

3M™ Scotchkote™ Abrasion Resistant Epoxy Coating 328

Data Sheet

Product Description

3M™ Scotchkote™ Abrasion Resistant Epoxy Coating 328 is a two part, 100% solids, ambient cured liquid coating designed to help protect steel pipes and other metal surfaces from the harsh effect of corrosion. In addition to its enhanced abrasion resistance properties, Scotchkote coating 328 has outstanding flexibility compared to conventional epoxy coatings.

Recommended Applications

- An Abrasion Resistant Overcoat (ARO) over Factory Applied Fusion Bonded Epoxy (FBE) coatings
- An abrasion resistant corrosion protection coating for the field joints of pipelines coated with an abrasion resistant parent coating
- A high durability patch material for FBE
- For rehabilitation of failing corrosion protection coatings
- Off shore application with “S” and “J” lay
- Internal lining of steel pipes
- Corrosion protection of metal assets that may experience some expansion, shifting, or other sources of strain
- Other field applications where corrosion protection is needed

Product Features

- Increased Gouge Resistance*
- Increased Abrasion Resistance*
- Increased Flexibility*
- 2 part ambient cured
- Improved adhesion to steel and FBE*
- Improved Cathodic Disbondment resistance*
- Air temperature does NOT have to be 5°F above dew point
- Applied by brush and roller or sprayed by High Spray Solids (HSS) System and Plural Component Spray equipment

- No solvents needed
- High build up to 45 mils/ 1150 microns in one pass
- 100% Solids (Wet film thickness same as dry film thickness)
- VOC on mixed product 8.0 g/l
- Can be applied to substrate at temperature down to 41°F/5°C
- Chemical resistance in the pH range 2-14

General Application Steps

1. Remove oil, grease, and loosely adhering deposits.
2. Abrasive blast clean surface to NACE SSPC-SP10, ISO 8501:1 SA-2 1/2 near white metal.
3. With air hose, clean blasted surface of any abraded debris then verify anchor profile is 1-4 mils (25-100 microns)
4. Apply Scotchkote coating 328 as soon as possible after blasting but no more than 4 hours.
5. Allow to cure. (See Application Guide)
6. Visually or electrically inspect the coating for defects.
7. Repair all defects using Scotchkote coating 328 as repair material.

Repair Process

1. Remove oil, grease, and loose debris from repair area.
2. Abrade the coating surface with medium grit sandpaper (80 grit). Ensure that the surrounding coating is roughened for 10 mm on all side of holiday. An anchor profile is recommended of 25-100 microns.
3. Ensure abraded surface is cleaned of any debris with use of an air blast or lint free cloth.
4. With metal above 41°F/5°C, apply Scotchkote coating 328 at minimum 20 mils/500 microns.

* Compared to conventional 2-part epoxy coatings



Coating Properties

Property	Results
Color	Blue-Green
Mix Ratio	3A/1B By Volume 73.1/26.9 By Weight
Viscosity 70°F/20°C (cps)	Part A = 22,000 Part B = 14,000
Shelf Life (unopened)	24 months
Specific Gravity (g/cc)	
Part A	1.34
Part B	1.48
Part A & B Mixed	1.38
Coverage (ft ² /lb/mil)/(m ² /kg/mm)	145/0.81
Minimum/Maximum Coating Thickness (as a primary corrosion protection coating)	20/60 mils (500/1500 microns)
Minimum/Maximum Coating Thickness (as an ARO)	40/100 mils (1000/2500 microns)
Gel Time 70°F/20°C (minutes)	30 min.
Dry to Touch Time 70°F/20°C (minutes)	155
Hard Dry Time (Shore D>70) (minutes)	255

Test Properties

Property	Test Description	Typical Values	
Cathodic Disbondment	CSA Z245.20-10 (Cl. 12.8)	149°F/65°C, 28 days, 1.5V 176°F/80°C, 28 days, 1.5V 203°F/95°C, 28 days, 1.5V	8.1 mmr 4.4 mmr 5.5 mmr
Hot Water Soak Adhesion	CSA Z245.20-10 (Cl. 12.14)	167°F/75°C, 28 days 203°F/95°C, 28 days	Rating 1 Rating 1
Dry Film Adhesion to Steel	ASTM D-4541 (IV)	70°F/20°C	6100 psi
Dry Film Adhesion to FBE	ASTM D-4541 (IV)	70°F/20°C	7200 psi
Flexibility	CSA Z245.20-10 (Cl. 12.11)	70°F/20°C -22°F/-30°C	4.0 °/PD 1.2 °/PD
Abrasion Resistance	ASTM D4060-07	5000 Cycles with 1000 g load	375 mg
Impact Resistance	ASTM G14	14.0 J (40-60 mils)	Pass
Gouge	CSA Z245.20-10 (Smooth Bit)	70 Kg	Pass
Shore D	ASTM D785	68°F/20°C	82
Tensile Strength	ASTM D2370	70°F/20°C	5837 psi
Elongation	ASTM D2370	70°F/20°C	3.8%

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Handling & 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.

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