



Dampney Protective Coatings

Thurmalox[®] 70 Colors Air-Dry UV Stable Finish Coat For Un-Insulated Stainless Steel

Description

Thurmalox 70 Colors is a UV stable silicone based heat resistant coating for un-insulated stainless steel surfaces primed with Thurmalox 70. The two coat system protects un-insulated austenitic stainless steel from "chloride induced stress corrosion cracking". Thurmalox 70 Colors withstands temperatures to 1000°F (538°C) with peaks to 1100°F (593°C). It is formulated to contain the minimum amounts of attainable chlorides, halides, sulfides, nitrates and metals that induce external stress corrosion cracking. Every batch of Thurmalox 70 & 70 Colors is tested by an independent laboratory for leachable chloride content. Thurmalox 70 Series is formulated to meet the currently accepted practice for selection of protective coatings for stainless steel surfaces under thermal insulation as set forth in NACE Technical Committee Report 6H189 "A State-of-the Art Report of Protective Coatings for Carbon Steel and Austenitic Stainless Steel Surfaces Under Thermal Insulation".

Recommended Uses

- UV stable finish coat for un-insulated stainless steel piping, vessels and equipment which has been primed with Thurmalox 70.
- Nuclear power facilities where a high temperature coating for insulated stainless steel with minimum amounts of chlorides, other halides, nitrates, sulfides and metals is needed.

Features

- Air Dries, easy to apply system
- Withstands continuous temperature of 1000°F (538°C) with peaks to 1100°F (593°C).
- Free of heavy metal pigments.
- Does not contribute to weld embrittlement of stainless steel welds.
- Prevents wet chlorides from the atmosphere or process operations from coming into contact with stainless steel surfaces.
- Prevents insulation, which may contain chlorides, from coming into contact with stainless steel surfaces.

Not Recommended For

- Immersion service
- Interiors of stacks, breechings and scrubbers

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-SP1, "Solvent Cleaning".
2. DO NOT USE CHLORINATED SOLVENTS ON STAINLESS STEEL SURFACES.
3. Blast all stainless steel surfaces using "Starblast"[®] fine grade that will yield a 1.0 to 1.5 mil profile after blasting.
4. For large surface areas, steam clean with an alkaline detergent, followed by a steam or fresh water wash to remove detrimental residues.
5. For small surface areas, solvent wipe with Dampney 170 cleaning solvent, a chloride free solvent, using proper procedures and precautions to minimize hazards.

Mixing

Redisperse 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.

Applications Guidelines

Surface temperature must be at least 5° F (3° C) above dew point. For optimum protection apply two coats of Thurmalox 70 series to a dry film thickness of 1.5-2.0 mils (37-50 microns) per coat. Total recommended dry film thickness is 3.0-4.0 mils (75-100 microns).

Un-insulated Stainless Steel

Prime Coat: Thurmalox 070-Black	1.5-2.0 mils. (37-50 microns)
Topcoat: Thurmalox 70 Colors	1.5-2.0 mils. (37-50 microns)

Bulletin 70 Colors

Application Equipment

Conventional spray is the recommended method of application; however Thurmalox 70 Series products may also be applied by airless spray, brush or roller. Do not apply Thurmalox 70 Series products in heavier films than specified since blistering may occur.

Conventional spray:

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 diam. 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

Formulated for use as supplied. Do not thin.

Dry Time 70°F (21°C) 50% RH

Thurmalox 70 Colors will air dry tack and thumb print free within 30-60 minutes. Allow 8 hours dry time between coats. Allow 24 hours dry time prior to shipping and handling if coating is not heat cured. Stainless steel surfaces coated with Thurmalox 70 & 70 Colors 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 70 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

TECHNICAL DATA

Characteristics	Thurmalox 70 Colors
Generic Type	Silicone
Color	Available in standard and Custom Colors
Temperature resistance	
Continuous	1000°F (538°C)
Intermittent	1100°F (593°C)
Percent (%) Solids by volume	20%
Dry film thickness per coat	1.5 - 2.0 mils (37 - 50 microns)
Wet film thickness per coat	8.5 - 10.5 mils (200 - 250 microns)
Theoretical coverage per gallon	321 sq. ft. per gallon
Application temperature @ 50% RH	50° - 120°F (10° - 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 70-108 Gray	9.6 lb (4.3 kg)
Dampney 170 Thinner	8.0 lb. (3.7 kg.)
Dampney 100 Thinner	7.2 lb. (3.2 kg.)
Flash point	45°F (7°C)
Pot life	N/A
Shelf life	1 year
Volatile organic compounds	5.96 lb./gal. (714 g./l.) Low VOC formulation us available.

* 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.**