

3M™ Scotchkote™ Liquid Epoxy Coating 323

Data Sheet

January 2019

Description

3M™ Scotchkote™ Liquid Epoxy Coating 323 is a two-part system designed to help protect steel pipe and other metal surfaces from the harsh effects of corrosion.

Agency Approvals & Self Certifications

For RoHS and REACH information, please visit www.3M.com/regs

Intended Uses

- As a patch material.
- As a girthweld coating.
- As an internal lining
- As a stand-alone coating for pipe rehabilitation.

Product Features

- No solvents needed. VOC as mixed 12 g/L.
 - High build, up to 45 mils/1150 microns in one application.
 - Applicable by cartridge, brush, roller, HSS or plural component spray.
 - Excellent adhesion.
 - Can be applied to a substrate as cold as 41°F/5°C.
 - Resistant to damage from acids and bases in pH range 2-14.
 - Resistant to hydrocarbons such as crude oil, motor oils and gasoline.
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General Application Steps

For use as a joint coating, a refurbishing coating or as a pipe coating:

1. Remove oil, grease and loosely adhering deposits.
2. Abrasive blast clean the surface to NACE No. 2/SSPCSP10, ISO 8501:1, Grade SA 2 1/2 near-white metal.
3. Ensure the abraded surface is cleaned of abrading debris with the use of an air blast or a clean lint free cloth then verify anchor profile is 1.5 - 4 mils.
4. Within four hours of blasting as per the above cleaning process and with the metal above 41°F/5°C and a minimum of 5°F/3°C above the dew point, apply Scotchkote coating 323 at recommended film thickness. Allow to cure.
5. Repair all defects using Scotchkote coating 323.

For use as a repair material in the field where scratches or other holidays may have occurred.

1. Remove oil, grease and loosely adhering deposits.
2. Abrade the FBE surface with medium grit sandpaper (approx 80 grit). Powered rotary sanders and sweep blasting are also acceptable means of performing this task as well. Ensure that the surrounding FBE is roughened for 10 mm on all sides of the holiday.
3. Ensure the abraded surface is cleaned of abrading debris with the use of an air blast or a clean lint free cloth then verify anchor profile is 1.5 - 4 mils.
4. With the metal above 41°F/5°C and a minimum of 5°F/3°C above the dew point, apply Scotchkote coating 323 at recommended film thickness.

Coverage

3M™ Scotchkote™ Liquid Epoxy Coating 323 Coverage per kit size (Assumes no waste)

Kit	lbs. of material Total	Coverage in square feet @ mils		
		25 mils	28 mils	30 mils
50 mL	0.15	0.85	0.76	0.71
450 mL	1.34	7.63	6.81	6.36
Quart	2.10	11.90	10.60	9.90
Gallon	8.70	47.70	42.60	39.70
5-gal x 3	152.10	865.80	773.00	721.50
55-gal drum x 3	1,690.40	9,621.80	8,590.90	8,018.10

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Properties

Property	Test Description	Value	
Color		Blue-Green	
Mix Ratio		2A: 1B by volume 70.8%: 29.2% by weight	
Viscosity in cps @ <ul style="list-style-type: none"> • Brush Grade 72°F/22°C • Spray Grade 72°F/22°C 		<ul style="list-style-type: none"> • Part A: 154,000 Part B: 6,000 • Part A: 90,000 Part B: 19,000 	
Shelf Life (unopened container)		24 months	
Specific Gravity		1.35 mixed	
Coverage		142 ft ² /(lb/mil) (0.74 m ² /(kg/mm))	
Recommended Coating Thickness		25-60 mils (625-1500 microns)	
Shyodu Gel Time (approximate pot life)	200 gm mass	75°F/24°C 104°F/40°C	20 Min 11 Min
Dry to Touch Time	ASTM D1640 Clause 7.5.2	41°F/5°C 75°F/24°C 122°F/50°C	7 hrs 1 hr 45 Min 26 Min
Approximate Back Fill Time (for additional information, see chart below)	ASTM D1640 Clause 7.7.1	41°F/5°C 75°F/24°C 122°F/50°C	8 hrs 2 hrs 39 Min 39 Min

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Typical Test Properties

Property	Test Description	Typical Value
Cathodic Disbondment (steel grit blasted plates laboratory applied; results may vary depending on blast media)	CSA Z245.20-06 Clause 12.8	149°F/65°C, 3.5V, 24 hrs 4.9 mmr 149°F/65°C, 1.5V, 48 hrs 5.5 mmr 149°F/65°C, 1.5V, 28 days 7.5 mmr 176°F/80°C, 1.5V, 14 days 6.4 mmr 176°F/80°C, 1.5V, 28 days 6.6 mmr
Hot Water Soak Adhesion of Coating	CSA Z245.20-06 Clause 12.14	203°F/95°C 24 hrs Rating 1 167°F/75°C 48 hrs Rating 1 167°F/75°C 28 days Rating 1
Dry Adhesion (pull off strength)	ASTM D 4541-02 TYPE 4	4000 psi
Flexibility	CSA Z245.20-06 Clause 12.11	68°F/20°C 1.0/PD 32°F/0°C 1.0/PD
Adhesion Resistance	ASTM D4060-06 CS-17 wheels 1000 g load 5000 cycles wheels resurfaced every 500 cycles	0.325 g loss
Impact Strength	ASTM G14	>1.5j
Hardness	ASTM D-22 40-97	Shor D 85 ± 1

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**Handling and Safety
Precautions**

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

**Ordering Information/
Customer Service**

For ordering technical or product information, or a copy of the Safety Data Sheet, call Phone: 800/722-6721 or Fax: 877/601-1305

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**Electrical Markets Division**

Austin, TX
800 722.6721
FAX: 877 601.1305
www.3M.com/corrosion

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