

**Product Data Sheet                      TIC 4085                      Heat Resistance Coating**

**Description**

**TIC 4085 Heat Resistant Coating** is an air drying and heat curing, pigmented silicone resin solution, normally applied to metal to prevent general and specific corrosion problems.

**TIC 4085 Heat Resistant Coating** is an air dried film performs well at ambient and low temperatures, having excellent adhesion, while, the heat cured film is resistant to thermal shock, impact and abrasion.

**TIC 4085 Heat Resistant Coating** is a pigmented silicone resin solution used to inhibit corrosion in particular, chloride ionization of stainless steel and oxidation of carbon steels at high temperatures. Applied either by brush or spray equipment, the product does not contain metallic zinc.

**TIC 4085 Heat Resistant Coating** contains no asbestos, lead, mercury or mercury compounds.

**Properties**

Property	Specification	Test method
Color	Dark gray	TSTM-01
Application	Brush or spray	TSTM-06
Density	1.32 ± 0.05 Kg/ℓ	ASTM D 1475
Volume non-volatile	42 ± 1 %	ASTM D 1644
Weight non-volatile	60 ± 1 %	ASTM D 1644
Coverage	0.63 Kg/m <sup>2</sup> (0.48 ℓ/m <sup>2</sup> ) Dried film thickness: 0.2 mm	TSTM-07
Drying time	Set to touch: 2 ~ 4 hours Dry through: 12 hours	ASTM D 1640
Service temperature limits	(Temperature at coated surface) -73 °C ~ 500 °C (-100 °F ~ 932 °F)	TSTM-04

**Limitations**

Store and apply between 4 °C (40 °F) and 38 °C (100 °F).

Always test plastic materials for compatibility when using a solvent base product.

**Application**

**Material Preparation**

Stir well. DO NOT THIN. Apply only to clean dry surfaces. Keep container closed when not in use to prevent solvent evaporation.

**Application**

1. **Austenitic stainless steel** : TIC 4085 Heat Resistant Coating is particularly recommended for use on austenitic stainless steel piping and equipment to inhibit stress corrosion cracking induced by soluble chlorides. It is most strongly emphasized that in this situation excellent surface preparation should be made.
2. **Ferrous metals** : TIC 4085 Heat Resistant Coating will protect ferrous metal from corrosion when exposed up to 500 °C, either continuously or cyclically. The resistance in these instances to high acid or alkali contact is not provided.
3. **High temperature services** : TIC 4085 Heat Resistant Coating may be used to weatherproof insulation where the coated surface temperature is in excess of the capability of normal coating products, as in 'flashing' down to a hot process pipe or vessel.
4. **Cellular insulation** : The formulation TIC 4085 Heat Resistant Coating makes it suitable for reducing abrasion of rigid cellular insulation, due to vibration or thermal cycling when operating outside the temperature range of anti-abrasive coatings.

**Specification / Site Instructions**

For brush application to stainless steel to give protection against chloride ion induced corrosion.

1. The coating as detailed shall be TIC 4085 Heat Resistant Coating applied strictly in accordance with the manufacturer's instructions.
2. Remove gross quantities of oil, grease and heavy rust. Any light to medium rust and small amounts of oil and grease can be removed as given below.
3. Thoroughly mix one volume of acid cleaner with three volumes of clean fresh water in a polyethylene bucket, to give a working solution.
4. Apply liberally and brush well into the surface. Before the working solution has dried, rinse off all traces with copious quantities of clean, fresh water and then allow drying.
5. Contamination of the prepared surface from any source including bare hands must be avoided prior to coating.
6. When the surface is completely dry, apply a uniform coat of TIC4085HeatResistant Coating, using a clean brush, at a rate of not less than 0.48 ℓ/m<sup>2</sup> to give a minimum dried film thickness of 0.2 mm.
7. Allow a minimum of 12 hours drying time of the first coat before over-coating.
8. When the first coat is completely dry, apply a second of TIC 4085 Heat Resistant Coating evenly and preferably at right angles to the first coat. This second coat must be applied at a rate of not less than 0.48 ℓ/m<sup>2</sup> to give a minimum dried film thickness of 0.2 mm.
9. Coated surfaces will be left a minimum of 48 hours before insulating or putting into service.

**Clean-up**

Use xylene (flammable) or chlorinated solvent (non-flammable) for cleaning equipment.

**Note**

**Important:** We make no other warranties and expressly disclaim any warranties of merchantability or fitness for a particular purpose. If a product fails to meet this limited warranty, purchaser's sole and exclusive remedy is replacement of the product or, at our option, refund of the purchase price. Our acceptance of any orders for the product is expressly conditional upon purchaser's assent to the terms on the applicable invoice.

**Adequate Tests:** The information contained herein we believe is correct to the best of our knowledge and tests. The recommendations and suggestions herein are made without guarantee or representation as to results. We recommend that adequate tests be performed by you to determine if this product meets all of your requirements. The warranted shelf life of our products is twelve months from date of shipment to the original purchaser.

**TIC CORPORATION**

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