

# 3M™ Scotchkote™ Liquid Epoxy Coating 323+

## Data Sheet

April 2017

**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 effects of corrosion.

**Agency Approvals & Self Certifications** For RoHS information, please visit [www.3M.com/ROHS](http://www.3M.com/ROHS)

**Product Features**

- VOC Free.
- 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.
- Resistant to damage from acids and bases in pH range 2-14.
- Resistant to hydrocarbons such as crude oil, motor oils and gasoline.

**Applications**

- As a patch material (Scotchkote coating 323+ is compatible with all 3M™ Scotchkote™ Fusion Bonded Epoxy and abrasion resistant overcoat products).
- As a girthweld coating.
- As an internal lining.
- As a standalone coating for pipe rehabilitation.

**General Application Steps** For uses 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 2.0 – 4.0 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 and allow to cure.
5. Repair any defects using Scotchkote coating 323+ using the repair procedure below.

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**General Application Steps** 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 (approximately 80 grit). Powered rotary sanders and sweep blasting are also acceptable means of performing this task as well. Ensure that the surrounding Fusion Bonded Epoxy (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.

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**Coverage** 3M™ Scotchkote™ Liquid Epoxy Coating 323+ Theoretical Coverage per kit size

Kit	lbs. of material Total	Coverage in square feet @ mils		
		25 mils	30 mils	35 mils
50 mL	0.16	0.85	0.71	0.61
450 mL	1.4	7.6	6.4	5.4
1L	3.2	17.0	14.1	12.1
3 L	9.5	50.9	42.4	36.3
17 L x 3	162	865	720	618
190 L drum x 3	1827	9764	8136	6974

(Assumes no waste).

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## Properties

Property	Test Description	Value	
Color		Blue-Green	
Mix Ratio		2A: 1B by volume 67: 33% by weight	
Viscosity in cps @20 rpm	<ul style="list-style-type: none"><li>• Brush Grade 77°F/25°C</li><li>• Spray Grade 77°F/25°C</li></ul>		<ul style="list-style-type: none"><li>• Part A: 27000 Part B: 8200</li><li>• Part A: 24000 Part B: 16400</li></ul>
Shelf Life (unopened container)		24 months	
Specific Gravity	Brush Grade Spray Grade	1.36 mixed 1.44 mixed	
Coverage		133.78 ft <sup>2</sup> /(lb/mil) (0.70 m <sup>2</sup> /(kg/mm))	
Recommended Coating Thickness		25-60 mils (625-1500 microns)	
Shyodu Get Time (Approximate pot life)	Spray Grade Brush Grade	75°F/25°C	12.14 Min 20.25 Min
Dry to Touch Time ASTM D1640 Clause 7.5.2	Spray Grade Brush Grade	75°F/25°C	90 Min 180 Min
Dry to Hard – Approximate Back Fill Time (For additional information, see chart below)	ASTM D1640 Clause 7.7.1	75°F/25°C	155 Min
Leneta Sag		@20°C	60

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## Typical Test Properties

Property	Test Description	Typical Value	
Cathodic Disbondment (Thickness 26-32 mils) (steel grit blasted plates laboratory applied; results may vary depending on blast media)	CSA Z245.20-14 clause 12.8	149°F/65°C, 3.5V, 24hrs	1.6mmr
		68°F/20°C, 1.5V, 28 days	4.6mmr
		203°F/95°C, 1.5V, 28 days	5.8mmr
Hot Water Soak Adhesion of Coating (Thickness 26-33 mils)	CSA Z245.20-14 clause 12.14	167°F/75°C, 28 days	Rating 1
Adhesion to Steel Substrate	ISO 21809-3 Annex C		Rating 1
Flexibility	CSA Z245.20-014 clause 12.11	32°F/0°C 72°F/22°C	1.46°/PD 1.72°/PD
Adhesion to Existing Coating (Fusion Bonded Epoxy)	ISO 21809-3 Annex C X-Cut		Rating 1
Impact Strength	CSA Z245.20-14	-22°F/-30°C	>1.5j
Hardness (Shore D)	ASTM D-22 40-97	72°F/22°C	85
Adhesion to Existing Coating	CSA Z245.20-14	95°C (HWS), 28 days	Rating 1

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

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**Ordering Information/  
Customer Service** For ordering technical or product information, or a copy of the Material Safety Data Sheet call 800.722.6721 or fax 877.601.1305

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[www.3M.com/corrosion](http://www.3M.com/corrosion)

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