InterH2O® 499

Water Borne Epoxy

PRODUCT DESCRIPTION

A two component, high performance fast drying water borne epoxy. Suitable for use as a direct to metal primer or as an intermediate. Extremely low solvent content meets all current and proposed VOC legislation.

INTENDED USES

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

These systems will give excellent performance in aggressive environments in a wide range of industries including commercial infrastructure, petrochemical, power, chemical, offshore structures and processing industries.

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

PRACTICAL INFORMATION FOR INTERH2O 499

Color	Red, Buff, Grey
Gloss Level	Matte
Volume Solids	52%
Typical Thickness	3-6.4 mils (75-160 microns) dry equivalent to 5.8-12.3 mils (144-308 microns) wet
Theoretical Coverage	167 sq.ft/US gallon at 5 mils d.f.t and stated volume solids 4.20 m²/liter at 125 microns d.f.t and stated volume solids
Practical Coverage	Allow appropriate loss factors
Method of Application	Airless Spray, Air Spray

Drying Time

			Overcoating Interval with recommended topcoats	
Temperature	**Touch Dry**	**Hard Dry**	*Minimum*	*Maximum*
50°F (10°C)	45 minutes	16 hours	8 hours	Extended[1]
59°F (15°C)	40 minutes	12 hours	5 hours	Extended[1]
77°F (25°C)	30 minutes	7 hours	4 hours	Extended[1]
104°F (40°C)	25 minutes	2.5 hours	3 hours	Extended[1]

[1] See International Protective Coatings Definitions & Abbreviations

Overcoating interval can vary markedly with film thickness, humidity and in particular, air flow.

REGULATORY DATA

Flash Point (Typical)	Part A >214°F (101°C); Part B 127°F (53°C); Mixed >214°F (101°C)	
Product Weight	11.6 lb/gal (1.39 kg/l)	
VOC	52 g/kg	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 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.

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

Abrasive Blast Cleaning

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

InterH2O 499 is also suitable for application onto fibreglass and concrete substrates. Contact International Protective Coatings for further details.

Primed Surfaces

Where InterH2O 499 is to be applied over a primer, this should only be of an approved type; see Systems Compatibilty for details. The primer surface should be dry and free from all contamination and InterH2O 499 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 8501-1:1998) or SSPC SP6 Abrasive Blasting or SSPC SP11, Power Tool Cleaning, and patch primed prior to the application of the product.

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.

(1) Agitate Base (Part A) with a power agitator.

(2) Combine entire contents of Curing Agent (Part B) with Base (Part A) and mix thoroughly with power agitator.

Mix Ratio

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

Working Pot Life

50°F (10°C)	59°F (15°C)	77°F (25°C)	104°F (40°C)
1 hour	2 hours	2 hours	2 hours

Airless Spray

Recommended

Tip Range 15-21 thou (0.38-0.53 mm)
Total output fluid pressure at spray tip not less than 2503 psi (176 kg/cm²)

Air Spray (Pressure Pot)

Recommended

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

Brush

Suitable - Small areas only

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

Roller

Suitable - Small areas only

Typically 2.0 mils (50 microns) can be achieved

Thinner

Clean potable water

Cleaner

International GTA991 (or clean water)

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/legialation.

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PRODUCT CHARACTERISTICS

Apply by air or airless spray. Thoroughly flush equipment with International GTA991 thinner, or alcohol, 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.

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 must be protected from freezing at all times during storage and transport. The recommended storage temperature is between 39°F (4°C) and 77°F (25°C).

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

The relative humidity should be lower than 80% 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 50°F (10°C) and 104°F (40°C) during application to achieve films suitable for purpose. At temperatures around 86°F (30°C) 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 that are difficult to ventilate should be brush applied to prevent over-application.

With InterH2O 499, 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. Unlike solvent based epoxies, the pot life of InterH2O 499 is shorter at low temperatures.

Over-application of InterH2O 499 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 will chalk and discolor on exterior exposure. However, these phenomena are not detrimental to anti-corrosive performance.

Where a durable cosmetic finish with good gloss and color 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 color and normal manufacturing tolerances.

SYSTEMS COMPATIBILITY

The following primers are recommended for InterH2O 499:

Water borne	Solvent borne
Interplate 809	Intergard 251
InterH2O 280	Interzinc 52
InterH2O 401	
InterH2O 499	

Suitable topcoats are:

Water borne	Solvent borne
Intercryl 700	Interfine 629HS
Intergard 1735	Interthane 990
InterH2O 699	
InterH2O 499	

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	Part A		Part B	
	Vol	Pack	Vol	Pack
20 liter	18 liter	20 liter	2 liter	3.7 liter

For availability of other pack sizes contact International Protective Coatings

SHIPPING WEIGHT (TYPICAL)

Unit Size	Part A	Part B
20 liter	27.8 kg	2.4 kg

U.N. Shipping No. Non Hazardous

STORAGE

Shelf Life	6 months minimum at 77°F (25°C). Subject to re-inspection thereafter. Store in dry, shaded conditions away from sources of heat and ignition. Protect from freezing at all times during storage.

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