

3M™ Scotchkote™

Polyurethane Coating System 352

Data Sheet and Application Guide

Product Description

3M™ Scotchkote 352 is a plural component coating system designed to protect buried steel structures from the harsh affects of corrosion. Scotchkote 352 can be used in a wide variety of other field applications where corrosion protection of metal is required. It can also be used as an abrasion-resistant top coat on FBE for use in horizontal drill applications.

Product Features

- Compatible with cathodic protection systems and provides outstanding resistance to cathodic disbondment and loss of adhesion due to wet environments.
- Applied by plural component spray equipment which allows for no waste of premixed materials.
- Designed for immersion or dry service.
- Allows applications to be performed in difficult conditions that require fast turn around time and good chemical resistance.
- Optimum ambient temperature range for field application is -10°C/14°F to 35°C/95°F.
- Good abrasion resistance

General Application Steps

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. Apply Scotchkote 352 coating at the specified thickness.
4. Allow to cure.
5. Visually or electrically inspect the coating for defects.
6. Repair all defects.

General Application Steps for Use as an Abrasive Coating

1. Remove all oil, grease and dirt.
2. Remove gloss on primary coating (FBE) by brush blasting or by using mechanical devices (polisher with disc #100 grit).
3. Holiday test and repair primary coating.
4. Apply SK352 by brush roller or plural spray to specified thickness.
5. Allow to cure for at least 24 hours.

Properties

Property	Value
Colors	Gray
Ratio	3A - 1B
Shelf life (unopened container) Store below 104°F/40°C	24 months
Solids content	100%
Adhesion Instron at 25°C	3000+ psi/210+kg/cm ²
Adhesion, 1,000 hours, 80° C, wet, (Russia VNIIST Institute)	Start 15 mpa Finish 10 mpa
Water Soak Adhesion 14 days, 90°C/194°F	No loss of adhesion
Abrasion Resistance Taber CS 7 wheel 1000g 1000 cycles	42 mg weight loss
Impact Resistance @ 30 mils	60 inch pounds/6.8 J
Cathodic Disbondment 65°C/150°F -1.5V 5% NaCl 14 days, 3 mm holiday	11 mm r
CSA Z245.20-02 23°C/73°F -1.5V 3% NaCl 28 days, 3.2 mm holiday	8 mm r
CDT 80°C/176°F -1.5V 3% NaCl 28 days, 3 mm holiday (Russia VNIIST Institute)	12 cm ² area
Film Build	20 mils minimum
Cure Time	
-10°C/14°F	52 hours
-5°C/23°F	14 hours
10°C/50°F	1 hour
35°C/95°F	20 minutes
65°C/149°F	3 minutes
100°C/212°F	1 minute
Coverage	133 sq ft/lb/mil/ 26 m ² /kg/25 μm
Wet Adhesion CSA Z245.20-98 65°C/149°F, 28-day water immersion 3 panels	1,1,1 rating
Impact CSA Z245.20-98 1.5 J/13.3 in•lbs	No failures



Application Procedures for Scotchkote™ Polyurethane Coating 352

Surface Preparation

Steel surfaces shall be clean and free of dirt, oil, or other contaminants prior to abrasive blasting. Slivers, rough welds, or other defects in the steel shall be ground out prior to abrasive blasting. Abrasive blasting shall be carried out to a near white metal blast using clean abrasive. Abrasive blast clean the surface to NACE No. 2/SSPC-SP10, ISO 8501:1, Grade SA 2 1/2 near-white metal.

During the blasting operation and until the final coating procedure has been finished, the temperature of the steel shall be greater than 3°C/5°F above the dew point.

The RH (relative humidity) shall be less than 95% during preparation of the steel and application of Scotchkote 352.

Application Procedures

3M™ Scotchkote 352 coating shall be applied to blasted steel surfaces using plural component spray equipment. A Graco Hydracat with a King Air motor or equivalent shall be used to provide the desired application pressure of 3000 psi. The ratio of the pump shall be 3 parts base (part A) to one part curing agent (part B).

3M Scotchkote 352 base shall be preheated to a temperature of 35°C/95°F while being agitated. A transfer pump at a minimum fluid to air ratio of 5:1 is recommended to feed the plural component pump.

3M Scotchkote 352 curing agent shall be transferred to the plural component pump with a minimum 2:1 ratio pump and must be at

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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a minimum temperature of 15°C/59°F. Agitation is not required unless band heaters are required to attain this temperature. In-line heaters shall be used on the base side to raise the temperature from 35°C/95°F to 60°C/140°F upon application. The hose bundle leaving the plural component pump shall be heat traced and insulated to maintain material temperature. The base line shall be 3/8 inch ID and the curing agent shall be 1/4 inch ID. A maximum length of 55 yards/50 meters shall be used.

The mixing block shall have a material shut off valve prior to entry and must have a solvent flush attachment that will allow the whip hose to be flushed of mixed material.

The whip hose shall be no more than 5.5 yards/5 meters in length and 3/16 inch ID.

The gun shall be a high pressure airless spray gun with a minimum pressure rating of 3000 psi. The tip sizing shall be a minimum of 0.023 and a maximum of 0.040 inch.

For a complete parts directory, please contact your 3M Representative.

Repair procedure

Repairs in the coating shall be performed in one of two ways.

Small area repairs

Small areas of damage in the coating up to 155 in.²/1000 cm² may be fixed by grinding out the defective area using an angle grinder or equal fitted with an abrasive disc. The area may then be coated using a suitable 3M Scotchkote repair product.

Larger repairs

Larger repairs shall be performed by spray application.

Ordering Information/Customer Service

For ordering technical or product information, or a copy of the Material Safety Data Sheet, call:

Phone: 800/722-6721 or 512/984-9393

Fax: 877/601-1305 or 512/984-6296