



Scotchkote™

XC-6171 Fusion Bonded Epoxy Coating

Product Description

3M™ Scotchkote™ XC-6171 Fusion Bonded Epoxy Coating is a one-part, heat curable, thermosetting, powdered epoxy coating designed for interior corrosion protection of production tubing, line pipe, and fittings. When applied over a primer, XC-6171 meets Saudi Aramco seawater and sour gas service requirements.

Typical Properties

| Property | Value |
|---------------------------------------|------------------------------------------------------------|
| Color | beige |
| Specific Gravity | 1.70 |
| Coverage | 113 ft ² /lb/mil 0.587 m ² /kg/mm |
| Shelf life 80°F (27°C) | 24 months |
| Gel time @ 380°F (193°C) (surface) | 120-160 seconds (Line Pipe) 70-100 seconds (Custom) |
| Cure time | 60 minutes |

General Application Information

1. Remove oil, grease and loosely adhering deposits.
2. Abrasive blast-clean the surface to near-white in accordance with SSPC-SP10 or NACE No. 2.
3. Prime surface with Scotchkote XC- 6186 water base primer or liquid phenolic primer.
4. Place part in preheat oven until it reaches a temperature of 340°- 360°F (171°- 182°C). If using a phenolic primer, do not exceed 30 minutes at temperature.
5. Deposit XC-6171 coating onto the interior of the pipe at the specified thickness.
6. Place coated part in a post cure station to reach a temperature of 410°- 430°F (210°- 221°C). Total time in post cure station must be a minimum of 60 minutes, but not more than 90 minutes.
7. Electrically inspect for holidays after coating has cooled to 200°F (93°C) or lower.
8. Repair all holidays.

Coating Test Data

| Property | Test Description | Result |
|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|
| Mandrel Bend | Saudi Aramco 09-SAMSS-091 600-750 micron thickness | 10.5 pipe diameters (5.4°/PD) |
| Autoclave (Saudi Aramco 09-SAMSS-091) | Treated Seawater Service Temperature - 95°C (203°F) Pressure - 3000 psi (20.7 MPa) Sample is immersed halfway in ASTM D-1143 solution (high solids brine) and pressurized with N ₂ | Pass* |
| | Wet, Sour Gas Crude Service Temperature - 95°C (203°F) Pressure - 3000 psi (20.7 MPa) Sample is immersed halfway in Formation Water (high solids brine) and pressurized with 3% CO ₂ , 3% H ₂ S, and 94% CH ₄ | Pass* |
| | Wasia Water Service Temperature - 95°C (203°F) Pressure - 3000 psi (20.7 MPa) Sample is immersed halfway in Wasia Water (high solids brine) and pressurized with 100% CO ₂ | Pass* (Phenolic primer is required for this service) |
| Abrasion Resistance | Saudi Aramco 09-SAMSS-091 ASTM D 4060 | 0.08 - 0.14 g weight loss |
| Adhesion | Saudi Aramco 09-SAMSS-091 | Pass |
| Hardness | Shore D | 80 Shore D |
| Water Absorption | ASTM D 570-95 | 1.07 % |
| Dielectric Strength | ASTM D 149-95a | 1306 volts/mil |
| Adhesion to Steel (shear) | ASTM D 1022 | 5264 psi |
| Impact | ASTM G14 - modified (coated 3x3x1/8 inch panel to a thickness of 16 mils) | Pass (160 in•lbs) |

* Pass means excellent adhesion, no blistering, no cracking or delamination.

Handling and Safety Precautions

Read all Health Hazard, Precautionary, and First Aid statements found in the Material Safety Data Sheet, and/or product label prior to handling or use.

Important Notice

Before using this product, you must evaluate it and determine if it is suitable for your intended application. You assume all risks and liability associated with such use.

Warranty; Limited Remedy; Limited Liability. This product will be free from defects in material and manufacture as of the date of purchase. **3M MAKES NO OTHER WARRANTIES INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF**



Corrosion Protection Products

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Ordering Information

For ordering information, technical information, product information or to request a copy of the Material Safety Data Sheet: phone: 1-800-722-6721 or 1-512-984-1038
fax: 1-877-601-1305 or 1-512-984-2210

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