Datasheet

Thurmalox® 70C

VOC Compliant High Solids Coating
Prevent Stress Corrosion Cracking Heat Resistant to 538ºC

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 538ºC with peaks to 593ºC. it is formulated to contain the minimum amount of attainable chlorides, halides, sulphides, 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 emission regulations

- Insulated stainless steel piping, vessels and equipment
- Nuclear power facilities where a high temperature coating for insulated stainless steel with minimum amounts of chlorides, other halides, nitrates, sulphides and metals is needed

FEATURES

- Air dries& easy to apply
- VOC Compliant 413g/L
- Withstands continuous temperature of 538ºC
- 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
- Excellent bond to stainless steel without need to abrasive blast (see Surface preparation)
- Prevents insulation, which may contain chlorides form coming into contact with stainless steel surfaces

NOT RECOMMENDED FOR

- Immersion service
- Interiors of stacks, breechings and scrubbers
- Un-insulated surfaces

SURFACE PREP – STAINLESS STEEL

1. Surfaces must be clean & dry. Remove all oil, grease, soil, drawing and cutting compounds, and other foreign matter by methods outlined in Steel Structures Painting Council Specification SSP_SP1 “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 107 Thinner, a Chloride free solvent, using proper procedures and precautions

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 5ºF (3ºC) above the dew point.

Coating System	Thickness
Thurmalox 70C	37-50 microns
Thurmalox 70C	37-50 microns

Total Dry film Recommended thickness 75-100µm

Dry Time

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 shipping prior to heat cure as long as the shipping and handling procedures for thin filmed system 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 177ºC for 30 minutes. Equipment protected with Thurmalox 70C in the air dried state will hat cure when placed into service

Thurmalox® 70C

VOC Compliant High Solids Coating Prevent Stress Corrosion Cracking Heat Resistant to 538ºC

Datasheet

APPLICATION

Conventional spray is the recommended method of application, however Thurmalox 70C series coatings may also be applied by airless spray. Contact Speccoats technical service department for brush or roller application. Do not apply Thurmalox 70C series coatings in heavier films than specified since blistering may occur

Airless Spray	Pump Ratio - 30 to 1 Min Nozzle Orifice - 11 to 15 Thou Tip Pressure - 100 Bar Min
Conventional Spray	• Air Assisted Airless • Pressure Pot - Pressure Feed Gun • Gravity Feed Gun • Various Nozzle sets are available to suit the guns

Brush – Use only wooden-handle brush with short China bristles. Do not flood surface with coating. Brush out thoroughly, maintaining a continuous wet edge and uniform appearing paint film.

Rollers – use only wooden-handles roller with phenolic core and ¼-3/8" nap. No not floor 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 - Dampney 100 thinners

Clean Up
Thoroughly flush spray equipment and hoses immediately after use with Dampney 100 Thinner. Dismantle spray equipment and clean parts, crushes and rollers with Dampney 100 Thinner.

Storage
Store in a cool, dry place with temperatures between 10ºC - 38ºC. Keep container closed when not in use

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.***

APPLICATION

Characteristics	*Thurmalox 70C*
Generic Type	*Silicone*
Colour	*Black*
Temperature Resistance	*Continuous - 538ºC* *Intermittent - 593ºC*
Percent Solids by Volume	*18 %*
Dry Film Thickness / Coat	*37-50 Microns*
Wet Film Thickness / Coat	*200-275 Microns*
Theoretical Coverage	*6.8m²/lt at 25 microns*
Application Temp. @50% RH	*10ºC -50ºC*
Cure Time 21ºC @ 50% RH	*To Touch – 6-8 Hours* *To Recoat – 10-12 Hours* *To Ship – 48 Hours*
Cure Time 10ºC @ 50% RH	*To Touch – 8-10 Hours* *To Recoat – 24 Hours* *To Ship – 72 Hours*
Full Cure	*30 Minutes @ 177ºC*
Thurmalox 70C ***Dampney 170 Thinners*** ***Dampney 100 Thinners***	*4.3 kg* *3.7 kg* *3.2 kg*
Flash Point	*16ºC*
Shelf Life	*1 Year*
Volatile Organic Compounds	*413g/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