



# Henry DC315 Thermal & Ignition Barrier Code Compliant Assembly over Henry Permax Open and Closed Cell Spray Foam



IFTI's DC315 and Henry spray foam teamed up to comply with the International Building Code mandates, that polyurethane spray foam can be tested as an assembly to meet alternative 15 minute thermal barrier and Ignition barrier status. In order to meet the code each foam, open and closed cell must be tested independently to meet the NFPA 286 room corner burn test and AC377 to Appendix X. DC315 passed over 100 certified NFPA 286 and UL 1715 over a variety of open and closed cell spray applied urethane foams including **Henry Permax Spray Foam Insulation**. The tested assemblies comply with all the requirements of 2006 IBC Section 803.2.1; 2009 IBC Section 803.1.2 and Section 2603.9; 2012 IBC Section 803.1.2 and Section 2603.10 **"Special Approvals for Thermal Barriers over Foam Plastics"**. DC315 also meets the requirement as an Ignition Barrier per AC 377, Appendix X at an incredible spread rate of 400 sq. ft. per gallon. ES Reports have been issued by the ICCES to support the Henry Permax and DC315 assembly as a code compliant and tested solution.

## DC315 Advantages when used with Henry Permax spray foam as a code compliant Thermal & Ignition Barrier assembly includes:

- DC315 is the only coating for SPF that is Warnock Hersey listed (WHI), marked, labeled with inspected product & manufacturing. This assures contractors that DC315 used for testing is the same quality on your job. Code officials, Inspectors and Fire Marshalls expect this assurance.
- Certified testing as a true single coat application up to 24 Mil WFT including ceilings
- Industry leading spread rate
- Lower labor cost and material cost equals higher profits
- Less time applying coatings means more jobs per year
- Meets Life Safety code and LEEDs points requirements
- VOC Emissions, passed CAL 1350 "safe for use in schools and high occupancy buildings"
- Passed strict EPA – VOC and AMQD tests meets emission requirements for all 50 states
- Complies with the requirements of NSF/ANS1 51 Incidental Food Contact, USDA approved for ceiling,
- Easily applied with a sprayer, brush, or roller, No complicated mixing- just stir the paint before application
- 1 year shelf life
- Fast and easy cleanup of our water base latex paint, tools & equipment



## Characteristics

- **Color:** Off-White, Gray
- **V.O.C.:** (47 g/l)
- **Volume Solids:** 67%
- **Drying Time** @ 77°F & 50% RH to touch 1-2 hours to recoat 2 to 4 hours
- **Reducer/Cleaner:** Water
- **Shelf Life:** 1 year (unopened)
- **Packaging:** 5 & 55 gallon containers
- **Application:** Brush, roller, conventional and airless spray

Thermal Barrier	Wet	Dry	Coverage Rate	Test Report	ES Report
Henry Permax CC 1.8 lb.	18	18	89 sq. ft. per gal	<a href="#">Thermal Barrier with DC 315 over Henry Permax CC 1.8 lb.</a>	
Henry Permax CC 2 lb.	18	12	89 sq. ft. per gal	<a href="#">Thermal Barrier with DC 315 over Henry Permax CC 2 lb.</a>	
Henry Permax LV OC 0.5 lb.	18	12	89 sq. ft. per gal	<a href="#">Thermal Barrier with DC 315 over Henry Permax LV OC 0.5 lb.</a>	<a href="#">ESR 3646</a>
Ignition Barrier	Wet	Dry	Coverage Rate	Test Report	ES Report
Henry Permax OC 0.5 lb.	4	3	400 sq. ft. per gal	<a href="#">Ignition Barrier with DC 315 over Henry Permax OC 0.5 lb.</a>	
Henry Permax LV OC 0.5 lb.	4	3	400 sq. ft. per gal	<a href="#">Ignition Barrier with DC 315 over Henry Permax LV OC 0.5 lb.</a>	<a href="#">ESR 3646</a>

**RECOMMENDED USES:** DC315 is designed for use on interior polyurethane foam surfaces

**USED BY:** Schools, Colleges, Nursing Homes, Child Care Centers, Hospitals, Penal Institutions, Apartments, Hotels, Factories, Warehouses, Retail Stores, Restaurants, Utilities, Railroad and other Transportation Companies, Oil and Chemical Installations, Military Installations, and other facilities where thermal and Ignition barriers are required over SPF open and closed cell.

Visit our website [www.painttoprotect.com](http://www.painttoprotect.com) to view a current matrix of all the manufacturer's foams DC 315 has been approved for Alternative Thermal and Ignition Barrier.



**If a coating has not passed a full scale test on a manufacturer's foam it cannot be used on that foam; there are no exceptions in the IBC Code!**

Coatings must pass a full scale test on each of the manufacturer's types of open and close cell foams. If a coating is not tested it cannot be used. Manufacturers like Bayer, Lapolla, Gaco, Quadrant, Icnene, Premium, NCFI, SWD, BioBased, etc., must be individually tested to be used as a protective 15 minute thermal barrier coating.

**IBC Code requires certified testing to ensure Code Compliance. Any company can say they are compliant, but can they supply you proof?**

**DC 315 viscosity of 15k to 18K CPS assures a one coat coverage at 20 wet mils. Lower viscosity products are a two coat application, resulting in double your labor costs.**

**Cross Hatch Spray Technique** will help to build a uniform coating thickness to eliminate the low and high coverage areas on open cell polyurethane foam applications. The cross-hatch spray technique consists of a wet spray coat, using 50 percent overlap, followed by another full wet spray coat at right angles to the first.

**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. If the job requires 20 wet mils or 80 sq. ft. per gallon, than a 5 gallon pail would cover 400 sq. ft. Measure out one or two 400 sq. ft. 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.

WET Film Thickness	Sq. Ft. Per One Gallon	Sq. Ft. Per Five Gallon
4 WFT	400 Sq. Ft. Per One Gallon	2000 Sq. Ft. Per Five Gallon
18 WFT	89 Sq. Ft. Per One Gallon	445 Sq. Ft. Per Five Gallon
20 WFT	80 Sq. Ft. Per One Gallon	400 Sq. Ft. Per Five Gallon
21 WFT	76 Sq. Ft. Per One Gallon	380 Sq. Ft. Per Five Gallon
22 WFT	73 Sq. Ft. Per One Gallon	365 Sq. Ft. Per Five Gallon

**Wait 11-24 hours to let foam off gas before applying DC 315 over new foam**

**Temperature: PROTECT FROM FREEZING DURING SHIPMENT AND STORAGE.** DC 315 is a 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.

**Humidity:** Humidity at 65% or higher requires fans to circulate the air for proper curing. High humidity may require a longer curing time. Relative humidity is harder to measure than temperature, but it 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. This is less common in cooler temperatures. Blistering happens more often when there is too much wind, which can dry DC 315 too quickly, causing dust deposits and other particles to settle on the surface. For additional information on applying DC 315 in high or low humidity contact IFTI at 949.975.8588 or email us at [ptp@painttoprotect.com](mailto:ptp@painttoprotect.com).

**Ventilation:** Please see humidity and temperature guidelines above. We recommend running fans to circulate the air during all applications especially in high or low humidity. In most cases free air movement across the surface will suffice. It is important that the fans do not blow directly onto the DC 315 coated surfaces before or after application, this may cause the paint to dry too fast resulting in cracking or delamination. Fans should be used to move air in and out of the work space.

**Freezing:** It's also important that air temperatures do not drop below freezing conditions in the work space the first night after DC 315 coating has been applied. Curing paint can still contain moisture that will crystallize in sub-freezing temperatures instead of evaporating out into the atmosphere as it is designed to do. If temperatures do drop, you won't see a problem until the following spring. Moisture will remain hidden in the foam over the winter and then migrate into the paint under a warm spring sun, which may form blisters or delamination.

**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. Our coating 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 recommended to perform mechanical stirring with a high 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. 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, add enough water to bring the level back up to within 3 inches from the top in order to ensure proper consistency.

**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 the following recommended sprayer*).

- **Brush:** Use top quality polyester/nylon blend brushes, such as those supplied by Purdy, Wooster, or equivalent
- **Roller:** Use a 3/8" polyester blend nap roller, which will generally work well when applying DC 315

**IMPORTANT: PRIMING YOUR AIRLESS HOSE LINE WITH WATER PRIOR TO USING DC 315 WILL GREATLY ASSIST IN APPLICATION AND YIELD (SEE INSTRUCTIONS ABOVE).**

**DC 315 VISCOSITY:** DC 315 is a variable viscosity coating. When you open DC 315 the unmixed viscosity will be approximately 30,000 – 35,000 CPS. After mixing for five minutes the viscosity will drop 15,000 CPS to approximately 20,000 CPS. If viscosity is still too high you can add 8 ounce of water per 5 gallon pail and mix to reduce the viscosity by 4000 – 5000 CPS.

**Coverage: DC 315 MUST BE THOROUGHLY MIXED FOR 5 MINUTES PRIOR TO APPLICATION WITH A MECHANICAL MIXER**

Check appropriate test report or ESR for required wet film thickness (WFT) and gallon per square coverage. For example, if the wet film thickness (WFT) required is 18 mils, the coverage will be 89 sq. ft. per gallon.

#### Measuring Wet Film Thickness (WFT)



Figure 1

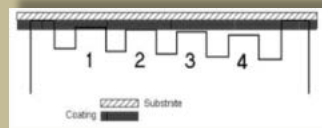
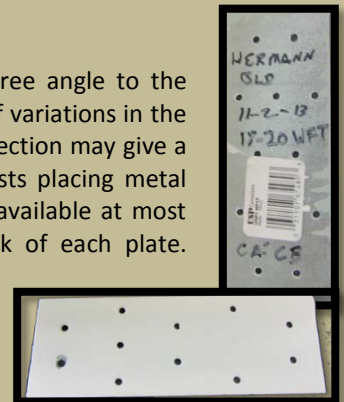


Figure 2

**How do I use a wet film thickness gauge:** A WFT gauge is designed to give the spray applicator immediate mil measurement of the film build just sprayed. There are several types of WFT gauges available. The most common is the notch gauge (see figure 1). Other types of gauges available from specialty vendors include the eccentric disk, rolling notch, and the 6 sided.

#### **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. International Fireproof Technology, Inc. (IFTI) suggests placing metal plates throughout the surface of the foam, or at least one per 100 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 and keep them on file at the job site. They are a great tool to present your code official or Fire Marshal.
- To use the WFT gauge, place the gauge directly on the wet finished part 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 notch is dry, then the wet measured thickness is 18 mils.



**Curing:** Fans should be used to circulate air for the first 24 hours of curing. Do not blow air directly on coating.

#### **Airless Sprayer:**

**For Residential and Warehouse usage:**

**Smaller Jobs less than 7,500 Square Feet:**

Pump:	<b>Titan</b> 640 Impact or equivalent
PSI:	3300
GPM:	0.70
Tip:	515 – 527
Filter:	30 mesh, removal of filter is recommend from gun and machine
Hose:	3/8" diameter airless spray line for the first 50' from pump and 1/4" x 6' whip
<b><u>Priming your airless:</u></b>	Prior to using DC 315 prime the sprayer by filling the hose with water

## Larger Jobs 7,500 Square Feet and Up:

Pump: **Titan** 840 Impact or **(Graco)** Ultra Max II 795 Hi-Boy or equivalent  
 PSI: 3300  
 GPM: 1.00  
 Tip: 515 - 532  
 Filter: 30 mesh, removal of filter from gun and machine  
 Hose: 3/8" diameter airless spray line for the first 50' from pump and 1/4" x 6' whip  
Priming your airless: Prior to using DC 315 prime the sprayer by filling the hose with water

Pump: **Titan** 1140 Impact or equivalent or **(Graco)** Mark 4 or 5 or equivalent  
 PSI: 3300  
 GPM: 1.2  
 Tip: 515 - 534  
 Filter: 30 mesh, removal of filter from gun and machine  
 Hose: 3/8" diameter airless spray line for the first 50' from pump and 1/4" x 6' whip  
Priming your airless: Prior to using DC 315 prime the sprayer by filling the hose with water

## For 5 Gallon Pails and 55 Gallon Drums:

Pump: **Titan** PowrTwin 12000 PLUS or **(Graco)** GH 300 or equivalent  
 PSI: 3300  
 GPM: 3.15  
 Tip: 517 - 558  
 Filter: 30 mesh, removal of filter from gun and machine  
 Hose: 3/8" diameter airless spray line for the first 50' from pump and 1/4" x 6' whip

Pump: **Titan** M 4000 or **(Graco)** GH 833 or equivalent  
 PSI: 4000/ 276  
 GPM: 3.3  
 Tip: 517 - 560  
 Filter: 30 mesh, removal of filter from gun and machine  
 Hose: 3/8" diameter airless spray line for the first 50' from pump and 1/4" x 6' whip

### Preparing your Airless before spraying

# Priming

- Read all warnings in pump manual or find the electronic manual
- Press pusher stem.
- Unclip siphon / return tubes. Place siphon tube into material container. Place return tube into waste container.
- Plug in power cord. Turn PRIME/SPRAY knob to PRIME position. Set pressure to minimum.
- Turn power ON. Steady flow through the return tube for 5 seconds
- Turn power OFF. Move return tube into material container. Clip siphon tube and return tube together.
- Point spray gun at separate waste container. Squeeze and hold trigger for steps 7-8. Turn power ON
- Turn PRIME/SPRAY knob to SPRAY. Continue to squeeze trigger until material is flowing freely through spray gun.
- Turn the power OFF. Release trigger and lock spray gun. Turn PRIME/SPRAY knob to PRIME.
- Thread the spray tip guard assembly onto the gun. Tighten by hand.
- Make sure spray tip is rotated forward in SPRAY position.
- Turn power ON. Turn PRIME/SPRAY knob to SPRAY. Adjust to desired pressure.