

SELECTION & SPECIFICATION DATA

Generic Type	Intumescent Fireproofing Coating based on Advanced Hybrid Technology
Description	Firefilm FC2 is a low VOC, one coat, high build system, based on patented technology. It provides a fast cure effective structural fire performance, for steelwork, with up to a 120 minute fire rating.
Features	<ul style="list-style-type: none"> • Fast cure • Low VOC • No solvent entrapment or prolonged solvent odour • High build potential (1.0 mm / 39.4 mils per coat) • Full thickness achievable in 1 coat • Designed for on-site and off-site use • Meets BS476 Part 2: 1987 Certification • Meets EN13381: Part 8 Certification • Meets C1, C2 and C3 Environments Building Classification (ISO 12944)
Color	<ul style="list-style-type: none"> • Part A: White • Part B: Translucent Black • Mixed: Off-white • Cured: Off-white
Finish	Smooth Matte
Primer	<p>Self-priming onto correctly prepared steelwork. No primer required for C1 or C2 environments (ISO 12944).</p> <p>If priming is desired, please refer to Carboline for advice before applying. Carboline should be consulted for technical advice when zinc rich primers or the overcoating of existing paints are specified for use.</p>
Wet Film Thickness	Firefilm FC2 may be applied up to a maximum wet film thickness (WFT) of 1.17 mm (46.3 mils)
Dry Film Thickness	1.0 mm (39.37 mils) per coat
Solids Content	By Volume 85% +/- 3%
Spray Applied Density	1,750 g/m ² (41.53 lb/ft ²) based on an applied 1.00 mm (39.4 mils) dry film thickness.
Theoretical Coverage Rate	<p>33.5 m²/l at 25 microns (1363 ft²/gal at 1.0 mils) 0.8 m²/l at 984 microns (35 ft²/gal at 39.4 mils) Allow for loss in mixing and application.</p>
VOC Values	As Supplied : 137 g/l (1.14 lbs/gal)
Topcoats	A compatible topcoat can be applied if a decorative finish is required. Contact Carboline Technical Service for recommended topcoats. Ensure Firefilm FC2 is completely dry before applying topcoat.
Specific Gravity	<p>Part A: 1.55 ±0.02 Part B: 0.99 ±0.01 Mixed: 1.46 ±0.02</p>
Viscosity	<p>Part A: 140 ±20 Poise (Spindle 7 @50 rpm) Part B: 10 ±1 Poise (Spindle 7 @50 rpm) Mixed: 80 ±10 Poise (Spindle 7 @50 rpm)</p>

SUBSTRATES & SURFACE PREPARATION

General	<p>All surfaces to be coated should be clean, dry and free from loose friable materials and any other contaminants likely to impair adhesion. Coat blasted steel within 2 weeks.</p> <p>No primer required for C1 or C2 environments (ISO 12944).</p> <p>Galvanised bolts, once degreased, can be coated with no further preparation.</p> <p>For use over other galvanised surfaces or other substrates, please contact Carboline.</p>
Steel	<p>Prepare surface according to ISO 8501-1 or SA 2.5.</p>

PERFORMANCE DATA

Test Method	System	Results
*Prohesion Cyclic Corrosion (ASTM G85:2009 Annex A5)	Firefilm FC2 (No Primer)	At 1000 hours maximum extent of undercut corrosion 6 mm (0.24") from scribe mark

*Note: The above test was carried out on a primer-less steel substrate

MIXING & THINNING

Gel Time	90-120 minutes @ 20-25 °C (68-77 °F)
Mixing	<p>Always mechanically mix product in full pack volumes.</p> <p>Ensure the two components are thoroughly combined until a uniform colour is obtained.</p>
Ratio	<p>100:12 by Weight</p> <p>5.6:1 by Volume</p>
Working Time	60 minutes @ 20-25 °C (68-77 °F)

APPLICATION EQUIPMENT GUIDELINES

Listed below are general equipment guidelines for the application of this product. Job site conditions may require modifications to these guidelines to achieve the desired results.

General	<p>Spray equipment can be cleaned using water only.</p>
Airless Spray	<p>Use Graco Mark V or equivalent.</p> <p>Firefilm FC2 should be spray applied at close proximity, approximately 600 mm (0.24") from the surface, to avoid dusting and promote good surface coalescence.</p> <p>Use of a wet film gauge is essential.</p> <p>Note: If spraying is stopped for longer than 15 minutes flushing will be necessary.</p> <p>Contact Carboline Technical Support if unsure the product is completely dry before applying top coating.</p>

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	-5°C (23°F)	-5°C (23°F)	-5°C (23°F)	0%
Maximum	35°C (95°F)	35°C (95°F)	35°C (95°F)	95%

Steel surface temperature should be a minimum of 3 °C (5 °F) above the dew point.
Ensure adequate ventilation during application.

CURING SCHEDULE

Surface Temp.	Dry to Touch	Dry to Handle	Minimum Recoat Time	Minimum Topcoat Time
5°C (41°F)	1 Hour	12 Hours	1 Hour	48 Hours
20°C (68°F)	1 Hour	8 Hours	1 Hour	24 Hours

CLEANUP & SAFETY

Cleanup	Flush spray equipment with a xylene based solvent. Do not use solvents which contain water, as these can result in premature curing of the product in the spray line.
Safety	Read and follow all caution statements on this product data sheet and on the SDS for this product. Employ normal workmanlike safety precautions. Use adequate ventilation. Keep container closed when not in use. Flammable: Keep away from open flames and other ignition sources.
Ventilation	Use in well ventilated conditions and ensure all recommended protective equipment is worn during handling & use of this product. For full recommendation, refer to the Safety Data Sheet.

MAINTENANCE

General	If coating becomes damaged, rebuild required thickness by spray or trowel. When dry, smooth and finish with approved topcoat to match. Damaged areas must be abraded back to a firm edge by sanding or scraping. The topcoat should be abraded back by 1" (25.4 mm) from the damaged area. The surface must be clean and dry before re-applying. The coating shall then be built back to the original thickness, allowed to dry, then overcoated with the specified topcoat or system.
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PACKAGING, HANDLING & STORAGE

Shelf Life	9 months @ 20-25 °C (68-77 °F) when stored as recommended in original unopened container
Shipping Weight (Approximate)	Approximately 28 kg (62 lbs)
Storage	Store in secure, dry warehouse conditions between +0 °C (32 °F) to +35 °C (95 °F) Keep all product containers closed when not in use. Part B is moisture sensitive and should remain tightly closed before use and must be used in conjunction with a desiccant kit.
Packaging	Part A and Part B supplied in 25 kg (55 lbs) kit. (16.1 litre drum)

Firefilm FC2

PRODUCT DATA SHEET



WARRANTY

To the best of our knowledge the technical data contained herein is true and accurate on the date of publication and is subject to change without prior notice. User must contact Carboline to verify correctness before specifying or ordering. No guarantee of accuracy is given or implied. Carboline warrants our products to be free of manufacturing defects in accord with applicable Carboline quality control procedures. THIS WARRANTY IS NOT VALID WHEN THE PRODUCT IS NOT: (1) APPLIED IN ACCORDANCE WITH CARBOLINE'S SPECIFICATIONS, AND/OR (2) PROPERLY STORED, CURED, AND USED UNDER NORMAL OPERATING CONDITIONS. Carboline assumes no responsibility for coverage, performance, injuries, or damages resulting from use of the product. If this product is found not to perform as specified upon inspection by a Carboline representative during the warranty period, Carboline's sole obligation, if any, is to replace the Carboline product(s) proven to be defective or refund the purchase price thereof, at Carboline's sole option. Carboline shall not be liable for any other losses or damages. This warranty excludes (1) labor and costs of labor for the application or removal of any product, and (2) any incidental or consequential damages, whether based on breach of express or implied warranty, negligence, strict liability or any other legal theory. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY CARBOLINE, EXPRESS OR IMPLIED, STATUTORY, BY OPERATION OF LAW, OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. All of the trademarks referenced above are the property of Carboline International Corporation unless otherwise indicated. The whole text of this Product Data Sheet, as well as the documents derived from it, have been written in English, and for legal purposes the English version shall prevail.