

Interline 399

E p o x y N o v o l a c



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

Intended Uses Suitable for the internal lining of storage vessels and process vessels in petrochemical plants where exposure to sour crude oil and water from gas separator processing vessels at elevated temperatures up to 95°C (203°F) is envisaged.
Provides good resistance to aromatic and aliphatic solvents.

Practical Information for Interline 399

Colour	Limited range
Gloss Level	Not applicable
Volume Solids	67%
Typical Thickness	85-125 microns (3.5-5.0 mils) dry equivalent to 127-187 microns(5.1-7.5 mils) wet
Theoretical Coverage	6.7 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, Brush, Roller
Drying Time	

Temperature	Touch Dry	Hard Dry	Overcoating Interval with Interline 399 with Self	
			<i>Minimum</i>	<i>Maximum</i>
10°C (50°F)	8 hours	16 hours	36 hours	5 days
15°C (59°F)	7 hours	12 hours	24 hours	4 days
25°C (77°F)	5 hours	8 hours	16 hours	3 days
40°C (104°F)	3 hours	6 hours	16 hours	2 days

Regulatory Data

Flash Point	Base (Part A) 26°C (79°F)	C/A (Part B) 48°C (118°F)	Mixed 24°C (75°F)
Product Weight	1.85 kg/l (15.5 lb/gal)		
VOC	270 g/l (2.25 lb/gal)	UK - PG6/23(92), Appendix 3	
	2.83 lb/gal (340 g/l)	USA - EPA Method 24	



Ecotech is an initiative by International Protective Coatings a world leader in coating technology to promote the use of environmentally sensitive products across the globe.

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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 8504:1992.

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.

Abrasive Blast Cleaning

This product must only be applied to surfaces prepared by abrasive blast cleaning to Sa3 (ISO 8501-1:1988) or SSPC SP5.

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.

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 Interline 399 system sheet and the detailed International Protective Coatings Recommended Working Procedures for 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

- (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 parts : 1 part by volume

Working Pot Life

10°C (50°F)	15°C (59°F)	25°C (77°F)	40°C (104°F)
5 hours	4 hours	2 hours	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/cm² (2,500 p.s.i.)

Air Spray (Pressure Pot)

Recommended Gun DeVilbiss MBC or JGA
Air cap 704 or 765
Fluid Tip E

Brush

Suitable - Small areas only Typically 50-75 microns (2-3 mils) can be achieved

Roller

Suitable - Small areas only Typically 50-75 microns (2-3 mils) can be achieved

Thinner

International GTA220 Do not thin more than allowed by local environmental legislation.

Cleaner

International GTA853 (or 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

The detailed Tank Lining Working Procedures should be consulted prior to use.

Characteristics

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 conventional 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, or 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.

Maximum resistance is not attainable until the film has completely cured. Cure is a function of temperature, humidity and film thickness. Normally films at 270 microns (10.8 mils) dry film thickness will exhibit full and complete cure for optimal chemical resistance in 7-10 days at 25°C (77°F) and 50% relative humidity. Curing times are proportionately shorter at elevated temperatures and longer at lower temperatures.

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 and 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 Tank Lining Working Procedures for detailed repair procedures.

At immersion temperatures in excess of 60°C (140°F), it is essential that the storage vessel is insulated. This is necessary to avoid premature coating failure due to a temperature gradient within the coating film and substrate which can induce blistering (this is known as the "cold wall" effect).

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 sections of the International Protective Coatings data manual:

- Definitions & Abbreviations
- Surface Preparation
- Paint Application
- Theoretical & Practical Coverage

Individual copies of the following information are available upon request.

- Tank Linings Recommended Working Procedures

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	20 litre unit	Interline 399 Base	16.67 litres in a 20 litre container
		Interline 399 Curing Agent	3.33 litres in a 5 litre container
	For availability of other pack sizes contact International Protective Coatings		
Shipping Weight	U.N. Shipping No. 1263		
	20 litre unit	35.7 kg (78.7 lb) Base (Part A)	3.96 kg (8.7 lb) Curing Agent (Part B)
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.	

Disclaimer

The information given in this sheet is not intended to be exhaustive and any person using the product for any purpose other than that specifically recommended in this sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. Any warranty, if given, or specific Terms & Conditions of Sale are contained in International's Terms & Conditions of Sale, a copy of which can be obtained on request. Whilst we endeavour to ensure that all advice we give about the product (whether in this sheet or otherwise) is correct we have no control over either the quality or 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 whatsoever or howsoever arising for the performance of the product or for any loss or damage (other than death or personal injury resulting from our negligence) arising out of the use of the product. The information contained in this sheet is liable to modification from time to time in the light of experience and our policy of continuous product development.

It is the user's responsibility to check that this sheet is current prior to using the product. Issue date: 08/05/2003

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International Protective Coatings

Worldwide Availability

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