Thurmalox® 70C Air Dry
VOC Compliant High Solids Coating
Prevents Stress Corrosion Cracking
Heat Resistant to 1000°F

Description
Thurmalox 70C is a VOC compliant, air drying, silicone based heat resistant coating that protects thermally insulated austenitic stainless steel from chloride induced stress corrosion cracking. Thurmalox 70C withstands temperatures to 1000°F (538°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 70C is tested by an independent laboratory for leachable chloride content.

Thurmalox 70C 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
Application to stainless steel surfaces where (1) the benefits of Thurmalox 70C 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.
- Insulated stainless steel piping, vessels and equipment
- Nuclear power facilities where a high temperature coating for stainless steel with minimum amounts of chlorides, other halides, nitrates, sulfides and metals is needed

Features
- VOC compliant - 3.45 lb./ gal. (413 g./l.)
- Air Dries
- Withstands continuous temperature of 1000°F (538°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.
- Easy to apply system
- Excellent bond to stainless steel without need to abrasive blast (see Surface Preparation).
- 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
- Uninsulated surfaces

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.

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.

Application Guidelines

Surface temperature must be at least 5°F (3°C) above dew point. Prior to application of Thurmalox 70C, bring material to 70°F (21°C) for optimal application properties. For optimum protection apply two coats of Thurmalox 70C 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).

Application Equipment

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

Conventional Spray:

Spray gun	DeVilbiss JGA402
Fluid tip	EF
Air cap	704
Fluid hose*	3/8" ID
Air hose	5/16" ID
Atomizing pressure	60 psi

Provide material pot with agitator, regulators for fluid and air pressure, and oil and moisture traps in supply line.

*Smaller hose diameter or length over 25 ft. may require increased pressure.

Airless Spray:

Spray gun	Graco 205-591, 208-663
Fluid tips*	163-610, 163-315
Pump	Graco Bulldog 30:1
Fluid hose	3/8" ID
Air pressure to pump	100 psi
Pump operating pressure	80-90 psi

* Use Reverse-A-Clean® tips for fast, easy clean out.

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 70C with Dampney 100 Thinner. Do not thin with Dampney 170 Thinner. Do not thin beyond federal, state and/or local VOC (volatile organic compound) emission regulations. Note: Use Dampney 170 Thinner only in the surface preparation of small stainless steel areas. 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 70C will air dry tack and thumb print free within 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. Stainless steel surfaces coated with Thurmalox 70C 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 70C 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 70C	
Generic Type	Silicone	
Color	Black	
Temperature resistance	1000°F (538°C) Continuous 1100°F (593°C) Intermittent	
Percent (%) Solids by volume	18	
Dry film thickness per coat	1.5 - 2.0 mils (37 - 50 microns)	
Wet film thickness per coat	8.0 - 11.0 mils (200 – 275 microns)	
Theoretical coverage per gallon	290 mil. sq. ft. (77 sq. m. @ 25 microns)	
	6.8 sq. m. @ 25 microns per liter	
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	8-10 hours	6-8 hours
To recoat	24 hours	10-12 hours
To ship	72 hours	48 hours
Full cure @ 350°F (177°C)*	30 minutes	
Weight per gallon		
Thurmalox 70C	9.4 lb. (4.3 kg.)	
Dampney 170 Thinner	8.0 lb. (3.7 kg.)	
Dampney 100 Thinner	7.2 lb. (3.2 kg.)	
Flash point	60°F (16°C)	
Pot life	N/A	
Shelf life	1 year	
Volatile organic compounds	3.45 lb./gal. (413 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.**