



# SafeCoat® TFI Structural Steel Protection

## PRODUCT 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, tubes, trusses 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** "Floor/Ceiling", **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 including columns, trusses and tubes
- 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

- is **non-toxic**. It contains no asbestos or halogens.
- is **fire-resistant**. It will not burn in liquid or solid state. Under fire conditions, it forms a char, preventing the spread of flames, and slowing the penetration of heat through the substrate
- has excellent **adhesion** and **durability** when applied to metal. (anti-corrosive primer required.)
- is **easy to use** but will need to be built up to proper thickness, typically over 4 or 5 applications.



## TECHNICAL DATA and PROPERTIES

<b>Coating Type</b>	Latex
<b>Finish</b>	White-off-white, flat finish
<b>Color</b>	<b>Standard:</b> White-off-white (Can be overcoated to achieve desired colour)
<b>Specific Gravity</b>	11.77 lbs/US Gallon or 1.41g/mL
<b>Hardness</b>	D76
<b>Solids by Weight</b>	69%
<b>Solids by Volume</b>	57%
<b>Coating VOC</b>	16.006      0.1336 lbs/USG
<b>Material VOC</b>	9.335 g/l      0.078 lbs/USG
<b>Density</b>	1.405
<b>Specific Gravity</b>	1.405
<b>Dry Time</b>	<b>Touch:</b> 30 min. to 1 hour (varies with temperature and humidity) <b>Recoat:</b> 1 to 2 hours <b>Full cure:</b> 48 hours
<b>Film Thickness</b>	<b>2-1/2-Hour Rating</b> <b>Dry:</b> 60 mils DFT/100 mils WFT
<b>Abrasion Resistance</b>	<b>Index to ASTM D4060:</b> 90 @ 1000 cycles @ 60 mils DFT
<b>Coverage</b>	16 ft. <sup>2</sup> /Gal.
<b>Flash Point</b>	No Flash
<b>Storage Limits</b>	Keep from freezing (above 50° F, 10°C recommended)
<b>Shelf Life</b>	24 months
<b>Packaging</b>	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 coated with an unknown primer, an adhesion test must be done. If adhesion is poor, recoat with an approved primer.

### Application:

**SafeCoat TFI Coating** 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 Coating** 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 Coating** is intended for interior use only. If the coated substrate will be subject to repeated washing or prolonged high humidity >70%, a finish coat of **Aquatherm Plus** or suitable topcoat is required. More than one additional finishing coat could adversely affect the flame spread rating and smoke developed classification. Before applying any finishing coat consult the manufacturer or their representative. A wet film thickness gauge can be used at the start of the application to check that sufficient **SafeCoat TFI Coating** has been applied. An application rate of 16 sq. ft. per gallon or wet film thickness of 100 mils will yield a dry film thickness 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 Coating** is not "WHMIS" regulated nor is it subject to the "Transportation of Dangerous Goods Act and Regulations". See MSDS 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** "Floor/Ceiling, **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
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Steel I-Beam 10WF30	2-1/2	60 mils dry 100 mils wet
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This rating would be achieved on the above steel member or other members with an equal or greater mass/density than the above tested member.

## CERTIFICATION

Each container bears a label with the following marks:



### LISTED INTUMESCENT COATING, THIN-FILM

Tested in accordance with **ASTM E-119**, **NFPA 251**, and **CAN/ULC S-101 to 1300°F** at Guardian Fire Testing Laboratories, Inc.

Material Details	Fire Resistance Rating When applied to 10WF30 Steel Beam
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SafeCoat TFI applied at 60 mils dry film thickness	2 hour, 30 minutes
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Guardian Listing numbers:  
GL95509 WC and GL95509 WU

## 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).