Oak Ridge™
Foam & Coating Systems, Inc.

OR DC315

Description
DC 315 is a high-performance intumescent coating for Spray Polyurethane Foam (SPF) and provides a fire protective barrier to delay the involvement of the foam in a fire. Fully tested and compliant in the USA, Canada, EU Nations, Australia and many other jurisdictions, DC 315 is the most tested and approved alternative thermal barrier on the market today!

DC 315 is applied over a manufacturer's SPF and tested to the criteria of NFPA 286, UL 1715 or ISO-CAN/ULC 9705 for duration of 15-20 minutes by an accredited fire testing facility. DC 315 has also been tested as an ignition barrier under AC 377 Appendix X. DC315 is fully AC456 Compliant and satisfies the International Building Code (IBC), International Residential Code (IRC), National Building Code of Canada (NBCC) and many other International model building codes.

DC315 Tested Solutions for Spray Polyurethane Foam
• More full scale Thermal and Ignition Barrier tests than any other product in the world
• DC 315 - 3rd. party inspected for Quality Control: Warnock Hersey Intertek W/N 20947
• Tested useful life, fire resistant property is not compromised after 50 years
• Top coat for color, weather & moisture protection, tested, via NFPA 286 full scale testing
• ANSI 51 testing for incidental food contact
• Passed CAL 1350 - qualify DC 315 as a low-emitting material in the Collaborative for High Performance Schools rating system (CHPS
• Designed & CHPS Verified)
• Passed strict EPA – V.O.C. and AQMD air emission requirements (for all 50 states)
• 3rd Party tested "Single Coat Coverage" up to 24 Mils WFT, on ceilings and walls, reducing labor costs equaling higher profits
• Meets Life Safety Code 101
• Meets LEED's point

Specifications

Finish	Flat
Color	Ice gray, white & dark gray
VOC	(47 g/l)
Volume Solids	67%
Drying Time	@ 77° & 50% RH to touch, 1-2 hours, to recoat-2-4 hours
Type of cure	Coalescence
Flash Point	None
Reducer/Cleaner	Water
Shelf Life	1 year unopened
Packaging	5- & 55-gallon containers
Shipping weight	5-gallon pail – 58 lbs. 55-gallon drum – 640 lbs.
Application	Brush, roller, conventional & airless sprayer
Performance	50+ years HOAC tested
WH listed	Spec ID 32890

Theoretical coverage
4 WFT = 2000 sq ft per 5 gal.
14 WFT = 575 sq ft per 5 gal
24 WFT = 335 sq ft per 5 gal

International Building Code Fire Performance Requirements for SPF: The International Building Code (IBC) mandates that SPF be separated from the interior of the building by a 15-minute thermal barrier, or other approved covering. DC 315 passed certified NFPA 286 and UL 1715 test over a variety of open and closed cell spray applied urethane foams that were conducted by IAS certified testing facilities. All tests performed comply with the requirements of 2009 IBC Section 803.1.2, and Section 2603.9; 2012 IBC Section 803.1.2 and Section 2603.10.

Alternative Ignition Barrier Assemblies DC 315 meets the requirements for ignition barrier per AC 377, Appendix X.

National Building Code of Canada Alternative Thermal Barrier Assemblies DC 315 prevents flashover for 10 minutes for combustible construction or 20 minutes for Non-Combustible construction when tested to the CAN/ULC 9705 Standard and meets the Intent of NBC Section 3.1.5.12 for the protection of foamed plastics. Ensure application thickness is applied according to building type.

Testing
USA
• ASTM E84 - Flame Spread 0 Smoke 10
• UL 1715, NFPA 286
• ASTM E2768- 30-minute Ignition Resistant material

Canada
• CAN/ULC S102 FSR 23 SDC 145 -
(tested as a system over SPF)
• CAN/ULC S 101
• CAN/ULC 9705 10- and 20-minute assembly testing

European Union
• BS 476 Part 6 & 7
• BS EN ISO 11925-2
• EN 13823
• EN 13501 Classification B S2 D0

Australia/New Zealand
• AUS ISO 9705
• AS/NZS 1530.3
• AS 5637.1 Group Classification 2, NZBC Group 2-S
• ISO 5660 Parts 1 and 2

Application Equipment
DC 315 can be applied by brush, roller or airless sprayer. For maximum yield and coverage spray application is recommended

Pump	(Graco) UltraMax 795 or equivalent
PSI	3000
GPM	1.1
Tip	517-523 or equivalent
Filter	Removal from the machine and gun is required
Hose	3/8" diameter airless spray line for the first 100' from pump and 1/4" X 3' whip

Pump	(Graco) TexSpray Mark 5 or equivalent
PSI	3300
GPM	1.35

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Tip 517-523 or equivalent
Filter Removal from the machine and gun is required
Hose 3/8" diameter airless spray line for the first 100' from pump and ¼" x 3; whip

Pump (Graco) GMAX 7900 or equivalent
PSI 3300
GPM 2.2
Tip 517 – 529 or equivalent
Filter Removal from the machine and gun is required
Hose 1/2" diameter airless spray line of the first 100', 300; from pump and ¼" x 3'whip

Pump (Graco) GH 833 or equivalent
PSI 4000
GPM 4.0
Tip 517- - 529 or equivalent
Filter Removal from the machine and gun is required
Hose ½" diameter airless spray line for the first 100', 300' from pump and ¼" x 3' whip

Prior to Applying DC 315 to Ensure Proper Adhesion:
Adhesion of a coating to SPF requires the foam surface to have a slight profile or texture similar to an orange peel. Smooth or glossy foam surfaces should be flash coated with a light 3 - 4 mils Wet Film Thickness (WFT) of DC 315 before applying the full application. Flash coating is a quick burst of DC 315 or a primer via airless sprayer over an area needing treatment. We also recommend flash coating around all pipes and air ducts.

Allow foam to cure and cool to ambient conditions prior to applying DC 315, Minimum 1 hour.

Surface Preparation: All surfaces to be coated must be clean, cured, firm, dry and free of dust, dirt, oil, wax, grease, mildew, and efflorescence. The quality of any application is only as good as the surface preparation that precedes the application. DC 315 has excellent bonding characteristics and will adhere to most sound, clean, foam surfaces. Verify that the surface of the foam is free of gouges, holes, and exposed cells. Also, verify the surface is stable, and not crumbling or deteriorated. If any such defects are found, make sure to repair them prior to proceeding.

Material Preparation: DC 315 must be thoroughly mixed before application. Failure to do so will seriously compromise the coating's ability to perform. It is required to perform mechanical stirring with a medium speed drill and a paddle appropriate for the size container you are working from. Contents should be stirred from the bottom up making sure to scrape the bottom and sides with a paint stick as you go. Contents should be stirred to a creamy consistency with no lumps. Continue mixing for 4-5 minutes per 5- gallon pail, 15-20 minutes per 55-gallon drum. Thinning is usually not needed. If DC 315 has been exposed to high heat, water may evaporate from the plastic 5-gallon container.

If the paint level is below 3 inches from the top of the container, continue to mix and SLOWLY add just enough water to restore a sprayable consistency. Use Caution not to add to much water or product will run and drip during application.

DC315 Viscosity: DC 315 is a 9,000-10,000-viscosity coating at 75°F. When you open a container of DC315 it may appear thick before it is mixed, ensure proper temperature and remix for 4-5 minutes to return it to the 9000-10,000 viscosity.

Temperature: PROTECT FROM FREEZING DURING SHIPMENT, STORAGE, AND USE. DC 315 is water-based coating which will freeze and become unusable at temperatures below 32°F. Do Not store material at temperatures below 50°F. Do Not apply DC 315 when ambient air and substrate temperatures fall below 50°F. Store DC 315 at 50°F to 80°F at all times. **Do Not** store DC 315 on concrete floors during winter months. IFTI recommends an ideal installation temperature range of 62°F to 90°F. Contact IFTI for applications outside these temperature ranges.

Humidity: Relative humidity plays an equally important role in how well DC 315 cures. Ideal conditions are 50-65% relative humidity. Curing times are significantly affected when humidity levels exceed 70%. Low relative humidity can also be a problem, because DC 315 may dry too quickly and lead to blistering on the surface. It is imperative that humidity is monitored throughout the application and curing process. 65% humidity at the beginning of the job will quickly rise as the coating is installed. Continue monitoring humidity as the coating cures until equilibrium is achieved.

Ventilation: Fans may be required to circulate the air during application, especially in high or low humidity. Air flow must be across the area DC 315 was applied, but not directly on it. If the relative humidity is greater than 85% at the end of spraying and cross ventilation is not drastically reducing it, then a mechanical industrial dehumidifier is required.

IMPORTANT- when spraying in enclosed or unconditioned spaces, such as attics, it is mandatory to use an "exhaust" blower at one end of the enclosed space and run a hose to the exterior of the building for removing stale air. Use a "supply" blower at the opposite end of the enclosed space and a hose from the exterior to maintain a negative pressure compared to the surrounding area, maintaining at least 0.3 air changes per hour for 48-72 hours following application.

Improper installation practices that do not address temperature, humidity and ventilation will void the warranty.

Application Equipment: DC 315 is best applied with an airless sprayer to achieve a more consistent mil thickness. In challenging areas where an airless sprayer is not practical, DC 315 can be applied by brush or roller (See table for a list of recommended sprayers).

Proper equipment and settings are imperative for correct application. Remove all filters from machine and gun. DC 315 requires high pressure to atomize the coating at the spray tip, correct atomization will yield a more consistent spread rate and easier coverage of uneven surfaces. Ensure you match your tip size to your machine - this is critical to ensure correct pressure at the spray tip. If the spray pattern has fingers or tails, then the pressure should be increased. If the maximum pressure of the sprayer is not enough to achieve a good spray pattern, a spray tip with a smaller orifice should be used.

A good spray pattern indicates that the paint or coating is completely atomized and distributed evenly on the surface. Hose length should be appropriate for your machine and always ensure your feed hose is larger than your whip.

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Having a smaller whip will serve to re-pressurize the coating at the spray gun and assist in correct atomization of the coating.

Spraying DC 315 for Maximum Yield: If this is the first-time using DC 315, we suggest testing a pre-measured area to get a feel for spraying and yield. Example, if the job requires 20 wet mils or 80 ft² per gallon, then a 5-gallon pail would cover 400 ft². Measure out one or two 400 ft² sections using pieces of tape, thumbtacks, or canned spray paint. Use just enough to outline the area you intend to apply DC 315. We suggest spraying inside the outlined area and taking wet film thickness measurements, with a wet film gauge across the area, to get a feel for maximum yield. DC 315 is a single coat application up to 24 mils WFT. If multiple coats are required wait at least 2 hours between coats.

Coverage:
Check appropriate test or Evaluation report for required wet film thickness (WFT) and gallon per square coverage. Theoretical coverage is listed below:

Wet	Sq. Ft per gallon	Sq. Ft. per five gallons
4WFT	400 sq. ft per gallon	2000 sq. ft. per 5 gallons
16WFT	100 sq. ft. per gallon	500 sq. ft. per 5 gallons
18' WFT	89 sq. ft per gallon	445 sq. ft. per 5 gallons
20 WFT	80 sq. ft. per gallon	400 sq. ft. per 5 gallons
22 WFT	73 sq. ft. per gallon	365 sq. ft. per 5 gallons
24 WFT	67 sq. ft. per gallon	335 sq. ft. per 5 gallons

Actual coverage rate will vary based on surface texture, over-spray, and miscellaneous losses. Allow a minimum of 5-10% for over-spray and losses.

Overlapping Technique: The overlapping technique ensures that an even amount of coating was sprayed onto the surface. The spray gun should be aimed so that the tip points at the edge of the previous stroke, therefore overlapping each stroke by 50%. To maximize efficiency when spraying on broad or open surfaces (e.g., ceilings and bare walls), the outside edges of walls should be sprayed first. The middle can then be sprayed quickly requiring less precise strokes. Given the contour of SPF we suggest spraying side to side followed by an up and down stroke.

How to Use a Wet Film Thickness Gauge: A WFT gauge is designed to give the spray applicator immediate mil measurement of the film build just been sprayed.

Technique: When placing the gauge on a freshly painted area, the gauge must be placed at a 90-degree angle to the substrate and pressed firmly to ensure correct depth. The applicator also needs to be aware of variations in the surface that may influence the reading. For example, if the surface is not perfectly flat, one direction may give a more accurate reading than the other.

To use the WFT gauge, place the gauge directly on the wet area just sprayed as described above. See figure 2, the notches will indicate the measured film thickness. For example, if the 18-mil notch is wet and the 20-mil notch is dry, then the wet measured thickness is 18 mils.

Medallions: For Wet Film Thickness verification and ease of measuring the applied coating, IFTI suggests placing metal plates (aka Medallions) to the surface of the foam, at least one per 400 sq. ft. These plates are available at most hardware stores.

IFTI recommends writing the job date and applicator name on the back of each plate. Measuring WFT on the front side of the plate will give the most accurate reading. Collect these plates at the end of the job, touch up, and keep them on file or at the job site. They are a great tool to present your code official or Fire Marshal and verify the applied thickness of coating.

Limitations:
DC 315 is for interior use. Contact IFTI for detailed application instructions when applying in unconditioned space such as, but not limited to, cold storage, parking garages or high humidity environments such as indoor swimming pools.

Limited Warranty:
To validate warranty, Job Work Records must be filled out for all applications of DC 315. Completed Work Records can be submitted to workrecords@painttoprotect.com within 10 Days of job completion.

This product will perform as tested if applied and maintained according to our directions, instructions and techniques. If this product is found to be defective upon inspection by its representative, the seller will, at its option, either furnish an equivalent amount of new product or refund the purchase price to the original purchaser of this product. Seller will not be liable for any representations made by any retail seller or applicator of the product. THIS WARRANTY EXCLUDES (1) LABOR OR COST OF LABOR FOR THE APPLICATION OR REMOVAL OF THIS PRODUCT OR ANY OTHER PRODUCT, THE REPAIR OR REPLACEMENT OF ANY SUBSTRATE TO WHICH THE PRODUCT IS APPLIED OR THE APPLICATION OF REPLACEMENT PRODUCT, (2) ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES. OTHER LIMITATIONS APPLY.

General Safety, Toxicity, Health Data
Safety Data Sheets (SDS) are available on this coating material. Any individual who may come in contact with these products should read and understand the SDS.
In case of emergency contact CHEMTREC EMERGENCY NUMBER at 800-424-9300.

WARNING: Avoid eye contact with the liquid or spray mist. Applicators should wear protective clothes, gloves and use protective cream on face, hands, and other exposed areas.

EYE PROTECTION: Safety glasses, goggles, or a face shield are recommended.

SKIN PROTECTION: Chemical resistant gloves are recommended, cover as much exposed skin area as possible with appropriate clothing.

RESPIRATORY PROTECTION IS MANDATORY!
Respiratory protective equipment, impervious foot wear and protective clothing are required at all times during spray application.

INGESTION: Do not take internally.
Consider the application and environmental concentrations in deciding if additional protection is necessary. 6/20

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