



International Fireproof Technology Inc.

The Ultimate in Firestop Solutions and Fire Protective Coatings

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Application Guide

DC4000-2K Fire Protective Coating is a two component water based non-intumescent coating. Specifically designed and tested to perform as a fire protective coating for spray applied foam insulation. DC4000-2K meets **NFPA 286 Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth** as an alternative thermal barrier for the protection of spray foam insulation in accordance with IBC/IRC code requirements. When DC4000-2K is applied to spray foam insulation, the coated foam plastic assembly may be left exposed as the interior finish in lieu of a prescriptive thermal barrier.

DC4000-2K will reduce the thermal conductivity and delay or eliminate ignition of the substrates and propagation of fire. Tested in accordance with the **CAN/ULC S-124 Standard Method of Evaluation of Protective Coverings for Foamed Plastics** DC4000-2k temperature rise at the interface of the protective cover and the foamed plastic at the end of 15 minutes has not exceeded 140°C average or 180°C at any one thermocouple, and is accorded a Classification of A as a 15 minute thermal barrier.

DC4000-2K, with topcoat, allows the use of foamed plastics on the exterior of buildings, tested in accordance with **NFPA 285 Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Wall Assemblies**, DC4000-2K eliminates the requirement for brick cladding or airspace limitations. This testing expands the cladding options for architects and specifiers to include metal panels while ensure fire and life safety goals are met.

DC4000-2K once cured forms an extremely hard, durable finish that resists impacts, offering enhanced maintenance free protective properties.

DC4000 tested solutions for Spray Polyurethane Foam

- Code Compliance Evaluated by QAI Laboratories [Listing B1117](#)
- Meets NFPA 285 Multi Story Fire test when applied over SPF behind metal cladding.
- DC4000 expands the designer’s options for not only insulating methods but also cladding options
- The most durable and versatile fire protective coating for SPF available on the market today.
- Passed strict EPA – VOC and AQMD air emission requirements "super-compliant" VOC standard of <10 g/L
- “Single Coat Coverage” up to 80 Mils WFT on ceilings and walls - reducing labor costs equaling higher profits
- Meets Life Safety Code 101
- Meets LEED’s point requirements
- Formaldehyde and Asbestos free

End Use Applications: DC4000 is for interior use.

To confirm the installation complies with IFTI’s best practices and is compliant with Code Evaluation reports, installer must have copies of all application documents on site. Installation documents can be downloaded at www.painttoprotect.com or Call IFTI at 949.975.8588 for current copies or with questions.

[Job Work Records](#) are an excellent way to track your installations and confirm compliance to your Building Official or Authority Having Jurisdiction. In the event of a concern on a job the installer can provide documented proof of the installation, use these forms for all thermal or ignition barrier projects.

Testing	
ASTM E 84	Flame Spread 0 Smoke Development 0
NFPA 285	Meets the Criteria of NFPA 285 behind Steel Cladding
NFPA 286	15-minute meets IBC Section 2603, 803.1.2 and 803.11. Permitted to be used where Class A finish is required.
CAN/ULC S124	Class A 15 minute thermal barrier over Polyurethane Foam

Specifications	DC4000-2K	
	Part A	Part B
Appearance	Dark Green Slurry	Dark Brown Powder
Color	Non-Uniform Speckled Gray	
VOC	0 g/L	
Solids by Volume	70 ± 5%	
Specific Gravity	1.59 ± 0.1	1.76 ± 0.1
Specific Gravity (Wet)	1.63+/-0.1 g/cc	
Drying Time	4 Hours (Temp. = 5°C-35°C (41°F-95°F))	
Flashpoint	None	
Reducing or Cleaning	Water	
Shelf Life	2 years from date of manufacture in unopened containers and stored at 10°C to 27°C (50°F to 80°F). Do not allow to freeze	
Packaging	20 Kg/Pail	5 KG/Pail

Prior to Applying DC4000-2K: The foam MUST be cured and cooled to ambient conditions. All surface preparation should be carried out in accordance with good painting practices. Foam surfaces must be clean, dry and free of moisture, peeling paint, dirt, dust, rust, stains, grease, oil, mold, mildew, wax, and other impediments. If a cleaning solution is used, rinse surface with clean water and make sure surface is completely dry.

Material Preparation: DC4000-2K must be thoroughly mixed before application. Failure to do so will seriously compromise the coating's ability to perform. Stir part A thoroughly and then mix part A and part B vigorously in correct ratio (A:B = 4:1 weight ratio)

Pot Life: Once DC4000-2K is mixed the product must be applied within 3 Hrs.

Managing DC4000-2K After Mixing: • Pay close attention to the work life of the material. • Only mix the DC4000-2K kits as needed. Do not let mixed material sit longer than necessary. • Scrape material down the sides of the hopper as the hopper material level lowers. Do not let older material cure on the walls. • Occasionally, do not refill the hopper until it is almost empty. This ensures all material in hopper is used while fresh.

APPLICATION: DC4000-2K is spray applied using specialized equipment. IFTI recommends the Graco M680 Mortar pump with HTX 680 Air assisted applicator equipped with a #4 orifice size. Refer to equipment manufacturer's instructions for detailed information or please visit www.painttoprotect.com to obtain current "Application, Equipment and Ventilation Guides".

Air Spray Techniques 1. Test the spray pattern into hopper. Hold the applicator 6-18 in. (150-450 mm) from the surface. Use this spraying distance for most applications. 2. Adjust pump air pressure until material flow is adequate. 3. Adjust the applicator air assist needle valve to achieve a uniform round spray pattern. Larger nozzles allow heavier patterns. 5. Overlap each stroke 50%. A circular overlapping pattern may give the best results.

Temperature: PROTECT FROM FREEZING DURING SHIPMENT AND STORAGE. DC4000-2K is a water-based coating which will freeze and become unusable at temperatures below 32° F (0° C).

Storage: Keep containers tightly closed. Avoid direct sunlight and protect from freezing. Storage temperature should stay within 50° F to 80° F (10°C - 27°C), in a closed container, and in a protected area. Shelf Life is 24 months. Do Not store material at temperatures below 50° F (10° C). Do Not apply DC4000-2K when ambient air or substrate temperatures fall below 50 F (10° C). Store DC4000-2K at 50° F to 80° F (10° C-27° C) at all times. Do Not store on concrete floors during winter months. Ambient air and surface temperature must not be less than 50° F (10° C) during application and drying. The recommended application temperature is between 62° F to 90° F (16° C - 32° C). If you suspect the product has been frozen - Do Not Use Product and Contact IFTI.

Drying and Curing Time: DC4000-2K Dry to touch: 4 Hours (Temp. = 5°C~35°C (41°F-95°F))

Color: Non-Uniform Speckled Gray - Product color may vary during curing. For projects that require an architectural finish for aesthetic purposes DC400-2K may be top-coated with a suitable paint that meets the need of the intended end use.

High Humidity: Ventilation or air exchange is critical, especially in unvented areas with limited air movement or humidity 65% or higher. Ideal conditions are 50-65% relative humidity. Curing times are significantly affected when humidity levels exceed 85%.

Coverage and Application Thickness: DC4000-2K must be applied at the tested thickness to provide desired fire protection specified for the end use application. Refer to the DC4000-2K Listing and test for specific application thicknesses. For a copy of current Listings and test reports visit our website at www.painttoprotect.com.

Measuring Wet Film Thickness (WFT)



Figure 1

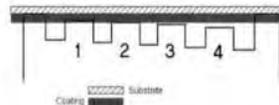


Figure 2

How to Use a WFT Gauge: When placing the gauge on a freshly painted area, the gauge must be placed at a 90-degree angle to the substrate. The notches will indicate the measured film thickness. For example, if the 60-mil notch is wet and the 65-mil notch is dry, then the wet measured thickness is 60 mils. Surface texture may influence the reading. For example, if the surface is not perfectly flat, one direction may give a more accurate reading than the other.

Medallions (Optional): 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, on average 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.



Clean Up & Disposal: DC4000-2K is a two-component product which cures by chemical reaction, it is imperative that all equipment and splatters be cleaned up with water and a mild soap prior to curing. Any spilled material should be contained and removed with inert absorbent. Disposal of the contaminated absorbent, container, and unused contents must be in accordance with local, state, and federal regulations. Call CHEMTREC 1-800-424-9300 or visit www.earth911.org.

Wear appropriate PPE for the conditions and environment you are working in. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product, Wear protective gloves, protective clothing, eye protection; If swallowed: Call a POISON CENTER if you feel unwell; If on skin: Wash with plenty of water; If skin irritation occurs: Get medical advice/attention, Take off contaminated clothing and wash it before reuse; If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing; Ingestion: Rinse mouth; Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation
VOC content: <XX g/L (<XX lb/gal)

0% of the mixture consists of ingredients of unknown acute toxicity. See www.painttoprotect.com for SDS*

FOR PROFESSIONAL USE ONLY

FAILURE TO COMPLY WITH THESE INSTRUCTIONS AND WARNINGS MAY VOID ALL WARRANTIES.

THIS PRODUCT WILL NOT MAKE ANYTHING 100% FIREPROOF NOR PREVENT A FIRE FROM OCCURRING OR CONTINUING. Surface areas treated with this product may help to resist the spread of fire. This product should be used only as part of a complete fire prevention system. Fires are always dangerous to persons and property. This product will not make a fire any less dangerous to persons or property. No guarantees are made that loss or injury will not be suffered by persons or property as a result of a fire. Environmental influences may affect the effectiveness of this product. Such influences include (but are not limited to) (I) Flammability and moisture content/ humidity of the underlying materials as well as surrounding areas, (II) Repeated contact with or cleaning of the painted surface, (III) Cracked, Chipped, or Peeling/paint, (IV) Age of the paint, (V) Thickness of the coat(s) applied.

Not for use on trafficable areas such as decks and flooring. This product will not alter the flammability of the underlying materials themselves. IFTI WILL NOT BE LIABLE FOR ANY REPRESENTATIONS MADE BY ANY RETAIL SELLER OR APPLICATOR OF THIS PRODUCT.

LIMITED WARRANTY: Product must be stored, mixed, applied, and maintained as directed on application instructions and specifications.

If this product is found to be defective upon inspection by IFTI's representative, IFTI will, at its discretion, either furnish an equivalent amount of new product, or refund the purchase price to the original purchaser of this 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 OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING DAMAGE TO PROPERTY, LOSS OF PROFITS AND BUSINESS GOODWILL, DESPITE ANY FAILURE TO REPAIR OR REPLACE GOODS.

Buyer has accepted this restriction on its right to recover consequential damages as part of its bargain with seller. Buyer acknowledges that the price of the goods would be higher if seller was required to be responsible for buyer's consequential damages.

DUE TO PAINT APPLICATION VARIABLES BEYOND OUR CONTROL, IFTI HAS NOT MADE AND DOES NOT MAKE A WARRANTY OR REPRESENTATION, EITHER EXPRESS OR IMPLIED, ABOUT THE CONDITION, MERCHANTABILITY OR DESIGN OF THIS PRODUCT OR ITS FITNESS FOR ANY PARTICULAR PURPOSE, OR THE QUALITY OF THE MATERIALS IN THE PRODUCT; NOR ANY OTHER REPRESENTATION OR WARRANTY THAT EXTEND BEYOND THE LIMITED WARRANTY SET FORTH ON THIS LABEL. LIABILITY, IF ANY, IS LIMITED TO REPLACEMENT OF THE PRODUCT OR REFUND OF THE PURCHASE PRICE.

For the complete terms of the limited warranty, go to www.painttoprotect.com.

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