

Thurmalox® 245

Silicone Zinc Dust Primer Heat Resistance 260°C - 649°C



DESCRIPTION

Thurmalox 245 Primer is a high temperature, corrosion resistant primer formulated from silicone resins and zinc dust. Thurmalox 245 Primer provides outstanding corrosion protection for metal surfaces operating at temperatures from 260°C to 538°C, with peak to 649°C. Thurmalox 245 is the primer for both Thurmalox 230 series and Thurmalox 280 Aluminium heat resistant topcoats. These primer/topcoat systems have excellent intercoat adhesion and are able to withstand severe thermal shock throughout the entire temperature range.

RECOMMENDED USES

- Stacks, Breechings, Boiler casings
- Manifolds, Mufflers and exhausts
- Hot Piping, Process Vessels, Heat exchangers
- Refinery Equipment – Heaters, Cracker
- Furnaces, Ovens

FEATURES

- Air Dries
- Withstands continuous temperature of 538°C with peaks to 648°C
- Prevents rusting and streaking of steel during shut downs
- Easily top coated with Thurmalox 230 series and Thurmalox 280 aluminium topcoats
- Excellent Intercoat adhesion
- Protects against weathering and corrosion
- Prevents under film corrosion attack

NOT RECOMMENDED FOR

- Immersion service
- Interiors of stacks, breeching and scrubbers
- Stainless Steel

SURFACE PREPARATION

SURFACE PREPARATION – CARBON STEEL

- 1) To Ensure optimum long-term system performance, surface must be clean, dry and free from dirt, oil greases, 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 spatter. Grind down sharp and rough edges, gouges and pits
- 3) Abrasive blast surface as per specification SSPC-SP 10 "Near-White blast cleaning", or per NACE Standard N0.2 to a profile depth of 25-55 microns minimum, with a 38micron anchor pattern being ideal. Abrasive used in blasting should be selected carefully from materials of mesh size required to produce the desired anchor pattern.
- 4) If abrasive blast cleaning is not permitted, prepare the surface by power tool cleaning per SSPC-SP 11/ use 2M brand "Heavy Duty Roto Peen", type C flap wheel cleaning system mounted on an air driven motor. This method will produce a surface equivalent to that provided by commercial blast cleaning per SSPC-SP 6, including the desired surface profile (Anchor Pattern)
- 5) Feather out all edges of adjacent painted surface after completion of surface preparation operations and prior to application of the first coat of paint.

MIXING

Thurmalox 245 Primer is a two-Package system consisting of a base component and zinc that are mixed together before use. Stiff 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 of the base component with 3 parts of Zinc Dust Component



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Datasheet

APPLICATION GUIDELINES

Surface temperature must be at least 3°C above dew point

UN-INSULATED CARBON STEEL

Coating System	Thickness
Thurmalox 245 Primer	37-50 microns
Thurmalox 230 Series Thurmalox 280 Aluminium	37-50 microns
Total Dry Film Thickness	75-100 microns

 Airless Spray	<ul style="list-style-type: none"> • Pump Ratio – 30:1 • Fluid Tips – 11 – 15thou • Fluid Hose – 3/8 to 1/2" ID • Air Pressure to Pump – 100psi • Pump Operating Pressure 65-80 psi
 Conventional Spray	<ul style="list-style-type: none"> • Fluid Tip – FX 1.1 mm tip • Air Cap – 704 • Fluid Hose – 3/8 ID • Air Hose – 5/16" ID • Atomizing Pressure – 40-4psi

APPLICATION GUIDELINES

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

Roller – Use only wooden handled roller with phenolic shank and core, and ¼ - 3/8" nap. Do not flood the surface with coating. Roll our excess coating on a suitable, screened surface. Then roll out thoroughly, maintaining a continuous wet edge and uniform appearing paint film

Thinning– Only thin Thurmalox 245 series coatings with Dampney 100 thinner. Note: use of other thinners not approved by Dampney may hinder product performance and void product warranty

Clean Up– Thoroughly flush spray equipment and hose immediately after use with Dampney 100 thinner. Dismantle spray equipment and clean parts, brushes and roller with Dampney 100 thinner

Storage– store in a cool dry place with temperatures between 10°C and 38°C. keep container closed when not in use.

Cure time at 21°C, 50% RH

Thurmalox 245 Primer will air dry tack and thumb print free with ½ - 1 hour. Allow 8 hours dry time between coats. Allow 24 hours dry time prior to shipping and handling if coating is not heat cured. Surfaces coated with Thurmalox 245 Primer in the air dried state can be handled and shipped prior to a heat cure as long as shipping and handling procedures for thin filmed systems are followed. Avoid mechanical abrasion during shipping and handling. Higher temperatures will reduce tack free, recoat and shipping times. Allow one hour solvent flash off period before heat curing or placing into service. Optimum film properties require a heat cure of 177°C fir 30 minutes. Equipment protected with the Thurmalox 245 Primer in the air dried state will heat cure when placed into service

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Resistance 260°C - 649°C**



TECHNICAL DATA

<i>Characteristics</i>	<i>Thurmalox 245 Primer</i>
<i>Generic Type</i>	<i>Silicone Zinc Dust</i>
<i>Colour</i>	<i>Dark Grey</i>
<i>Temperature Resistance</i>	<i>Continuous – 538°C Intermittent – 648°C</i>
<i>Percent Solids by Volume</i>	<i>33%</i>
<i>Dry Film Thickness / Coat</i>	<i>37-50 Microns</i>
<i>Wet Film Thickness / Coat</i>	<i>112-150 Microns</i>
<i>Theoretical Coverage</i>	<i>12.65m²/lt at 25 microns</i>
<i>Application Temp. @50% RH</i>	<i>10°C -50°C</i>
<i>Cure Time 10°C @ 50% RH</i>	<i>To Touch – 1 Hour To Recoat – 12 Hours To Ship – 48 Hours</i>
<i>Cure Time 21°C @ 50% RH</i>	<i>To Touch – 30 minutes To Recoat – 8 Hours To Ship – 24 Hours</i>
<i>Full Cure @ 177°C</i>	<i>30 minutes</i>
<i>Thurmalox 245 Primer Dampney 100 Thinners</i>	<i>5.5 kg 3.2 kg</i>
<i>Flash Point</i>	<i>7°C</i>
<i>Shelf Life</i>	<i>1 Year</i>
<i>Volatile Organic Compounds</i>	<i>583 g/L</i>

PRECAUTIONARY INFORMATION

WARNING: Combustible Liquid and Vapour. Keep away from heat, sparks and flame. Vapours may cause flash fire. Do not breathe vapours or spray mist. Avoid contact with eyes, skin and clothing. Use with adequate ventilation during mixing and application. Wear an appropriate, properly fitted organic vapour cartridge-type respirator (NIOSH approved) during and after application unless air monitoring demonstrates vapour/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 non-sparking tools and equipment. Wear conductive and non-sparking 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

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.**