

High Temperature Silicone

PRODUCT DESCRIPTION

A single component, heat resistant, metal spray sealer coating, based on a pure silicone resin, with optimised aluminium flake for barrier properties.

INTENDED USES

Designed for use as a sealer coat on thermally sprayed metal coatings, including aluminium, to reduce porosity and increase overall corrosion resistance, in atmospheric and subsea applications, as noted in Karl P. Fisher, Trevor Rosbrook, William H. Thomason, Jay Murali, "Performance of thermal sprayed aluminium coatings in the splash zone and for riser service", NACE International, Houston, TX, Corrosion 94, Paper 499 – 1994.

Contact International Protective Coatings for further track record details.

PRACTICAL INFORMATION FOR INTERTHERM 179

Colour	Aluminium
Gloss Level	Not applicable
Volume Solids	37%
Typical Thickness	15 microns (0.6 mils) dry equivalent to 41 microns (1.6 mils) wet
Theoretical Coverage	24.70 m ² /litre at 15 microns d.f.t and stated volume solids 989 sq.ft/US gallon at 0.6 mils d.f.t and stated volume solids
Practical Coverage	Allow appropriate loss factors
Method of Application	Air spray, Roller, Brush

Drying Time

Temperature	Touch Dry	Hard Dry	Overcoating Interval with recommended topcoats	
			Minimum	Maximum
5°C (41°F)	2 hours	60 minutes ²	16 hours	Extended ¹
15°C (59°F)	85 minutes	60 minutes ²	16 hours	Extended ¹
25°C (77°F)	60 minutes	60 minutes ²	16 hours	Extended ¹
40°C (104°F)	45 minutes	60 minutes ²	16 hours	Extended ¹

¹ See International Protective Coatings Definitions and Abbreviations

² This product will not fully harden until heated to 200°C (392°F). See Product Characteristics section for further information.

REGULATORY DATA

Flash Point (Typical)	27°C (81°F)
Product Weight	1.10 kg/l (9.2 lb/gal)
VOC	537g/kg EU Solvent Emissions Directive (Council Directive 1999/13/EC)

See Product Characteristics section for further details

Protective Coatings

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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.

Primed Surfaces

Intertherm 179 should always be applied over a recommended anti-corrosive coating scheme. The primer surface should be dry and free from all contamination and Intertherm 179 must be applied within the overcoating intervals specified (consult the relevant product data sheet).

Areas of breakdown, damage etc., should be prepared to the specified standard (e.g. Sa2½ (ISO 8501-1:2007) or SSPC SP6 Abrasive Blasting or SSPC SP11, Power Tool Cleaning) and patch primed prior to the application of the product.

Zinc Primed Surfaces

Intertherm 179 is suitable for application to unweathered steelwork freshly coated with solvent based zinc silicate shop primers.

Other types of shop primer are not suitable for overcoating.

Weld seams and damaged areas should be blast cleaned to Sa2½ (ISO 8501-1:2007) or SSPC-SP10 and primed with a suitable zinc silicate primer.

Aluminium Metal Spray

Application of Intertherm 179 should be undertaken within the recommended overcoating limits for metal spray. Normally, application of the sealer should take place within 8 hours of the final application of metal spray (as per NACE No.12, SSPC-CS 23.00 and AWS C2.23M). The surface to be coated should be clean, dry and free from contamination before application of Intertherm 179.

APPLICATION

Mixing	This material is a one component coating and should always be mixed thoroughly with a power agitator before application.		
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	Only for small areas or touch ups	
Roller	Suitable	Only for small areas or touch ups	
Thinner	International GTA179	Do not thin more than allowed by local environmental legislation	
Cleaner	International GTA179		
Work Stoppages	Thoroughly flush all equipment with International GTA179. 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 GTA179. 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.		

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PRODUCT CHARACTERISTICS

For high temperature service, Intertherm 179 requires heat curing at 200°C (392°F) to give optimum crosslinking and fully develop film properties such as hardness. Heat curing is not required for sealing metal spray.

The maximum DFT which should be applied before heating is 15 microns (0.6 mils) otherwise blistering will occur. Two or more coats cannot be applied without heating between coats.

When using Intertherm 179 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 179 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 179.

When using a zinc silicate primer to obtain maximum corrosion resistance the recommended thickness of zinc silicate is 50 microns (2 mils) dry film thickness to ensure maximum surface strength for any subsequent temperature cycling and to avoid flaking of topcoats

Level of sheen and surface finish are dependent on application method. Avoid using a mixture of application methods whenever possible.

When using Intertherm 179 to seal thermally sprayed metal coatings, such as aluminium, thinning with International GTA179 thinners will be necessary to ensure good penetration of the metal spray (depending on its porosity and applied thickness).

Note: VOC values are typical and are provided for guidance purpose only. These may be subject to variation depending on factors such as differences in colour 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

This specialist coating is only compatible with a very limited number of products.

Interzinc 22

Intertherm 179 should only be overcoated with itself. For high temperature service, stoving is required between coats.

For other suitable primers/topcoats, consult International Protective Coatings.

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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
Product sales code for Intertherm 179 is HTA200.			
For availability of other pack sizes, contact International Protective Coatings.			
SHIPPING WEIGHT (TYPICAL)	Unit Size		
	5 litre		6.01 kg
STORAGE	Shelf Life		
			24 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.

This Technical Data Sheet is available on our website at www.international-marine.com or www.international-pc.com, and should be the same as this document. Should there be any discrepancies between this document and the version of the Technical Data Sheet that appears on the website, then the version on the website will take precedence.

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