

Modified Silicone

PRODUCT DESCRIPTION

A single pack, temperature indicating paint based upon a modified silicone.

The colour changes from green to blue at temperatures between 180-220°C (356-428°F), and from blue to white at temperatures between 310-350°C (590-662°F).

INTENDED USES

A functional coating for identification of hot spots and internal insulation failures, exhibiting a visual colour change in response to temperature rise.

Typically used on reaction vessels on chemical and petrochemical sites as a one-time warning of dangerous temperature increases.

This product can be used in two coats as a self-priming system over stainless steel, or over an inorganic zinc primer for optimum corrosion protection to carbon steel substrates.

Suitable for application both in the fabrication yard and on-site.

PRACTICAL INFORMATION FOR INTERTHERM 715

Colour	Green (at ambient temperature)
Gloss Level	Eggshell
Volume Solids	42%
Typical Thickness	25 microns (1 mils) dry equivalent to 60 microns (2.4 mils) wet
Theoretical Coverage	16.80 m ² /litre at 25 microns d.f.t and stated volume solids 674 sq.ft/US gallon at 1 mils d.f.t and stated volume solids
Practical Coverage	Allow appropriate loss factors
Method of Application	Air Spray, Brush, Roller

Drying Time

Temperature	Touch Dry	Hard Dry	Overcoating interval with self	
			Minimum	Maximum
5°C (41°F)	60 minutes	3 hours	3 hours	Extended ¹
15°C (59°F)	40 minutes	2 hours	2 hours	Extended ¹
25°C (77°F)	30 minutes	90 minutes	90 minutes	Extended ¹
40°C (104°F)	15 minutes	45 minutes	45 minutes	Extended ¹

¹ See International Protective Coatings Definitions and Abbreviations

REGULATORY DATA

Flash Point (Typical)	34°C (93°F)		
Product Weight	1.20 kg/l (10.0 lb/gal)		
VOC	4.58 lb/gal (550 g/l) 481 g/kg	EPA Method 24 EU Solvent Emissions Directive (Council Directive 1999/13/EC)	

See Product Characteristics section for further details

Modified Silicone

SURFACE PREPARATION

All surfaces 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 Intertherm 715, the surface should be reblasted to the specified visual standard.

Surface defects revealed by the blast cleaning process should be ground, filled, or treated in the appropriate manner.

Shop Primed Surfaces

Intertherm 715 is suitable for application to unweathered steelwork freshly coated with zinc silicate shop primers.

If the zinc shop primer shows extensive or widely scattered breakdown, or excessive zinc corrosion products, overall sweep blasting will be necessary. Other types of shop primer are not suitable for overcoating and will require complete removal by abrasive blast cleaning.

Weld seams and damaged areas should be blast cleaned to Sa2½ (ISO 8501-1:2007) or SSPC-SP6.

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 (Pressure Pot)	Recommended	Gun Air Cap Fluid Tip	DeVilbiss MBC or JGA 704 or 765 E
Air Spray (Conventional)	Recommended	Use suitable proprietary equipment	
Brush	Suitable - small areas only	Typically 25 microns (1.0 mils) can be achieved	
Roller	Suitable - small areas only	Typically 25 microns (1.0 mils) can be achieved	
Thinner	International GTA713	Do not thin more than allowed by local environmental legislation	
Cleaner	International GTA713		
Work Stoppages	Thoroughly flush all equipment with International GTA713. All unused material should be stored in tightly closed containers. Partially filled containers may show surface skinning and/or a viscosity increase of the material after storage. Material should be filtered prior to use.		
Clean Up	Clean all equipment immediately after use with International GTA713. It is good working practice to periodically flush out spray equipment during the course of the working day. Frequency of cleaning will depend upon amount sprayed, temperature and elapsed time, including any delays. All surplus materials and empty containers should be disposed of in accordance with appropriate regional regulations/legislation.		

Modified Silicone

PRODUCT CHARACTERISTICS

Intertherm 715 is intended for application to external steel surfaces which are internally insulated to reduce the surface temperature to below 100°C (212°F). Optimum performance is achieved when the surface temperature is below 50°C (122°F). The function of the coating is to give a visual indication of hotspots or where insulation may have failed and the approximate temperature the steelwork has reached in that area. It is not intended to provide an accurate gradient of temperature across a surface; thermocouples should be used to provide this data.

Gradual changes in colour will normally occur as the surface temperature of the substrate increases in the following ranges:

180-220°C (356-428°F)	Green to Blue
310-350°C (590-662°F)	Blue to White

Normal continuous surface temperature of 100°C and above will cause the original colour to gradually change over a period of time. The higher above 100°C, the faster the change. The coating will also show colour drift upon prolonged exposure to continuous elevated operating temperatures.

Maximum continuous dry temperature resistance for Intertherm 715 is 350°C (662°F).

Intertherm 715 is a one time warning system. The colour change is permanent. After warning of a temperature change the coating must be reapplied after proper surface preparation has been performed.

Typical service life of this coating is 16 to 24 months before recoating is necessary.

When using Intertherm 715 over inorganic zinc primer, the products should be applied in strict accordance with film thickness specifications, since application of excessive thicknesses may cause blistering. Determine that the inorganic zinc primer is thoroughly cured prior to application of the Intertherm 715 by following the curing instructions given on the relevant product data sheet.

When zinc silicate primers have been allowed to weather, all zinc salts must be removed by water washing/bristle brushing prior to the application of Intertherm 715.

Intertherm 715 may be applied to warm surfaces between 40-80°C (104-176°F) by thinning with one part of International GTA713 to one part Intertherm 715, then applying multi-coats in thin wet films to achieve the specified dry film thickness.

Note: VOC values quoted are based on maximum possible for the product taking into account variations due to colour differences and normal manufacturing tolerances.

Low molecular weight reactive additives, which will form part of the film during normal ambient cure conditions, will also affect VOC values determined using EPA Method 24.

SYSTEMS COMPATIBILITY

Intertherm 715 can be applied directly to abrasive blast cleaned surfaces. However, when improved anti-corrosive performance is required the following primers are recommended:

Interzinc 22

Intertherm 715 is not normally topcoated with products other than itself.

For other suitable primers, consult International Protective Coatings.

Modified Silicone

ADDITIONAL INFORMATION

Further information regarding industry standards, terms and abbreviations used in this data sheet can be found in the following documents available at www.international-pc.com:

- Definitions & Abbreviations
- Surface Preparation
- Paint Application
- Theoretical & Practical Coverage

Individual copies of these information sections are available upon request.

SAFETY PRECAUTIONS

This product is intended for use only by professional applicators in industrial situations in accordance with the advice given on this sheet, the Material Safety Data Sheet and the container(s), and should not be used without reference to the Material Safety Data Sheet (MSDS) which International Protective Coatings has provided to its customers.

All work involving the application and use of this product 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 this product, consult International Protective Coatings for further advice.

PACK SIZE	Unit Size	Vol	Pack
	5 litre	5 litre	5 litre
For availability of other pack sizes, contact International Protective Coatings.			
SHIPPING WEIGHT (TYPICAL)	Unit Size		
	5 litre	6.6 kg	
STORAGE	Shelf 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.	

Important Note

The information in this data sheet is not intended to be exhaustive; any person using the product for any purpose other than that specifically recommended in this data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at their own risk. All advice given or statements made about the product (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing to do so, we do not accept any liability at all for the performance of the product or for (subject to the maximum extent permitted by law) any loss or damage arising out of the use of the product. We hereby disclaim any warranties or representations, express or implied, by operation of law or otherwise, including, without limitation, any implied warranty of merchantability or fitness for a particular purpose. All products supplied and technical advice given are subject to our Conditions of Sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is liable to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to check with their local representative that this data sheet is current prior to using the product.

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