

## SafeCoat® Steel

### DESCRIPTION

**SafeCoat® Steel** is a single component latex intumescent fire retardant coating ideally suited for exposed **interior** structural steel where a flame spread and 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.

### USES

- Imparts fire rating to exposed steel structural members.
- Provides an aesthetic, thin, decorative finish to comply with architectural designs

### FEATURES

- **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. The **PRECIDIUM™ 41-P Waterborne Epoxy Primer** is Quantum's approved anti-corrosive primer. Other approved primers are listed below under surface preparation.
- **Easy to use** but will need to be built up to proper thickness, typically 25 - 35 mils WFT/17- 23 mils DFT per application. (Detailed application is available from the manufacturer.)

### PROPERTIES

<b>Coating Type</b>	Latex		
<b>Finish</b>	Off-white, flat finish		
<b>Color</b>	Standard: Off-white A suitable top coat may be used to achieve the desired colour, sheen and durability. Contact the distributor or manufacturer.		
<b>Specific Gravity</b>	13.18lbs/US Gallon or 1.58g/mL		
<b>Hardness</b>	D80		
<b>Solids by Weight</b>	77%	<b>Solids by Volume</b>	65%
<b>Coating VOC</b>	2.6 g/L		
<b>Bond Strength</b>	660 psi		
<b>Dry Time (Touch):</b>	1-2 hours (varies with mil thickness, Temperature and humidity)		
<b>Flash Point</b>	No Flash		
<b>Storage Limits</b>	Keep from freezing (33°-100° F; 1-38°C. Colder product will be thicker; warmer will be thinner.)		
<b>Shelf Life</b>	12 months		
<b>Packaging</b>	Available in five-gallon pails. Special order: 55-gallon drums		

### FLAME SPREAD and FIRE RESISTANCE RATINGS OF LISTED PRODUCT

Test	Rating			
<b>CAN/ULC S-102-18</b>	Flame Spread: <b>Class A (0)</b> Smoke Developed: <b>Class A (25)</b>			
<b>UL 263 (2011)</b> <b>CAN/ULC S-101 (2014)</b> <b>ASTM E119 (2018a)</b>	Fire Resistance <b>(30-120 minutes)</b> (Contact manufacturer for mil thickness for your required rating; varies based on time, steel member type and size. Some examples of testing are below.)	<b>Listing Design #: QTS/IF 120-01</b> Intertek: Listing Section(s): ROOF/CEILING, FLOOR/CEILING, BEAM & COLUMN ASSEMBLIES. CSI Code(s): 07 81 00 Applied Fireproofing; 07 00 00 Thermal and Moisture Protection; 07 81 23 Intumescent Fireproofing		
<b>Columns (1-hour Rating)</b>	<b>M/D</b>	<b>WFT (mil)</b>	<b>Coverage</b>	<b>DFT (mil)</b>
W10x30	40.5	136	12 sq. ft./gallon	88
W12x50	53.1	116	14 sq. ft./gallon	75
W14x30	32.8	154	10 sq. ft./gallon	100
HSS 4"x4"x3/8"	20	143	11 sq. ft./gallon	93
HSS 4"x4"x1/4"	13.5	222	7 sq. ft./gallon	144

## 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, tested for adhesion both before and during burn testing.

### Approved Primers:

Quantum Chemical: **PRECIDIUM™ Epoxy 41P**  
Cloverdale Paint: 70323; 71044; 70327; 71199  
PPG: Multiprime 4160; DevGuard 4190;  
Spectracron QAP 111  
Sherwin Williams: ProCryl; DTM Bonding Primer

### Application:

For optimal finish, apply **SafeCoat® Steel** using airless spray equipment. Remove both the gun and pump filters prior to spraying. See the detail application instructions for specific equipment recommendations.

**SafeCoat® Steel** is a heavier body paint requiring mechanical/shear mixing for best product viscosity for spraying. Use reliable and consistent pumping equipment to achieve optimal results. Apply each coat uniformly to entire surface to obtain smoothest finish (30-40 mils WFT/20-26 mils DFT per coat to avoid product sag). Apply one coat per day or recoat once prior coat reaches a Shore D hardness of 50.

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.

Ensure the proper QC Form is filled out and provided to the site inspector and Quantum Chemical. The form is available from the distributor or the Quantum Chemical website at [www.quantumchemical.com](http://www.quantumchemical.com).

**SafeCoat® Steel** is intended for **interior use only**. If the coated substrate will be subject to repeated washing, prolonged high humidity, or high traffic, a suitable top coat 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® Steel** has been applied.

**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® Steel** 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.

## 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).