-Shield 112XC	2.0 pcf	CCRR-1011	20	13	1.3	11.25	11.25
UTC	7041 0.5 lb	0.5 pcf	ESR-3244	20	13	1.3	5.5	14.75
UTC	7040 0.5 lb	0.5 pcf	ESR-3244	20	13	1.3	5.5	14.75
Volatile Free, Inc.	VFI-716	0.5 pcf	ER-414	20	13	1.3	8	11.5
Volatile Free, Inc.	VFI-714	2.2 pcf	ER-415	18	12	1.1	7.5	11.5

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

Notes:

1. Approval of DC315 for use with any insulation product listed herein is conditional upon that insulation product's current approval for use with DC315. Users must independently verify the current validity of any evaluation report referenced herein.
2. ER – Evaluation Reports from IAPMO Uniform Evaluation Service
CCRR – Code Compliance Research Reports from Intertek.
ESR – Evaluation Service Reports from ICC-ES.
3. Theoretical coating application rates are based strictly on minimum wet film thickness requirements and shall be increased for sit-specific conditions such as foam plastic surface texture, overspray loss, container and other residues, application technique and environmental conditions.



TABLE 2
FOAM PLASTIC PRODUCTS APPROVED FOR USE WITH DC315 AS ASSEMBLIES NOT REQUIRING A PRESCRIPTIVE IGNITION BARRIER

Manufacturer's Name	Product Name	Product Density	Evaluation Report ^{1,2}	Application of DC315			Maximum Thickness of Spray Foam (inches)	
				Minimum Installed Thickness (mils)		Theoretical Application Rate per Gallon (square feet) ³	Vertical	Overhead
				Wet Film	Dry Film			
Accella Polyurethane Systems	Bayseal OC 0.5 lb	0.5 pcf	ESR-1655	4	3	400	9.5	11.5
Accella Polyurethane Systems	Foamsulate 220	2.0 pcf	ER-352	4	3	400	7.5	11.5
Accella Polyurethane Systems	QuadFoam® 500	0.5 pcf	ER-271	4	3	400	7.5	11.5
Accella Polyurethane Systems	Foamsulate™ 50	0.5 pcf	ER-351	4	3	400	7.5	11.5
BASF	158 Spraytite	2.0 pcf	ESR-2642	4	3	400	5.5	11.5
BASF	Enertite	0.5 pcf	ESR-3102	4	3	400	11.5	15.5
BASF	Spraytite 178	2.0 pcf	ESR-2642	4	3	400	5.5	11.5
Certaiteed	CertaSpray X	0.5 pcf	ESR-3759	4	3	400	11.5	11.5
Demilec	Agribalance	0.6-0.8 pcf	ESR-2600	4	3	400	7.5	11.5
Demilec	Heatlok XT-w	2.0 pcf	ESR-3883	4	3	400	7.5	11.5
Demilec	Sealection 500	0.5 pcf	ESR-1172	4	3	400	7.5	11.5
Gaco Western	Gaco Green 052N	0.5 pcf	CCRR-1075; ESR-2478	4	3	400	11.25	11.25
General Coatings	Ultra-Thane 230	2.0 pcf	ESR-3033	4	3	400	7.5	11.5
Henry	Permax LV	0.5 pcf	ESR-3646	4	3	400	11.5	11.5
Icynene, Inc.	Classic Plus	0.7 pcf	ESR-1826	4	3	400	8	14
Icynene, Inc.	Classic	0.5 pcf	ESR-1826	4	3	400	5.5	11.25
Icynene, Inc.	Classic Max Select	0.5 pcf	ESR-1826	4	3	400	5.5	11.25



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				Minimum Installed Thickness (mils)		Theoretical Application Rate (gallons/100 square feet) ³	Vertical	Overhead
				Wet Film	Dry Film			
Icynene, Inc	ProSeal	2.0 pcf	ESR-3500	4	3	400	8	14
Johns Manville	JM Corbond® III Performance Insulation	2.0 pcf	ER-146	4	3	400	7.5	11.5
LaPolla	FL500	0.5 pcf	ESR-2847	4	3	400	5.5	11.5
NCFI	Sealite	0.5 pcf	ESR-1154	4	3	400	12	14
Patriot	200	2.0 pcf	ESR-4065	4	3	400	8	14
Patriot	500	0.5 pcf	ESR-4064	4	3	400	5.5	11.25
Patriot	500 HY	0.5 pcf	ESR-4064	4	3	400	5.5	11.25
Rhino Linings	ThermoGuard	0.5 pcf	ESR-2100	4	3	400	8	12
SES Foam, LLC	SES 0.5	0.5 pcf	ER-492	4	3	400	9.5	11.5
Sustainable Polymer Products	.50 OC HY	0.5 pcf	ER-514	4	3	400	7.5	11.5
Sustainable Polymer Products	2 lb. CC	2.0 pcf	ER-511	4	3	400	7.5	11.5
Sustainable Polymer Products	.50 lb OCX	0.5 pcf	ER-512	4	3	400	7.5	11.5
SWD	QS 108	0.5 pcf	CCRR-1051	4	3	400	8	12

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

Notes:

- Approval of DC315 for use with any insulation product listed herein is conditional upon that insulation products' current approval for use with DC315. Users must independently verify the current validity of any evaluation report referenced herein.
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ESR-3702

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DIVISION: 09 00 00—FINISHES
SECTION: 09 96 43—FIRE-RETARDANT COATINGS

REPORT HOLDER:

**INTERNATIONAL FIREPROOF TECHNOLOGY INC./
PAINT TO PROTECT INC.**

**17528 VON KARMAN AVENUE
IRVINE, CALIFORNIA 92614**

EVALUATION SUBJECT:

DC 315 COATING



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ICC-ES Evaluation Report

ESR-3702

Reissued February 2017

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DIVISION: 09 00 00—FINISHES
Section: 09 96 43—Fire-Retardant Coatings

REPORT HOLDER:

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(949) 975-8588

www.painttoprotect.com
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EVALUATION SUBJECT:

DC 315 COATING

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2015, 2012, 2009 and 2006 *International Building Code*® (IBC)
- 2015, 2012, 2009 and 2006 *International Residential Code*® (IRC)

Property evaluated:

- Application without a prescriptive thermal barrier
- Physical properties

2.0 USES

DC315 is a liquid-applied coating intended for application over the surface of spray-applied foam plastic insulation recognized in an ICC-ES evaluation report as 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 15-minute thermal barrier when installed as described in this report.

3.0 DESCRIPTION

DC315 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° and 80°F (10 and 27°C).

4.0 DESIGN AND INSTALLATION

4.1 Installation – General:

DC 315 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.

DC 315 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 installation 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 90°F (32° C) and relative humidity of not more than 65%. The manufacturer must be consulted for specific application conditions.

The DC 315 coating may be applied over spray-applied foam plastic insulation without covering the coated assembly with the 15-minute thermal barrier prescribed in the IBC Section 2603.4 and IRC Section R316.4 (2006 IRC Section R314.4).

5.0 CONDITIONS OF USE

The DC 315 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 installation instructions, and the applicable code. A copy of the installation 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.
- 5.4** The coating is manufactured in Taoyuan, Taiwan and Irvine, California, under a quality control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

- 6.1** Reports of testing in accordance with AC456, including room corner fire testing in accordance with NFPA 286.

7.0 IDENTIFICATION

All containers of DC 315 coating must be labeled with the manufacturer’s name (International Fireproof Technology Inc. / Paint to Protect Inc.) and address; the product name; the date of manufacture, the shelf life or expiration date;

the manufacturer’s instructions for application, and the evaluation report number (ESR-3702).

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

TABLE 1—USE OF INSULATION WITHOUT A PRESCRIPTIVE THERMAL BARRIER

INSULATION TYPE	MAXIMUM THICKNESS (in.) (Vertical Surfaces)	MAXIMUM THICKNESS (in.) (Overhead Surfaces)	DC 315 COATING MINIMUM THICKNESS ¹ (Applied to all Foam Surfaces)	MINIMUM THEORETICAL APPLICATION RATE OF COATING ²	TEST METHOD
BASF Spraytite 158 (See ESR-2642)	5 ¹ / ₂	7 ¹ / ₂	13 mils DFT 20 mils WFT	1.25 gal / 100 ft ²	NFPA 286
JM Corbond [®] oc (See ESR-3776)	7 ¹ / ₂	11 ¹ / ₂	12 mils DFT 18 mils WFT	1.125 gal / 100 ft ²	

For SI: 1 inch = 25.4 mm; 1 mil = 0.0254 mm; 1 gallon = 3.38 L; 1 ft² = 0.93 m².

Notes:

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

²As 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.