



Quantum Chemical

SafeCoat® TFI

DESCRIPTION

SafeCoat® TFI is a single component latex, intumescent fire retardant coating ideally suited for exposed **interior** structural steel where a 2-1/2 hour fire resistance rating is required. It is ideal for interior steel columns, trusses, beams and other exposed structural members. It limits thermal penetration by expanding to many times the original dry film thickness when exposed to heat. This expanded material forms a char which insulates the substrate against heat, and reduces available oxygen to the surface. It provides a 2-1/2 hour fire rating as tested under **ASTM E-119-08A**, **NFPA 251** "Small Scale Test" and **CAN/ULC4-S101**, "No Load"

USES

- Imparts a 2-1/2 hour fire rating to exposed steel structural members equal or greater in M/D than a 10WF30 Flange Column tested (MD 40.5)
- Provides an aesthetic, thin, decorative finish to comply with architectural designs
- Listed by Guardian Fire Testing Laboratories, Inc, New York, according to the test standards above.
- Guardian is an independent laboratory certified to test and list products under the same accreditation authorities as UL, ULC and Intertek

FEATURES

- **Non-toxic** - contains no asbestos or halogens.
- **Fire-resistant** - It will not burn in liquid or solid state.
- **Forms a char under fire conditions**, preventing the spread of flames, and slowing the penetration of heat through the substrate
- **Excellent adhesion and durability** when applied to metal. (manufacturer-approved anti-corrosive primer required.)
- **Easy to use** but will need to be built up to proper thickness, typically over 4 or 5 applications.



Metal coupons (TFI @ 60 mils DFT) before and after burning. Char insulates structural steel to provide a 2-1/2 hour fire rating per the testing indicated on page 2.

PROPERTIES

Coating Type	Latex
Finish	Off-white, flat finish
Color	Standard: Off-white (Can be overcoated to achieve desired colour, sheen, durability)
Specific Gravity	11.77 lbs/US Gallon or 1.41g/mL
Hardness	D76
Solids by Weight	69%
Solids by Volume	57%
Coating VOC	16.006 g/l 0.1336 lbs/USG
Material VOC	9.335 g/l 0.078 lbs/USG
Density	1.405
Specific Gravity	1.405
Dry Time	Touch: 30 min. to 1 hour (varies with temperature and humidity) Recoat: 1 to 2 hours Full cure: 48 hours
Film Thickness	2-1/2-Hour Rating (Contact the manufacturer for required mil thickness for steel members.)
Abrasion Resistance Index to ASTM D4060:	90 @ 1000 cycles @ 60 mils DFT
Coverage	16 ft. ² /Gal.
Flash Point	No Flash
Storage Limits	Keep from freezing (above 50° F, 10°C recommended)
Shelf Life	24 months
Packaging	Available in one, five and fifty-five US gallon quantities



APPLICATION INSTRUCTIONS

Surface Preparation:

All surface preparation should be carried out in accordance with good painting practices. Remove all loose, peeling or powdery paint from the surface. All dirt, grease, oil, wax and other foreign material must be removed with a suitable cleaner and allowed to thoroughly dry. Steel must be primed with an approved anti-corrosive primer. If steel is already primed, perform an adhesion. If unsuitable, recoat with approved primer.

Application:

SafeCoat® TFI can be best applied with airless spray equipment. Use a 17-21 thousand aperture with an 8-12" fan, depending on the size of the steel member and balancing coverage and over spray considerations. **SafeCoat® TFI** is a heavier body paint requiring reliable and consistent pumping equipment to achieve optimal results. Apply uniformly to entire surface. If thinning is required use clean water only and do not exceed 200 mL per gallon. Surface and ambient temperature must be maintained at greater than 50° F (10°C) during application and must remain so for at least 48 hours following the application. **SafeCoat® TFI** is intended for **interior use only**. If the coated substrate will be subject to repeated washing, prolonged high humidity, or high traffic, a finish coat of a suitable topcoat is required. More than one additional finishing coat could adversely affect the flame spread rating and smoke developed classification. Consult the product manufacturer or store rep for suitable top coats. A wet film thickness gauge can be used at the start of the application to check that sufficient **SafeCoat® TFI** has been applied. A rate of 16 sq. ft. per gallon or WFT of 100 mils will yield a DFT of 60 mils.

Clean Up: All application tools can be easily cleaned with water. If product has dried on, use hot soapy water to soften and remove it.

Precautions: **SafeCoat® TFI** is not "WHMIS" regulated nor is it subject to the "Transportation of Dangerous Goods Act and Regulations". See SDS for detailed precautions. PROTECT FROM FREEZING as freezing will damage the product.

TEST RESULTS

FIRE RESISTANCE RATING

Testing was conducted in accordance with **ASTM E-119-08A**, NFPA 251, "Small Scale Test" and **CAN/ULC4-S101** by Guardian Fire Testing Laboratories Inc. of Buffalo, NY. Following is a summary of the results of those tests.

Test System	Hour Rating	Material Thickness
Steel I-Beam 10WF30 (Column)	2-1/2	Contact the manufacturer for mils

This rating would be achieved on the above steel member or other members with an equal or greater mass/density (MD 40.5) than the above tested member. Contact the manufacturer for required mil thicknesses on other steel members to achieve the 2.5 hour rating.

CERTIFICATION

Each container bears a label with the following marks:

LISTED INTUMESCENT COATING, THIN-FILM	
<small>Tested in accordance with ASTM E-119, NFPA 251, and CAN/ULC S-101 to 1300°F at Guardian Fire Testing Laboratories, Inc.</small>	
<small>Fire Resistance Rating When applied to 10WF30 Steel Beam</small>	
<small>Material Details</small>	
SafeCoat TFI applied at 60 mils dry film thickness	2 hour, 30 minutes
<small>Guardian Listing numbers: GI95509 WC and GL95509 WU</small>	

PRODUCT WARRANTY

Recommendations for the use of our products are based on tests carried out at government approved labs. Manufacturer and seller are not responsible for results where the product is used under conditions beyond our control. The purchaser of this product must rely on his own judgement in determining suitability for his purpose, and in applying directions as to handling and use. Quantum makes no warranty, expressed or implied, except that if this product proves on inspection to be defective, Quantum will replace such quantity of the product proven to be defective or refund the purchase price of defective product. Labour costs and other consequential damages are hereby excluded. No representative or purported agent of Quantum has the authority to change this warranty. The information contained herein is subject to change without notice. If in doubt, contact your Quantum Representative for current Technical Data Sheets (TDS).