

Specialized Industrial Materials, LLC

Single FR

Single FR™ is a high temperature waterborne intumescent fire-resistant barrier coating that will withstand direct flame contact for 2 hour fire protection. It does not emit continuous smoke with E84 testing yielding 5=flame spread and 70=smoke during flame exposure. It is environmentally friendly and is used in demanding fire shielding applications such as mine safety, protecting steel frameworks, building foam insulation, utility poles, cedar shake roofs, styrene and polyurethane foam board and other flammable material protection. Designers also use this material's unique decorative coating properties to enhance interior walls specified by fire-retardant requirements as acrylic texture chips may be added. Single FR also provides outstanding UV stability.

It is a water-based formulation that is applied by low pressure air-less spray equipment, roller or brush. It is non-toxic and may be applied in low-ventilated enclosed areas. Please call or email our Technical Support Group for any questions regarding material, application or prospective uses.

TDS



FIRESKIN 1K PHYSICAL PROPERTIES

| | | |
|-------------------------------------|---------------|----------------------------|
| Fire Rating | ASTM E84 | Class 1, 5-Flame, 70-Smoke |
| Hardness | Shore D | 45-50 |
| Bond Strength | ASTM D952-90 | 50 psi |
| Compressive Strength | ASTM D695-91 | 300 psi |
| Elongation | ASTM D882 | 100-150% |
| Abrasion Resistance | ASTM D1044-90 | 0 grams loss |
| Impact | ASTM D256-90b | .8 ft-lbs/in. of notch |
| % Solids by Weight (Liquid) | -- | 80% +/- 2% |
| Water Absorption (24 hr. immersion) | ASTM C272 | <0.5% by vol. |

TECHNICAL APPLICATION DATA

Single FR is a single component spray formulation which does not contain VOCs. This material may be used directly on foam, wood, textiles, masonry, wallboard, metal, etc. It does not normally require the use of primers on most substrates to obtain proper adhesion. Material must stirred thoroughly prior to use. All surfaces must be clean and free of contaminants. Application temperature ranges from 50°F to 110°F. Tack free time is 30 min at 75°F with full cure in 24 hours. Re-coat time is normally 20-30 min. Functional operating temperature ranges from -40°F to 1800°F. Application film thickness dependant on barrier requirement but typically 20-30 mils per coat. Subsequent coats may be applied after the first coat is fully dry. Fire rating is 1 hr rating per 60 mils. A 2 hr rating would be 120 mils. Coverage is 100 sq.ft./gal.

Adhesion Results of Typical Substrates per ASTM D-4541 Elcometer

| | | |
|------------------|-----------|--|
| Concrete- Primed | >300 psi | Concrete cohesive failure; excellent bonding |
| Steel- Primed | >1000 psi | Excellent bonding |
| Wood- Primed | >300 psi | Wood failure; excellent bonding |

Preparation of substrate surface prior to the application of any Specialized Industrial coating system is extremely important as substrate adhesion is imperative. For dirty or greasy substrates, power clean with mild detergent or grease wax remover prior to any sanding or grinding operation. Abrade surface slightly using fine sandpaper or scotch-brite pad. Metals susceptible to corrosion must use a cathodic primer first to seal metal and provide for proper bonding. Call [TechSupport Group for assistance](#) with using a S.I.M. application system. If patching concrete, use our mineral filled fast-set Acrylic Modified Epoxy applied by trowel. For expansion joints, use Joist Seal applied by hand cartridge dispensing gun. It is always best to perform a test area section of the S.I.M. application system prior to full scale engagement.

This technical data information is accurate to the best of our knowledge. S. I. M. makes no warranty, expressed or implied within the materials on this website, its use or with its any application. S. I. M.™ shall not be liable for material or application related injuries, material non-conformance, application failures or any consequential damage by the use of this product.

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