



THERMOSHIELD

HEAT RESISTANT PAINT

Product Description:-

A single component, high temperature coating, based on a moisture curing silicone binder. The moisture curing cross linking mechanism allows multiple coats to be applied without heat curing. Suitable for temperature up to 540 °C (1004°F).

Intended Uses:-

For the protection of steel from corrosion on areas including flare stacks, chimneys, exhausts, vent and pipe work, at temperature up to 540 °C (1004°F). Where maximum corrosion protection is required, application should be over a zinc silicate primer.

Practical Information For Thermo-shield:-

Color	Aluminum
Gloss Level	Not applicable
Volume Solid	45%
Typical Thickness	25 microns (1 mils) dry equivalent to 56 microns (2.2 mils) wet
Theoretical Coverage	: 18 m ² /liters at 25 microns d.f.t
Practical Coverage	: Allow appropriate loss factors

Method of Application : Air spray, Brush, Roller

Drying Time :

Temperature	Touch Dry	Hard Dry	Minimum	Maximum
5°C (41°F)	90 minutes	5 hours	24 hours	Extended ¹
15°C (59°F)	60 minutes	3 hours	16 hours	Extended ¹
25°C (77°F)	30 minutes	2 hours	12 hours	Extended ¹
40°C (104°F)	15 minutes	1 hour	6 hours	Extended ¹

Regulatory Data:-	Flash Point	25°C (77°F)
	Product Weight	1.13 kg/l (9.4 lb/gal)
	VOC	4.13 lb/gal (495 g/lit) 509g/kg



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Surface Preparation:-

All surface to be coated should be clean, dry and free from contamination. Prior to paint application all surfaces should be assessed and treated in accordance with ISO 8504:2000. Oil or grease should be removed in accordance with SSPC-SP1 solvent cleaning.

Abrasive Blast Cleaning :

Abrasive blast clean to Sa2½ (ISO 8501 - 1:2007) or SSPC-SP6. If oxidation has occurred between blasting and application of Thermo-shield, the surface should be re-blasted to the specified visual standard. Surface defects revealed by the blast cleaning process should be ground, filled, or treated in the appropriate manner. A surface profile of 25-50 microns (1-2 mils) is recommended.

Hand or Power Tool Preparation

Any coatings present on the surface must be removed prior to the application of Thermo-shield. Hand or power tool clean to a minimum St3 (ISO 8501-1:2007) or SSPC-SP3.

Note, all scale must be removed and areas which cannot be prepared adequately by chipping or needle gun should be spot blasted to minimum standard of Sa ½ (ISO 8501 - 1:2007) or SSPC-SP6. Typically this would apply to C or D grade rusting in this standard.

Primed Surface

Thermo-shield is suitable for application to un-weathered steel work freshly coated with zinc silicate shop primers. If the zinc shop primer shows extensive or widely scattered break down, or excessive zinc corrosion products. Overall sweep blasting will be necessary. Other types of shop primer are not suitable for over coating and will require complete removal by abrasive blast cleaning. Weld seams and damaged areas should be blast cleaned to Sa ½ (ISO 8501 - 1:2007) or SSPC-SP6.

Aluminum Metal Spray

Metal sprayed surfaces should be fresh, clean and free from moisture, or surface contamination.

Application:-

- Mixing** This material is a one component coating and should always be mixed thoroughly with a power agitator before application.
- Mix Ratio** Not applicable
- Airless Spray** Not recommended
- Air Spray (Conventional)** Recommended: Use suitable proprietary equipment
- Brush** Suitable - small areas only
Typically 15-20 microns (0.6-0.8 mils) can be achieved
- Roller** Suitable - small areas only
Typically 15-20 microns (0.6-0.8 mils) can be achieved
- Thinner** Thinner # 07, Do not thin more than allowed by local environmental legislation.
- Cleaners** Thinner # 07



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Work Stoppages	Do not allow material to remain in hoses, gun or spray equipment. Thoroughly flush all equipment with Thinner # 07. Partially filled containers may show surface skinning and/or a viscosity increase of the material after storage.
Clean Up	Clean all equipment immediately after use with Thinner # 07. It is good working practice to periodically flush not spray equipment during the course of the working day. Frequency of cleaning will depend upon amount sprayed, temperature and elapsed time, Including and delays. All surplus materials and empty containers should be disposed of in accordance with appropriate regional regulations/legislation.
Product Characteristics:-	<p>Thermo-shield is moisture curing, and does not evolve water vapor during the heat curing mechanism as with standard silicones. Application at thicknesses of 15 microns (0.6 mil).</p> <p>Maximum thickness which can be applied in a single coat without subsequent blistering on heating is 40 microns(1.6 mil). Up to 3 coats at a maximum of 25 micron (1mil) per coat can be applied without the requirement of heating between coats. This provides maximum corrosion protection when it is not possible to use a zinc silicate priming system.</p> <p>Thermo-shield Aluminum version is suitable for the protection of abrasive blast cleaned steel operation at continuous dry temperature up to 540°C (1004°F). However, the maximum service temperature over hand prepared substrates is 400°C (752°F).</p> <p>Thermo-shield is not suitable for exposure in acid or alkaline environments. Thermo-shield Aluminium version has the following specification approvals: BS5493 (1977) : CP7 Shell specification DEP 40.48.00.30 Gen. Chapter VI (h)</p> <p>Note: VOC values are typical and are provided for guidance purpose only. These may be subject to variation depending on factors such as difference in color and normal manufacturing.</p> <p>Low molecular weight reactive additives. Which will form part of the film during normal ambient cure condition, will also effect VOC values determined using EPA Method 24.</p>
Safety Precautions:-	<p>This product is intended for used only by professional applicators in industrial situations in accordance with the advice given on this sheet, the Material Safety Data Sheet and the containers, and should not be used without reference to the Material Safety Data Sheet (MSDS) which Internal Protective Coatings has provided to its customers.</p> <p>All working involving the application and used of this products should be performed in compliance with all relevant national, Health, Safety & Environmental standards and regulations/ In the event welding or flame cutting is performed on metal coated with this product, dust and fumes will be emitted which will require the use of appropriate personal protective equipment and adequate local exhaust ventilation. If in doubt regarding the suitability of use of the product, consult PATSA Sales.</p>
Pack Size:-	5 Liter
Storage:-	Self Life 12 months minimum at 25°C (77°F). Subject to re-inspection thereafter. Store in dry, shaded conditions away from sources of heat and ignition.