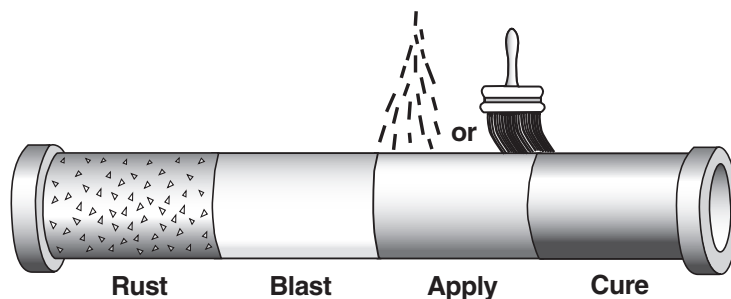


3M™ Scotchkote™ Liquid Epoxy Coatings 306 and 314

Application Guide



Product Description

3M Scotchkote Liquid Epoxy Coatings 306 and 314 are ambient temperature cure, two-part thermosetting epoxy liquid coatings. They are designed to protect metal, wood, concrete and other materials from rust, corrosion and deterioration, both above and below ground. Scotchkote liquid epoxy coatings are color-matched to Scotchkote fusion-bonded epoxy coatings and can be used for pipe coating repairs, circumferential pipe field welds and coating of associated valves, fittings and other applications where color compatibility is desired. Please contact your 3M sales or customer service representative for proper color match.

Scotchkote 306 and 314 are pre-thinned for spray applications. These coatings may be applied quickly and easily by roller, brush or spray. A buildup to 16 mils/406 µm can be obtained in one application without sag. Because these are ambient temperature cure coatings, they can be applied to structures in the field without the use of heating equipment. A tack-free surface is obtained in 2-3 hours at a 73°F/23°C ambient temperature. These coatings should not be applied at temperatures below 55°F/13°C.

Surface Preparation

Coating performance is dependent on the cleanliness of the substrate surface. It must be clean, dry and free of loose rust and scale paint, etc. Remove all oils, grease and other contaminants with a suitable solvent.

Metal surfaces should be blast cleaned in accordance with NACE No. 2/SSPC-SP 10 ISO 8501:1, Grade SA 2 1/2, near-white finish using clean, dry 30 mesh sand or other suitable abrasive.

To prevent the formation of rust or oxide, coat surfaces as soon as possible after cleaning. For maximum protection, the coating must have direct contact with the metal surface.

Treat new concrete surfaces with muriatic acid, then water wash. Old concrete surfaces should be sand-blasted or etched using muriatic acid followed by a thorough water wash.

To fill deep pits, cracks, holes and unusually rough welds, use a thick putty mixture of Scotchkote 306 or 314 coating combined with an inorganic filler such as fine sand or portland cement. Apply with a putty knife or trowel.

Application Steps

Scotchkote 306 and 314 will settle while in storage. Therefore, the mixing procedure is extremely important.

Mixing

1. Thoroughly mix separate parts A and B.
 2. Combine equal quantities of parts A and B.
 3. Thoroughly mix combined A and B.
- A uniform color throughout will indicate proper mixing.

Pot Life

Pot Life 10 lb. (4.5 kg) Unit	Cure Time
60°F/16°C	90 minutes
73°F/23°C	60 minutes
85°F/29°C	30 minutes
100°F/38°C	20 minutes

Recommendation: Prepare only the quantity of coating that can be applied in this period of time.

Spray Application

The coating can be applied with conventional pot spray equipment (Binks Model 18 with a model 80-210 cup and 63PB tip). Use conventional equipment settings:

Property	Value
Fluid pressure	20 - 30 psi (1,5 - 2,0 bar)
Line pressure	80 psi (5,5 bar)
Tip size	0.046 in (1,17 mm)
Pot Life, 10 lb (4.5 kg) unit	
60°F/16°C	90 minutes
73°F/23°C	60 minutes
85°F/29°C	30 minutes
100°F/38°C	20 minutes
Closed Cup Flash Point	Part A 74°F/23°C Part B 54°F/11°C

Airless spray equipment, the Graco Hydra-Spray™ or the Graco Hydra Cat can be used. Adjust pressure pot and atomizing air pressures to obtain a finely atomized spray. Using a sweeping motion, apply one-half the final wet film thickness in the horizontal direction. Follow immediately with the application of one-half of the final wet film in the vertical direction.



Brush and Roller Application

Use an ordinary paint brush or roller and apply to the desired thickness.

Multiple Coats

Apply 3M™ Scotchkote™ 306 and 314 in multiple coats to increase thickness. Apply the additional coats as soon as the base coat is tack free, but still soft (coating will deform under pressure). If the base coat is allowed to harden, it must be brush blasted before overcoating. Scotchkote coating should not be applied over 16 mils/406 µm per coat (wet) or solvent entrapment may occur.

Equipment Clean-Up

MEK or toluene may be used to clean spray equipment, rollers and brushes.

Repair of Fusion-Bonded Epoxy

Scotchkote Fusion-Bonded Epoxy Coatings require limited repairs. Scrapes, scars, coating imperfections or other minor defects should be cleaned to remove dirt, scale and damaged coating by sanding or other suitable means. Feather the adjacent coating and remove all dust by wiping. Next, apply Scotchkote Liquid Epoxy Coating on small areas to a minimum thickness of 12 mils/305 µm. The freshly coated area should be allowed to properly cure prior to handling and storage. Cure can be accelerated with heat.

Circumferential Weld - Fusion Bonded Epoxy

The welded joint must be clean; free of mud, oil, grease and other foreign contaminants. The exposed metal in the weld zone must be sandblasted to a NACE No. 2/SSPC-SP10, ISO 8501-Sa 2.5, near-white finish. The adjacent fusion bonded coating should be brush

blasted to clean and roughen the coating surface for a distance of 2 in./50 mm back from the weld zone.

Using a brush, roller or spray gun, apply Scotchkote 306 and 314 liquid coating to a maximum thickness of 16 mils/406 µm. Overlap the pipe coating no less than 1 in./25 µm. Allow coating to properly cure before handling.

Coverage

139 ft²/lb at 1 mil
0.93 m²/kg at 1 mm

Cure Specifications

A tack-free surface is obtained in approximately 2-3 hours at 73°F/23°C. Maximum properties of Scotchkote 306 and 314 are achieved by allowing the coatings to cure in accordance with times and temperatures listed in the cure guide.

Scotchkote 306 and 314 Cure Guide

Temperature	Cure Time
300°F/149°C	15 minutes
250°F/122°C	20 minutes
200°F/97°C	30 minutes
160°F/72°C	60 minutes
73°F/23°C	48 hours

Note Before heat curing, flash the solvent under forced ventilation for 2 hours at 70°F/21°C or 1 hour at 150°F/66°C.

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.

*VOC content when properly mixed: 306 - 194 g/L; 314 - 188 g/L

*This product is to be applied without thinning. Scotchkote 306 is not intended for use and does not meet AIM VOC limits for the South Coast Air Quality District of Southern California. Users need to consult local air quality regulations for product use.

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80-6111-8376-7-C

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