InterH2O® 499 FWA500 Series International®

Water Based Epoxy

PRODUCT DESCRIPTION

A two component, high performance fast drying water based epoxy. InterH2O 499 FWA500 Series is suitable for use as a direct to metal primer or as an intermediate, and has an extremely low solvent content.

INTENDED USES

Designed as a high build corrosion resistant primer intermediate for use in water based systems for non-immersed structural steel.

Systems incorporating InterH2O 499 FWA500 Series will give high performance in aggressive environments in a wide range of industries including commercial infrastructure, petrochemical, power and energy industries.

Fast drying and extended overcoating properties are ideal for new construction use.

PRACTICAL INFORMATION FOR INTERH2O 499 FWA500 SERIES

Colour	Red, Grey, White
Gloss Level	Matt
Volume Solids	52%
Typical Thickness	75-180 microns (3-7.2 mils) dry equivalent to 144-346 microns (5.8-13.8 mils) wet
Theoretical Coverage	3.71 m²/litre at 140 microns d.f.t and stated volume solids 149 sq.ft/US gallon at 5.6 mils d.f.t and stated volume solids
Practical Coverage	Allow appropriate loss factors
Method of Application	Airless Spray, Brush, Roller

Drying Time

			Overcoating Interval with recommended topcoats	
Temperature	**Touch Dry**	**Hard Dry**	*Minimum*	*Maximum*
10°C (50°F)	1 hour	8 hours	8 hours	6 months
15°C (59°F)	1 hour	6 hours	6 hours	6 months
25°C (77°F)	30 minutes	5 hours	5 hours	6 months
40°C (104°F)	30 minutes	2 hours	2 hours	6 months

The drying times quoted have been determined at 50% relative humidity and 0.2-0.5m/sec air flow. Overcoating interval can vary markedly with film thickness, humidity and in particular, air flow. Refer to InterH2O 499 FWA500 Series Application Guidelines for more details.

REGULATORY DATA

Flash Point (Typical)	Part A >100°C (>212°F); Part B >100°C (>212°F); Mixed >100°C (>212°F)	
Product Weight	1.385 kg/l (11.6 lb/gal)	
VOC	67 g/kg	EU Solvent Emissions Directive (Council Directive 2010/75/EU)
	19 g/lt	Chinese National Standard GB/T 23985-2009

Coating hazard marker GB 30981.2-W-Pb ≤1000-NC Qualified for GB 30981.2-2025

See Product Characteristics section for further details

Water Based Epoxy

SURFACE PREPARATION

All surfaces to be coated should be clean and free from contamination. Prior to application all surfaces should be assessed and treated in accordance with ISO 8504:2000. Where necessary, remove weld spatter and where required smooth weld seams and sharp edges. Oil or grease should be removed in accordance with SSPC-SP1 solvent cleaning.

Strict adherence to all cleanliness standards is essential for application of water based coatings.

Steel Substrates

Abrasive blast clean to Sa2½ (ISO 8501-1:2007) or SSPC-SP6. If oxidation has occurred between blasting and application of InterH2O 499 FWA500 Series, 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.

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 InterH2O 499 FWA500 Series.

Stainless Steel/Aluminium

Ensure surface is clean, dry and free from metal corrosion products prior to application. Sand or sweep blast with a non-metallic and chloride-free abrasive to create a surface profile.

Primed Surfaces

InterH2O 499 FWA500 Series can be applied over approved anti-corrosive primers. The primer surface should be dry and free from all contamination and InterH2O 499 FWA500 Series 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 and spot primed prior to the application of a full coat of InterH2O 499 FWA500 Series.

APPLICATION

Mixing

Material is supplied in two containers as a unit. Always mix a complete unit in the proportions supplied. Once the unit has been mixed, it must be used within the working pot life specified.

Mix Ratio

9 part(s) : 1 part(s) by volume

Working Pot Life

10°C (50°F)	15°C (59°F)	25°C (77°F)	40°C (104°F)
6 hours	6 hours	3 hours	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 176 kg/cm² (2503 p.s.i.)

Air Spray (Conventional)

Suitable

Gun	DeVilbiss MBC or JGA
Air Cap	704 or 765
Fluid Tip	E

Brush

Suitable - Small areas

Typically 50-75 microns (2.0-3.0 mils) can be achieved

Roller

Suitable - Small areas

Typically 50 microns (2.0 mils) can be achieved

Thinner

Clean potable water. Maximum dilution is 5% by volume.

Cleaner

International GTA991 (or clean water)

Choice of cleaner maybe subject to local legislation. Please consult your local representative for specific advice.

Work Stoppages

Do not allow material to remain in hoses, gun or spray equipment. Thoroughly flush all equipment with clean water followed by International GTA991. 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 clean water followed by International GTA991. It is good working practice to periodically flush out spray equipment during the course of the working day. Frequency should depend upon amount sprayed, temperature and elapsed time, including any delays.

All surplus material and empty containers should be disposed of in accordance with appropriate regional regulations/legislation.

PRODUCT CHARACTERISTICS

Apply by air or airless spray. Thoroughly flush equipment with International GTA991 thinner followed by water prior to use. To obtain maximum edge protection and film build, airless or air spray application is recommended. Application by other methods, e.g. brush or roller, may require more than one coat and should be limited to small areas.

As with all water based coatings careful control of application conditions is required to ensure good performance.

The following basic parameters must be adhered to:

InterH2O 499 FWA500 Series must be protected from freezing at all times during storage and transport. The recommended storage temperature is between 10°C (50°F) and 35°C (95°F).

The minimum steel temperature for application must be above 10°C (50°F), and be at least 3°C (5° F) above dew point.

The relative humidity should be lower than 85% otherwise drying and overcoating times will be severely extended. The relative humidity should be greater than 20% otherwise films may not coalesce satisfactorily. The air temperature must be kept between 10°C (50°F) and 40°C (104°F) during application to achieve films suitable for purpose. At temperatures of 30°C (86°F) higher relative humidities can be tolerated with good air flow.

Good airflow is essential around the object being painted [minimum air speed 0.1m/sec (4 inches/sec), maximum air speed 1m/sec (40 inches/sec)]. Optimal air speed 0.3-0.5m/s (12 - 20 inches/sec).

Minor areas which are difficult to ventilate should be brush applied to prevent over-application.

With InterH2O 499 FWA500 Series, no increase in viscosity is observed after mixing, even after long periods. However, if the stated pot lives are exceeded then the film formed on curing will have inferior properties and will not give the specified level of performance.

Over-application of InterH2O 499 FWA500 Series will extend both the minimum overcoating periods and handling times, and may be detrimental to long term overcoating properties.

In common with all epoxies InterH2O 499 FWA500 Series will chalk and discolour on exterior exposure. However, these phenomena are not detrimental to anti-corrosive performance.

Where a durable cosmetic finish with good gloss and colour retention is required overcoat with recommended topcoats.

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.

SYSTEMS COMPATIBILITY

InterH2O 499 FWA500 Series should always be applied to correctly prepared substrates.

Suitable primers are:
- InterH2O 499 FWA500 Series
- Interzinc 52E

Suitable topcoats are:
- InterH2O 699 PA Series

Please contact your local representative for further information.

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.
All work involving the application and use of this product should be performed in compliance with all relevant national Health, Safety and Environmental standards, regulations and legislation.

Proper ventilation must be provided during application and afterwards during curing (refer to product datasheets for typical curing times) to ensure safe limits and prevent fires and explosions. Forced extraction will be required in confined spaces. Ventilation and/or respiratory personal protective equipment (airfed hoods or appropriate cartridge masks) must be provided during application and curing. Take precautions to avoid skin and eye contact (overalls, gloves, goggles, masks, barrier cream, etc).

Before use, obtain, read and then follow the advice given on the Material Safety Data Sheets (Parts A and B if two-pack) and the Health and Safety section of the Coatings Applications Procedures for this product.

In the event that 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.

The detailed safety measures are dependent on application methods and the work environment. If you do not fully understand these warnings and instructions or if you cannot strictly comply with them, do not use the product and consult International Protective Coatings.

Warning: This product contains liquid epoxies and modified polyamines and may cause skin sensitisation if not used correctly.

PACK SIZE	Unit Size	Part A		Part B	
		Vol	Pack	Vol	Pack
	19 litre	17.1 litre	20 litre	1.9 litre	5 litre
	For availability of other pack sizes, contact AkzoNobel.				

SHIPPING WEIGHT (TYPICAL)	Unit Size	Part A	Part B
	19 litre	26.26 kg	2.38 kg

STORAGE	Shelf Life	12 months at 25°C (77°F). Subject to re-inspection thereafter. Store in dry, shaded conditions away from sources of heat and ignition. InterH2O 499 FWA500 Series must be protected from freezing at all times during storage and transport. The recommended storage temperature is between 10°C (50°F) and 35°C (95°F).

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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