

Epoxy Novolac

PRODUCT DESCRIPTION A high performance, highly crosslinked two component epoxy novolac tank lining, with excellent heat and solvent resistance.

INTENDED USES Suitable for internal lining of storage vessels, process vessels and pipe internals at elevated temperatures up to 130°C (266°F).

*See product characteristics for full information.

PRACTICAL INFORMATION FOR INTERLINE 399

Colour	Limited range
Gloss Level	Not applicable
Volume Solids	67%
Typical Thickness	85-125 microns (3.4-5 mils) dry equivalent to 127-187 microns (5.1-7.5 mils) wet
Theoretical Coverage	6.70 m ² /litre at 100 microns d.f.t and stated volume solids 269 sq.ft/US gallon at 4 mils d.f.t and stated volume solids
Practical Coverage	Allow appropriate loss factors
Method of Application	Airless Spray, Air Spray, Roller, Brush

Drying Time

Temperature	Touch Dry	Hard Dry	Overcoating interval with self	
			Minimum	Maximum
10°C (50°F)	8 hours	16 hours	36 hours	9 days
15°C (59°F)	7 hours	12 hours	24 hours	8 days
25°C (77°F)	5 hours	8 hours	16 hours	7 days
40°C (104°F)	3 hours	6 hours	16 hours	6 days

REGULATORY DATA **Flash Point (Typical)** Part A 26°C (79°F); Part B 48°C (118°F); Mixed 24°C (75°F)

Product Weight	1.85 kg/l (15.4 lb/gal)	
VOC	2.83 lb/gal (340 g/l)	EPA Method 24
	199 g/kg	EU Solvent Emissions Directive (Council Directive 2010/75/EU)
	312 g/l	Chinese National Standard GB23985

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.

Where necessary, remove weld spatter and smooth weld seams and sharp edges.

Oil or grease should be removed in accordance with SSPC-SP1 solvent cleaning.

Abrasive Blast Cleaning

This product must only be applied to surfaces prepared by abrasive blast cleaning to Sa2½ (ISO 8501-1:2007) or SSPC SP10. A sharp, angular surface profile of 50-75 microns (2-3 mils) is recommended.

Interline 399 must be applied before oxidation of the steel occurs. If oxidation does occur the entire oxidised area should be reblasted to the standard specified above.

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

Where local VOC regulations allow, surfaces may be primed with Interline 399 (thinned 10% GTA220) to 40 microns (1.5 mils) dry film thickness before oxidation occurs. Alternatively, the blast standard can be maintained by use of dehumidification.

APPLICATION

Mixing	Interline 399 must be applied in accordance with the detailed International Protective Coatings Working Procedures for the application of Tank Linings.	
	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.	
	<ul style="list-style-type: none"> (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	5.00 part(s) : 1.00 part(s) by volume	
Working Pot Life	10°C (50°F) 5 hours	15°C (59°F) 4 hours
	25°C (77°F) 2 hours	40°C (104°F) 1 hour
Airless Spray	Recommended	Tip Range 0.43-0.53 mm (17-21 thou) Total output fluid pressure at spray tip not less than 176 kg/cm ² (2503 p.s.i.)
Air Spray (Pressure Pot)	Recommended	Gun DeVilbiss MBC or JGA Air Cap 704 or 765 Fluid Tip E
Brush	Suitable - Stripe coats only	Typically 50-75 microns (2.0-3.0 mils) can be achieved
Roller	Not recommended	
Thinner	International GTA220	Thinning is not normally required. Consult the local representative for advice during application in extreme conditions. Do not thin more than allowed by local environmental legislation.
Cleaner	International GTA853 or International GTA415	
Work Stoppages	Do not allow material to remain in hoses, gun or spray equipment. Thoroughly flush all equipment with International GTA853. 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 GTA853. 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

The detailed Interline 399 Application Guidelines should be consulted prior to use.

Interline 399 is typically specified as a three coat system at 90 microns (3.6 mils) per coat to give a total coating system dry film thickness of 270 microns (10.8 mils). Exact specification for total dry film thickness will be dependent upon service end use requirements. Consult International Protective Coatings for specific advice regarding tank lining applications.

Maximum film build in one coat is best attained by airless spray. When applying by methods other than airless spray, the required film build is unlikely to be achieved. Application by air spray may require a multiple cross spray pattern to attain optimum film build. The use of other methods, e.g. brush or roller, may require more than one coat and are suggested only for small areas and initial stripe coating.

Surface temperature must always be a minimum of 3°C (5°F) above dew point.

Do not apply at steel temperatures below 10°C (50°F). The relative humidity during application and curing should not exceed 80%.

When applying Interline 399 in confined spaces ensure adequate ventilation.

Good ventilation throughout application and cure, and firm control of film thickness, are essential to ensure full removal of retained solvent and optimum performance of cured film. Total coating system film thickness must not exceed 350 microns (14 mils).

The curing times will vary depending upon dry film thickness and conditions that exist during application and throughout curing periods.

Return to Service

The following minimum cure times are recommended for Interline 399 to achieve its full chemical resistance properties.

<u>Temperature</u>	<u>Cure Schedule</u>
10°C (50°F)	14 days
15°C (59°F)	10 days
25°C (77°F)	7 days
35°C (95°F)	5 days
40°C (104°F)	4 days

Cure schedule refers to the minimum time at the specified substrate temperature prior to immersion in all chemicals as per the chemical resistance list.

After the last coat has cured hard, the coating system dry film thickness should be measured using a suitable non-destructive magnetic gauge to verify the average total applied system thickness. The coating system should be free of all pinholes or other holidays. The cured film should be essentially free of runs, sags, drips, inclusions or other defects. All deficiencies and defects should be corrected. The repaired areas shall be retested and allowed to cure as specified before placing the finished lining into service. Consult International Protective Coatings Interline 399 Application Guidelines for proper repair procedures.

Interline 399 is suitable for end uses which involve low salinity hot water, such as boiler houses, up to a temperature of 95°C (203°F). For higher temperature applications, please contact an International Paint representative.

This product has the following specification approvals:

DEF STAN 80-97 Annexe G for the lining of bulk aviation fuel tanks.

Spanish Norma INTA 164402-A.

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

This system is self-priming and is not suitable for application over other primers.

Interline 399 should only be topcoated with itself, and should never be overcoated with another product.

Consult International Protective Coatings to confirm that Interline 399 is suitable for contact with the product to be stored.

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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
- Interline 399 Application Guidelines

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 drying (Refer to product datasheets for typical drying times) to keep solvent concentrations within 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 drying. 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.

PACK SIZE	Unit Size	Part A		Part B	
		Vol	Pack	Vol	Pack
	20 litre	16.67 litre	20 litre	3.33 litre	5 litre
	5 US gal	4.17 US gal	5 US gal	0.83 US gal	1 US gal

For availability of other pack sizes, contact AkzoNobel.

SHIPPING WEIGHT (TYPICAL)	Unit Size	Part A	Part B
	20 litre	35.7 kg	3.96 kg
	5 US gal	71.4 lb	8 lb

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.

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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