

# 3M™ Scotchkote™ Liquid Epoxy Coating 323

## Data Sheet

### Product 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 affects of corrosion.

### 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.
- 100% solids.
- Can be applied to a substrate as cold as 41°F/5°C.
- Meets the requirements of AWWA C210.
- Resistant to damage from acids and bases in pH range 2-14.
- Resistant to hydrocarbons such as crude oil, motor oils and gasoline.
- Certified to ANSI/NSF Standard 61, Drinking Water System Components. 

### 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/SSPC-SP10, 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 323 at recommended film thickness. Allow to cure.
5. Repair all defects using Scotchkote 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 323 at recommended film thickness.

### 3M™ Scotchkote™ 323 Coverage per kit size (Assumes no waste)

Kit	lbs of material	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



## Properties

Property	Test Description	Value	
Color	Blue-Green		
Mix Ratio	2A : 1B by volume 70.8% : 29.2% by weight		
Viscosity in cps @			
• Brush Grade 72°F/22°C	Part A: 154,000 Part B: 6,000		
• Spray Grade 72°F/22°C	Part A: 90,000 Part B: 19,000		
Shelf Life (unopened container)	24 months		
Specific Gravity	1.35 mixed		
Coverage	142 ft <sup>2</sup> /(lb/mil) (0.74m <sup>2</sup> /(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 hr 39 min 39 min

## 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, 149°F / 65°C, 1.5V, 149°F / 65°C, 1.5V, 176°F / 80°C, 1.5V, 176°F / 80°C, 1.5V,	24 hrs 48 hrs 28 days 14 days 28 days	4.9 mmr 5.5 mmr 7.5 mmr 6.4 mmr 6.6 mmr
Hot Water Soak Adhesion of Coating	CSA Z245.20-06 clause 12.14	203°F / 95°C 167°F / 75°C 167°F / 75°C	24 hrs 48 hrs 28 days	Rating 1 Rating 1 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 32°F / 0°C	1.0/PD 1.0/PD	
Abrasion 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		

## **Handling and Safety Precautions**

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

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80-6111-8345-2-Rev Q

## **Ordering Information/Customer Service**

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

# 3M™ Scotchkote™ Liquid Epoxy Coatings

## 323/323i Product Handling Times\*

Product Temperature	Pot-Life	Dry to Touch Time	Back Fill Time
40°F (4°C)	45 minutes	6-7 hours	7-9 hours
60°F (16°C)	25 minutes	2-3 hours	4-6 hours
75°F (24°C)	18 minutes	90-120 minutes	2.5-3.5 hours
85°F (29°C)	14 minutes	50-70 minutes	1.5-2.5 hours
100°F (38°C)	10 minutes	35-45 minutes	60-90 minutes
120°F (49°C)	7 minutes	20-30 minutes	30-60 minutes
150°F (66°C)	—	5-15 minutes	15-30 minutes

\*It is very important to understand that the times listed above are approximations and will vary due to separate product, ambient and substrate temperatures as well as a combination of them.

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