

Thurmalox® 230C Series

Air Dry Series VOC Compliant High Solids Coatings Heat Resistance 260°C - 648°C Standard & Custom Colours



DESCRIPTION

Thurmalox 230C Series coatings are VOC Compliant heat resistant coatings based on silicone resins and thermally stable pigments. They are formulated specifically to protect metal surfaces operating at temperatures from 260°C to 538°C, with peaks to 648°C. For maximum corrosion protection, prime metal surfaces with Thurmalox 245C VOC Compliant silicone zinc dust heat and corrosion resistant primer and topcoat with Thurmalox 230C series. The 245C primer/230C series topcoat system provide outstanding adhesion, film integrity, colour stability, corrosion, weathering and thermal shock resistance from ambient to 538°C. Thurmalox 230C series coating are available in a wide range of standard (see Master Colour Card) and custom colours.

RECOMMENDED USES

Application to surfaces where (1) the benefits of Thurmalox 230 C series coatings are needed, and where (2) federal, state and/or local authorities require high temperature coatings to be compliant with reduced VOC (volatile organic compound) emission regulations

- Stacks, breechings, boiler casings
- Refinery equipment – heaters, crackers
- Reformers
- Furnaces, kilns and ovens
- Compressors, turbines and engines
- Piping, pumps and manifolds
- Process vessels, heat exchangers
- Stainless steel

FEATURES

- VOC compliant 371.5g/L
- Air dries, easy to apply system
- Withstands continuous temperature of 538°Cm with peaks to 648°C
- Outstanding heat and weathering resistance
- Excellent colour stability to 538°C
- Outstanding resistance to thermal shock
- Excellent bond to stainless steel, without need to abrasive blast (see Surface Preparation)

NOT RECOMMENDED FOR

- Interiors of breechings
- Interiors of stacks, breeching and scrubbers

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 pit
- 3) Abrasive blast surface as per specification SSPC-SP 10 “Near-White blast cleaning”, or per NACE Standard N0.2 to a profile depths 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.

SURFACE PREPARATION – STAINLESS STEEL

- 1) Surfaces must be clean and dry. Remove all oil, grease, soil, drawing and cutting compounds, and other foreign matter by methods outlined in Steel Structures Painting Council Specification SSPC-SP 1 “Solvent Cleaning”
- 2) DO NOT USE CHLORINATED SOLVENTS ON STAINLESS STEEL SURFACES
- 3) For large surface areas, steam clean with an alkaline detergent, follow by a steam or fresh water wash to remove detrimental residues
- 4) For small surface areas, solvent wipe with Dampney 170 Thinner, a chloride free solvent, using proper procedures and precautions to minimize hazards



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MIXING

Re-disperse any settled-out pigments by stirring with a paint paddle followed by thorough mixing to a uniform consistency with an explosion proof or air-driven power mixer. No not open containers until ready to use. Keep lid on container when not in use.

APPLICATION GUIDELINES

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



CARBON STEEL

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

STAINLESS STEEL – UN-INSULATED

Coating System	Thickness
Thurmalox 232C	37-50 microns
Thurmalox 232C	37-50 microns
Total Dry Film Thickness	75-100 microns

Note: For application of other Thurmalox 230C series colours to un-insulated stainless steel consult the Speccoats Technical Service Department

 <p>Airless Spray</p>	Pump Ratio – 30:1 Fluid Tips – 11 – 15thou Fluid Hose – 3/8 to 1/2" ID Air Pressure to Pump – 100psi Pump Operating Pressure 80-90 psi
 <p>Conventional Spray</p>	<ul style="list-style-type: none"> Fluid Tip – EF Air Cap – 704 Fluid Hose – 3/8 ID Air Hose – 5/16"ID Atomizing Pressure – 60psi

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 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 230C series coatings with Dampney 182 Thinner. Do not thin beyond federal, state and/or local VOC (Volatile Organic Compound) emission regulation. 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 230C series coating will air dry tack and thumb print free with 6-8 hours. Allow 10-12 hours dry time between coats. Allow 48 hours dry time prior to shipping and handling if coating is not heat cured. Surfaces coated with Thurmalox 230C series coating 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 230C series coating in the air dried state will heat cure when placed into service

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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.**

TECHNICAL DATA

Characteristics	Thurmalox 230 Series
Generic Type	Silicone
Colour	See master colour card. Also available in custom colours
Temperature Resistance	Continuous – 538°C Intermittent – 649°C
Percent Solids by Volume	56%
Dry Film Thickness / Coat	37-50 Microns
Wet Film Thickness / Coat	62-87 Microns
Theoretical Coverage	21.6m ² /lt at 25 microns
Application Temp. @50% RH	10°C -50°C
Cure Time 10°C @ 50% RH	To Touch – 8-10 Hours To Recoat – 24 Hours To Ship – 72 Hours
Cure Time 21°C @ 50% RH	To Touch – 6-8 Hours To Recoat – 10-12 Hours To Ship – 48 Hours
Full Cure @ 177°C	30 minutes
Thurmalox 230C Dampney 170 Thinner Dampney 182 Thinner Dampney 180 Thinner	5.8 kg 3.7 kg 3.5 kg 3.2 kg
Flash Point	16°C
Shelf Life	1 Year
Volatile Organic Compounds	371.5 g/L