Dampney Protective Coatings

Thurmalox® 245 Air Dry
Silicone Zinc Dust Primer
Heat Resistance 500°F - 1200°F

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 500°F (260°C) to 1000°F (538°C), with peaks to 1200°F (649°C). Thurmalox 245 is the primer for both Thurmalox 230 Series and Thurmalox 280 Aluminum 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, Crackers
- Furnaces, Ovens

Features
- Air dries
- Withstands continuous temperature of 1000°F (538°C), with peaks to 1200°F (648°C)
- Prevents rusting and streaking of steel during shutdowns
- Easily topcoated with Thurmalox 230 Series and Thurmalox 280 Aluminum 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

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-SP10, “Near-White Blast Cleaning”, or per NACE Standard No.2 to a profile depth of 1.5 - 2.0 mils maximum, with a 1.5 mil 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 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-SP6, 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 245 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 of the Base component with 3 parts Zinc Dust component.

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

Uninsulated Carbon Steel

Primer: Thurmalox 245 Primer	1.5-2.0 mils (37-50 microns)
Topcoats: Thurmalox 230 Series Thurmalox 280 Aluminum	1.5-2.0 mils (37-50 microns)
Total dry film thickness	3.0-4.0 mils (75-100 microns)

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Application Equipment

Conventional spray is the recommended method of application, however Thurmalox 245 Primer may also be applied by airless spray, brush or roller. Do not apply Thurmalox 245 Primer in heavier films than specified since blistering may occur.

Conventional spray:

Spray gun	DeVilbiss MBC-510
Fluid tip	FX (1.1 mm 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:

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.

Roller: Use only wooden-handled roller with phenolic shank and core, and 1/4-3/8" nap. Do not flood surface with coating. Roll out 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 Primer with Dampney 100 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 245 Primer will air dry tack and thumb print free within 1/2-1 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 350° F (177° C) for 30 minutes. Equipment protected with the Thurmalox 245 Primer in the air dried state will heat cure when placed 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

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Replaces issue of 0695

TECHNICAL DATA

Characteristics	Thurmalox 245 Primer	
Generic Type	Silicone Zinc Dust	
Color	Dark Gray	
Number of components	Two	
Temperature resistance		
Continuous	1000°F (538°C)	
Intermittent	1200°F (648°C)	
Percent (%) Solids by volume	33	
Dry film thickness per coat	1.5 - 2.0 mils (37 - 50 microns)	
Wet film thickness per coat	4.5 - 6.0 mils (112 - 150 microns)	
Theoretical coverage per gallon	530 mil. sq. ft. (49 sq. m. @ 25 microns)	
Application temperature @ 50% RH	50°F-120°F (10°C-50°C)	
Drying time @ 50% RH	50°F (10°C)	70°F (21°C)
To touch	1 hour	30 minutes
To recoat	12 hours	8 hours
To ship	48 hours	24 hours
Full cure @ 350°F (177°C)*	30 minutes	
Weight per gallon		
Thurmalox 245 Primer	12.0 lb. (5.5 kg.)	
Dampney 100 Thinner	7.2 lb. (3.2 kg.)	
Flash point (Pensky Martens)	45°F (7°C)	
Pot life	N/A	
Shelf life	1 year	
Volatile organic compounds	4.9 lb./gal. (583 g./l.)	

* See Dry Time section

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.**

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