



CHEMTHANE 2265

Polyurethane Coating and Lining

Features

AWWA C-222-08 Certified

Chemthane 2265 is 3rd party certified to meet or exceed all specifications of American Water Works Association's C-222-08 protocol.

ANSI/NSF 61 Approved

Chemthane 2265 is ANSI/NSF Standard 61 Drinking Water System Components approved.

Non-Abrasive

Chemthane 2265 is formulated without abrasive fillers that rapidly erode the spray gun module and clog the proportioning unit filters.

Non-Extended

Chemthane 2265 is formulated without plasticizers, tar, or other hydrocarbon extenders.

Minimal Overspray

Chemthane 2265 is formulated to minimize the overspray fog in the application area.

Very Low Odor

Chemthane 2265 has noticeably less odor than conventional coatings as a result of its low tendency to fog and the absence of tar extenders and aromatic solvents.

Description

Chemthane 2265 is a 1:1, direct-to-metal, fast-set, spray applied polyurethane. It is 100% solids and contains zero VOCs.

Chemthane 2265 is primarily specified as an interior lining and an exterior coating for large diameter transmission lines of potable water, waste water and raw water.

Chemthane 2265 is third party certified to meet or exceed the American Water Works Association C-222-08 Specification. Chemthane 2265 is also ANSI/NSF 61 Drinking Water System Components approved through UL.

Technical Data

Test Method	Description	C-222-08 Value	Chemthane 2265 Laboratory Test Results*
ASTM D4541	Adhesion to Steel	>1500 psi	>3200 psi
ASTM D4060	Abrasion Resistance	<100 mg loss	<55 mg loss
ASTM G-14	Impact Resistance	>75 in lbs.	>85 in lbs, 6 cm o.d. pipe >125 in lbs, flat plate
ASTM D2240	Hardness	>65 Shore D	73 Shore D
ASTM D-522	Mandrel Bend	3" Mandrel 180°	No Cracking
ASTM D-570	Water Absorption	<2%	<1.5%
ASTM G-95	Cathodic Disbondment	<12mm	<12mm
ASTM D-149	Dielectric Strength	>250 volts/mil	>600 volts/mil
ASTM D-543	Chemical Resistance		
	10% Sulfuric Acid	5% maximum change in	<2%
	30% Sodium Chloride	mass, length or	<2.5%
	30% Sodium Hydroxide	width after 30	<2%
	#2 Diesel Fuel	day immersion	<3.5%

*3rd Party Test Results. All testing was performed in a laboratory environment. Results are for comparison purposes only and should not be considered a guarantee. Field results will vary significantly due to a large number of variables.

Accessory Products

Chemthane 3700 is a 100% solids, aliphatic/UV resistant, fast-set topcoat for above ground crossings, access points, under bridge spans and fords.

Chemthane 2265 Repair is supplied in dual containers to be hand mixed and applied with spatula for dolly repair and small isolated repairs.

Chemthane 1150 Repair is supplied in dual containers to be hand mixed and applied with a brush or roller for coating pipe joints and repair areas.



1. Scope

1.1 This specification covers the spray application of a two-component, 100% solids polyurethane coating to the interior and/or exterior of steel pipe.

2. Material

2.1 The material for use shall be **CHEMTHANE 2265** manufactured by **CHEMLINE, INC.**

2.2 The material shall consist of a two-component system. Part A: an aromatic polyisocyanate prepolymer resin and Part B: a polyol resin. These two components are mixed in a 1:1 ratio at time of application.

3. Packaging, Storage, and Shelf Life

3.1 **CHEMTHANE 2265** is supplied in two 55-gallon drums: Components A and B.

3.2 Components A and B are non-flammable and non-combustible.

3.3 Keep drums tightly sealed until ready for use to prevent atmospheric moisture from contaminating material. A blanket of nitrogen should be applied to any drums that have been opened and are to be stored for extended periods.

3.4 Store material under shelter at temperatures between 50-90°F in a well-ventilated and dry area. Ensure material does not freeze.

3.5 Material has a shelf life of 12 months after the date of manufacture if properly stored.

4. Surface Preparation

4.1 The substrate must be dry and free of dust, oil and grease. Clean any contamination with a clean rag and solvent (Xylene or MEK preferred).

4.2 Welds, sharp edges, weld splatter and other surface imperfections should be ground smooth using a disc grinder. This step is critical to prevent holidays. It is preferred that this step is performed prior to abrasive blasting.

4.3 Use G25, G40 steel grit or similar to blast the substrate. Substrate surfaces should be cleaned to a minimum of a near white blast with a **minimum angular profile of 2.5 mils**. Verify blast profile using Testex tape and a micrometer. The steel surface should be rough to touch.

4.4 The steel grit supply should be topped off regularly with new grit to maintain a deep, angular profile in the steel substrate.

4.5 Steel pipe must be painted within twelve hours maximum of abrasive blasting. If conditions for flash rust exist, schedule must be decreased.

4.6 Use a clean pressurized air line to blow off dust and debris caused by abrasive blasting.

5. Thickness

5.1 The dry film thickness of the coating or lining should be established by determining the minimum dry film thickness that is required to reproduce holiday free sections of pipe. Field experience show that this thickness is generally a minimum of 30 mils in order to properly cover welds.

6. Product Application

6.1 Material is applied using a plural component, high-pressure airless spray unit with in-line heaters and heated hoses.

6.2 Vent material supply containers using nitrogen or desiccant drier.

6.3 Material in drums must be heated to temperatures between 100-120°F. Material temperature at the spray gun should be 135-

150°F. Material must be agitated prior to use for a minimum of 30 minutes using an air driven mixer at medium speed.

6.4 Clean intake and outbound filters. Lubricate A side threads using lithium grease.

6.5 It is recommended that the proportioning unit be verified for proper operation by performing a volume check. Confirm that the pump delivers equal volumes A and B into separate containers.

6.6 The substrate surface temperature should be a minimum of 5°F above the dew point of ambient air and rising.

6.7 Use a heat source to condition the pipe to a temperature between 60-120°F. Consult Chemline for application outside this range.

6.8 The spray gun must be clean and in good working order. It is recommended that the spray gun be disassembled and cleaned at the end of each shift. Soak gun parts expect for the gun body in an aggressive solvent (i.e. MEK). Be sure spray gun parts are clean. Reassemble spray gun prior to coating application.

6.9 Spray test panel on a section of clean cardboard and confirm that pressures are equal and that the material is spraying correctly. Cured material should be uniform in color and high gloss. The cured film should not be oily.

6.10 Begin spraying off target. Additionally, finish your spraying off target. Apply coating in a uniform manner. Unlimited film builds may be achieved in a single-coat multi-pass application.

6.11 The proportioning pump should generate fluid pressures between 2000 and 2400 psi while material is being sprayed to ensure proper mix of material components. Pressure gauges on Parts A and B should be relatively equal and consistent while spraying. If a difference in fluid pressures of more than 500 psi exists while spraying, stop spraying and identify reason for pressure difference.

6.12 Do not apply coating after the recoat window has been exceeded. The recoat window is reduced with increased film build and/or increased temperature. Recoat windows can be less than 10 minutes in extreme cases. If the recoat window has been exceeded, brush blast the original coating and create a 2.5 mil profile in the existing coating, then topcoat.

6.13 The recoat window for Chemthane 2265 applied at 25-60 mils DFT is 2 hrs at temperatures below 120F.

7. Inspection

7.1 A visual inspection should be made within 5 minutes of initial application. Verify coating is smooth, glossy and uniform in color. The surface of the coating should not be greasy or oily.

7.2 Film thickness should be verified using a magnetic thickness gauge in accordance with SSPC-PA2 or per specification. Be sure gauge has been calibrated before taking readings.

7.3 Test pipe for holidays. Generally, 100 volts per mil is used to determine testing voltage. Circle any holidays and repair.

7.4 Verify adhesion using ASTM D4541 Test or equivalent per specification. This test should be performed at temperatures between 55-80°F. The coating should have been allowed to cure for a minimum of 6 hours at 75°F before testing, typically overnight.

Review Date: 02/2013

Chemline, Inc. • 5151 Natural Bridge Rd. • St. Louis, MO 63115 • Phone : (314) 664 - 2230

While the descriptions, designs, data and information contained herein are presented in good faith and believed to be accurate, it is provided for your guidance only. Because many factors may affect processing or application/use, we recommend that you make tests to determine the suitability of a product for your particular purpose prior to use. NO WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESIGNS, DATA, OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, DATA OR DESIGNS PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE. Further, you expressly understand and agree that the descriptions, designs, data, and information furnished by Chemline, Inc. hereunder are provided gratis and Chemline assumes no obligation or liability for the descriptions, designs, data and information given or results obtained, all such being given and accepted at your risk.

