



Dampney

Protective Coatings

Thurmalox[®] 210 Air Dry Silicone Zinc Dust Primer Heat Resistant to 500°F

Description

Thurmalox 210 Primer is a heat and corrosion resistant primer formulated from modified silicone resins and zinc dust. Thurmalox 210 Primer provides outstanding corrosion protection for metal surfaces operating at temperatures to 500°F (260°C). Thurmalox 210 is the primer for Thurmalox 200 series heat resistant topcoats. The 210 primer/200 series topcoat system has excellent intercoat adhesion and is able to withstand severe thermal shock throughout the entire temperature range.

Recommended Uses

- Stacks, Breechings, Boiler Casings
- Refinery Equipment - Heaters, Crackers
- Reformers
- Furnaces, Kilns, Ovens
- Compressors, Turbines, Engines
- Piping, Pumps, Manifolds
- Process Vessels, Heat Exchangers

Features

- Air dries, easy to apply
- Withstands continuous temperature to 500°F (260°C)
- Prevents rusting and streaking of steel during shutdowns
- Easily topcoated with Thurmalox 200 Series heat resistant topcoats
- Excellent intercoat adhesion
- Protects against weathering and corrosion
- Prevents underfilm corrosion attack

Not Recommended For

- Immersion service
- Interiors of stacks, breechings and scrubbers
- Stainless steel
- Under insulation

Surface Preparation - Carbon Steel

1. To ensure optimum long-term coating system performance, surfaces must be clean, dry and free from dirt, oil, grease, salts, welding flux, mill scale, rust, oxides, old paint, corrosion products or other foreign matter.
2. Remove all surface imperfections that will induce premature coating system failure. Chip or scrape off weld splatter. Grind down sharp and rough edges.
3. Abrasive blast surface per specification SSPC-SP 10, "Near-White Blast Cleaning", or per NACE Standard No. 2 to a profile depth of 1.5 - 2.0 mils maximum. Abrasive used in blasting should be selected carefully from materials of mesh size required to produce the desired anchor pattern.
4. If abrasive blasting is not permitted, prepare surface by power tool cleaning per SSPC-SP 11. Use 3M brand "Heavy Duty Roto Peen", type C flap wheel cleaning system mounted on an air-driven motor. This method will provide a surface equivalent to that provided by commercial blast cleaning per SSPC-SP 6, including the desired surface profile.
5. Feather out all edges of adjacent painted surfaces after completion of surface preparation operations and prior to application of the first coat of paint.

Mixing

Thurmalox 210 Primer is a two package system consisting of a base component and zinc that are mixed together before use. Sift zinc dust slowly into base with continuous mechanical agitation. Mix thoroughly until free of lumps. Pour mixture through 30-mesh screen. If a partial unit is needed, mix by weight 10 parts Base component with 3 parts Zinc Dust component.

Application Guidelines

Surface temperature must be at least 5°F (3°C) above dew point.

Carbon Steel

| | |
|--------------------------------|-----------------------------------|
| Primer: Thurmalox 210 Primer | 2.0-2.5 mils (50-62 microns) |
| Topcoats: Thurmalox 200 Series | 2.0-2.5 mils (50-62 microns) |
| Total dry film thickness | 4.0-5.0 mils (100-125 microns) |

Application Equipment

Conventional spray is the recommended method of application. However, Thurmalox 210 Primer may also be applied by airless spray or brush. Do not apply Thurmalox 210 Primer in heavier films than specified since blistering may occur. Do not apply Thurmalox 210 by roller.

Conventional Spray:

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|--------------------|----------------------|
| Spray gun | DeVilbiss MBC-510 |
| Fluid tip | AV115-FX (.042" tip) |
| Air cap | 704 |
| Fluid hose* | 3/8" ID |
| Air hose | 5/16" ID |
| Atomizing pressure | 40-45 psi |

*Smaller hose diameter or length over 25 ft. may require increased pressure.

Airless Spray:

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|----------------------|---------------------------|
| Spray gun | Graco 205-591, 208-663 |
| Fluid tips* | 163-614, 163-616 (12"fan) |
| Pump | Graco Bulldog 30:1 |
| Fluid hose | 3/8" ID |
| Air pressure to pump | 65-80 psi |

Brush: Use only wooden-handled brush with short China bristles. Do not use synthetic-bristled brushes. Do not flood surface with coating. Brush out thoroughly, maintaining a continuous wet edge and uniform appearing paint film.

Thinning

Only thin Thurmalox 210 Primer with Dampney 112 Thinner. Note: Use of other thinners not approved by Dampney may hinder product performance and void product warranty.

Dry Time 70°F (21°C) 50% RH

Thurmalox 210 Primer will air dry tack and thumb print free within 2-3 hours. Allow 8 hours dry time between coats. Allow 24 hours dry time prior to shipping and handling. Surfaces coated with Thurmalox 210 Primer can be handled and shipped as long as shipping and handling procedures for thin filmed systems are followed. Avoid mechanical abrasion during shipping and handling. Allow one hour solvent flash off period before heat curing or placing into service.

Cleanup

Thoroughly flush spray equipment and hoses immediately after use with Dampney 100 Thinner. Dismantle spray equipment and clean parts, brushes and rollers with Dampney 100 Thinner.

Storage

Store in cool, dry place with temperature between 50°F and 100°F (10°C and 38°C). Keep container closed when not in use.

Precautionary Information

WARNING: Flammable Liquid and Vapor

Keep away from heat, sparks and flame. Vapors may cause flash fire. Do not breathe vapors or spray mist. Avoid contact with eyes, skin and clothing. Use with adequate ventilation during mixing and application. Wear an appropriate, properly fitted organic vapor cartridge-type respirator (NIOSH approved) during and after application unless air monitoring demonstrates vapor/mist levels are below applicable limits. Follow respirator manufacturer's directions for respirator use. Wash thoroughly after handling. Wear protective gloves, chemical safety goggles and impervious protective clothing. Use skin cream. In confined spaces it is required to use a positive pressure supplied-air respirator (NIOSH approved). Use explosion-proof lights and electrical equipment. Use only nonsparking tools and equipment. Wear conductive and nonsparking footwear. Make certain all electrical equipment is grounded. Observe all safety precautions and follow procedures described in OSHA regulations. See Material Safety Data Sheet (MSDS) for complete precautionary and disposal information.

If instructions and warnings cannot be strictly followed, do not use this product.

FOR INDUSTRIAL USE ONLY

TECHNICAL DATA

| Characteristics | Thurmalox 210 Primer | |
|----------------------------------|---|-------------|
| Generic Type | Silicone Zinc Dust | |
| Color | Dark Gray | |
| Number of Components | Two | |
| Temperature resistance | 500°F (260°C) | |
| Continuous | 30 | |
| Percent (%) Solids by volume | 2.0 - 2.5 mils (50 - 62 microns) | |
| Dry film thickness per coat | 6.0 - 8.0 mils (150 - 200 microns) | |
| Wet film thickness per coat | 480 mil. sq. ft. (11 sq. m./liter @ 25 microns) | |
| Theoretical coverage per gallon | 50°F-120°F (10°C-50°C) | |
| Application temperature @ 50% RH | 50°F (10°C) | 70°F (21°C) |
| Drying time @ 50% RH | 4-6 hours | 2-3 hours |
| To touch | 10-12 hours | 8 hours |
| To recoat | 48 hours | 24 hours |
| To ship | | |
| Weight per gallon | 11.6 lb. (5.2 kg.) | |
| Thurmalox 210 Primer | 7.2 lb. (3.2 kg.) | |
| Dampney 112 Thinner | 7.2 lb. (3.2 kg.) | |
| Dampney 100 Thinner | 81°F (27°C) | |
| Flash point | N/A | |
| Pot life | 1 year | |
| Shelf life | 4.9 lb./gal. (587 g./l.) | |
| Volatile organic compounds | | |

WARRANTY

Dampney protective coating products are expressly warranted to meet applicable technical and quality specifications. The technical data contained herein are accurate at the date of issuance but are subject to change without prior notification. No warranty of current accuracy is hereby given or implied. User must contact Dampney to verify correctness before ordering. Dampney assumes no responsibility for coverage, performance or injuries resulting from handling or use and **LIABILITY, IF ANY, SHALL BE LIMITED TO PRODUCT REPLACEMENT.** In no event will Dampney be responsible for consequential damages, except insofar as mandated by law. Dampney **DISCLAIMS ALL OTHER WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**