

# Thurmalox® 280

**Aluminium Air Dry Silicone Coating**  
**Heat Resistant 260°C - 648 °C**



## DESCRIPTION

*Thurmalox 280 Aluminium* is an air drying, heat resistant coating based on silicone resins formulated specifically to protect metal surfaces operating at temperatures from 260°C to 648°C. For maximum corrosion protection, metal surfaces should be primed with Thurmalox 245 silicone zinc dust heat and corrosion resistant primer and top coated with Thurmalox 280 aluminium. The 245 primer/280 topcoat system provides outstanding corrosion, weathering and thermal shock resistance throughout this 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
- Withstands continuous temperature of 648°C
- Outstanding heat and weathering Resistance
- Easy to Apply System
- Outstanding resistance to thermal shock

## NOT RECOMMENDED FOR

- Immersion service
- Interior of stacks, breechings 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 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.



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Datasheet

## 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. Do 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

### UN-INSULATED CARBON STEEL

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

Conventional spray is the recommended method of application, however Thurmalox 280 aluminium may also be applied by airless spray, brush or roller. Do not apply Thurmalox 280 aluminium in heavier films than specified since blistering may occur

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

## 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 1/4 - 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 280 Aluminium 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 280 Aluminium will air dry tack and thumb print free with 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 280 Aluminium can be handled and shipped prior to a heat cure as long as shipping and handling procedures for thin filmed systems are followed. 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 for 30 minutes. Equipment protected with the Thurmalox 280 Aluminium in the air dried state will heat cure when placed into service

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## TECHNICAL DATA

Characteristics	Thurmalox 280 Aluminium
Generic Type	Silicone
Colour	Aluminium
Temperature Resistance	Continuous – 649°C
Percent Solids by Volume	25%
Dry Film Thickness / Coat	37-50 Microns
Wet Film Thickness / Coat	150-200 Microns
Theoretical Coverage	9.6m <sup>2</sup> /lt at 25 microns
Application Temp. @50% RH	10°C -50°C
Cure Time 10°C @ 50% RH	To Touch – 1 Hour To Recoat – 12 Hours To Ship – 48 Hours
Cure Time 21°C @ 50% RH	To Touch – 30 Minutes To Recoat – 8 Hours To Ship – 24 Hours
Full Cure @ 177°C	30 minutes
Thurmalox 280 Aluminium Dampney 100 Thinners	4.3 kg 3.2 kg
Flash Point	7°C
Shelf Life	1 Year
Volatile Organic Compounds	630 g/L

## 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.**