

Inorganic Zinc Rich Silicate

PRODUCT DESCRIPTION

Part of the Interzinc 22 series of products.

A two component, rapid recoat, fast curing solvent based inorganic zinc rich ethyl silicate primer. Conforms to SSPC Paint 20 Level 2

Available in ASTM D520, Type II zinc dust version as standard.

INTENDED USES

A zinc primer suitable for use with a wide range of high performance systems and topcoats in both maintenance and new construction of bridges, tanks, pipework and structural steelwork.

Provides excellent corrosion protection for correctly prepared steel substrates, up to temperatures of 540°C (1004°F) when suitably topcoated.

Fast curing primer capable of application in a wide range of climatic conditions.

PRACTICAL INFORMATION FOR INTERZINC 2277

Colour	Green Grey
Gloss Level	Matt
Volume Solids	66%
Typical Thickness	50-75 microns (2-3 mils) dry equivalent to 76-114 microns (3-4.6 mils) wet
Theoretical Coverage	8.80 m ² /litre at 75 microns d.f.t and stated volume solids 353 sq.ft/US gallon at 3 mils d.f.t and stated volume solids
Practical Coverage	Allow appropriate loss factors
Method of Application	Airless Spray, Air Spray
Drying Time	

Temperature	Touch Dry	Hard Dry	Overcoating Interval with recommended topcoats	
			Minimum	Maximum
5°C (41°F)	30 minutes	3 hours	18 hours	Extended ¹
15°C (59°F)	20 minutes	1.5 hours	9 hours	Extended ¹
25°C (77°F)	10 minutes	1 hour	4.5 hours	Extended ¹
40°C (104°F)	5 minutes	30 minutes	1.5 hours	Extended ¹

¹ See International Protective Coatings Definitions and Abbreviations

The drying times quoted have been determined at the quoted temperature and 55% relative humidity. The 5°C (41°F) time was determined at 60% relative humidity. Prior to overcoating, verify a value of 4 via ASTM D4752 MEK rub test. See Product Characteristics section for more details on overcoating.

REGULATORY DATA

Flash Point (Typical)	Part A 13°C (55°F); Mixed 13°C (55°F)	
Product Weight	2.31 kg/l (19.3 lb/gal)	
VOC	3.92 lb/gal (470 g/l) 192 g/kg	EPA Method 24 EU Solvent Emissions Directive (Council Directive 1999/13/EC)

See Product Characteristics section for further details

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SURFACE PREPARATION

All surfaces to be coated should be clean, dry and free from contamination. Prior to 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 (or SSPC-SP10 for optimum performance). If oxidation has occurred between blasting and application of Interzinc 2277, 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.

A surface profile of 40-75 microns (1.5-3.0 mils) is recommended.

Shop Primed Steelwork

Interzinc 2277 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.

Damaged / Repair Areas

All damaged areas should ideally be blast cleaned to Sa2½ (ISO 8501-1:2007) or SSPC-SP6. However, it is acceptable that small areas can be power tool cleaned to Pt3 (JSRA SPSS:1984) or SSPC-SP11, provided the area is not polished. Repair of the damaged area can then be carried out using a recommended zinc epoxy primer - consult International Protective Coatings for specific advice.

APPLICATION

Mixing	Interzinc 2277 is supplied in two parts, a liquid Binder base component (Part A) and a Powder component (Part B). The Powder (Part B) should be slowly added to the liquid Binder (Part A) whilst stirring with a mechanical agitator. DO NOT ADD LIQUID TO POWDER. Material should be filtered prior to application and should be constantly agitated in the pot during spraying. Once the unit has been mixed it should be used within the working pot life specified.			
Mix Ratio	4 part(s) : 1 part(s) by volume			
Working Pot Life	5°C (41°F) 12 hours	15°C (59°F) 8 hours	25°C (77°F) 4 hours	40°C (104°F) 2 hours
Airless Spray	Recommended	Tip Range 0.38-0.53 mm (15-21 thou) Total output fluid pressure at spray tip not less than 112 kg/cm ² (1593 p.s.i.)		
Air Spray (Pressure Pot)	Recommended	Gun Air Cap Fluid Tip	DeVilbiss MBC or JGA 704 or 765 E	
Brush	Suitable - small areas only	Typically 25-50 microns (1.0-2.0 mils) can be achieved		
Roller	Not recommended			
Thinner	International GTA803(or International GTA415)	Do not thin more than allowed by local environmental legislation		
Cleaner	International GTA803 or International GTA415			
Work Stoppages	Do not allow material to remain in hoses, gun or spray equipment. Thoroughly flush all equipment with International GTA803. Once units of paint have been mixed they should not be resealed and it is advised that after prolonged stoppages work recommences with freshly mixed units.			
Clean Up	Clean all equipment immediately after use with International GTA803. 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

Prior to overcoating, Interzinc 2277 must be clean, dry and free from both soluble salts and excessive zinc corrosion products.

Surface temperature must always be a minimum of 3°C above dew point.

When applying Interzinc 2277 in confined spaces ensure adequate ventilation.

If thinning is required to assist spray application in warmer climates, (typically >28°C (82°F)), it is recommended that International GTA803 thinners are used

It is recommended that prior to overcoating a solvent rub test to ASTM D4752 should be undertaken. A value of 4 indicates a satisfactory degree of cure for overcoating purposes.

At relative humidities below 55%, curing will be retarded. Humidity may be increased by the use of steam or water spraying. However, cure at relative humidities below 55% is more effectively achieved by incorporating the Low Humidity Cure Accelerator*; some example overcoating times at 15°C (59°F) are detailed below;

Relative Humidity (%)	20	30	40
Minimum Overcoating Interval	24 hours	10 hours	10 hours

The Interzinc 2277 Application Guidelines contain further information on expected cure times at lower relative humidities.

Excessive film thickness and/or over-application of Interzinc 2277 can lead to mudcracking, which will require complete removal of the affected areas by abrasive blasting and re-application in accordance with the original specification.

Care should be exercised to avoid application of dry film thickness in excess of 125 microns (5 mils).

For high temperature service, the thickness of Interzinc 2277 should be restricted to 50 microns d.f.t. Continuous dry temperature resistance of Interzinc 2277 is 400°C if left untopcoated, however, if this product is used as a primer for Intertherm 50 the dry temperature resistance will be 540°C.

Untopcoated Interzinc 2277 is not suitable for exposure in acid or alkaline conditions or continuous water immersion.

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.

*Only available in Europe, China, Middle East, Africa and Russia.

SYSTEMS COMPATIBILITY

When it is necessary for Interzinc 2277 to be overcoated by itself due to low dry film thickness, the coating surface must be fresh and unweathered. A minimum of 50 microns (2 mils) d.f.t of any subsequent coat of Interzinc 2277 is needed to ensure good film formation.

Before overcoating with recommended topcoats ensure the Interzinc 2277 is fully cured (see above) and if weathering has occurred all zinc salts should be removed from the surface by fresh water washing, and if necessary scrubbing with bristle brushes.

Typical topcoats and intermediates are:

Intercure 200	Intergard 475HS
Intercure 420	Interseal 670HS
Intergard 251	Intergard 269
Intertherm 50	Interplus 356

In some cases it may be necessary to apply a mist coat of suitable viscosity to minimise bubbling. This will depend upon the age of the Interzinc 2277, surface roughness and ambient conditions during curing and application. Alternatively, an epoxy sealer coat, such as Intergard 269, can be used to reduce bubbling problems.

For other suitable topcoats/intermediates 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
- Interzinc 2277 Application Guidelines

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	Part A		Part B	
		Vol	Pack	Vol	Pack
	16.8 litre	13.44 litre	15 litre	3.36 litre	20 litre

For availability of other pack sizes, contact International Protective Coatings.

SHIPPING WEIGHT (TYPICAL)
Shipping weights can vary depending on supply point; please contact International Paint for further details.

STORAGE	Shelf Life
	Part A 6 months minimum at 25°C (77°F). Part B 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.

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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