

Epoxy Phenolic

PRODUCT DESCRIPTION

A two component, solvent free chemically resistant heavy duty epoxy phenolic tank lining.

INTENDED USES

Interline 984 is intended as a lining for the protection of ferrous and non-ferrous substrates (including concrete). It may be used as a single or multi coat scheme, or as either a spray applied fibre reinforced Matcote system or a hand-lay glass reinforced system.

Interline 984 has been formulated to focus on Oil and Gas downstream lining opportunities with extended recoat interval designed to assist with the contract schedules associated with lining bulk storage tanks.

Interline 984 is compliant with EI1530 (Joint Industry Group standard). This is the quality assurance requirement for the manufacture, storage and distribution of aviation fuels to airports.

Interline 984 is resistant to crude oil at temperatures up to 90°C (194°F).

PRACTICAL INFORMATION FOR INTERLINE 984

Colour	Yellow, Green, White
Gloss Level	Not applicable
Volume Solids	100%
Typical Thickness	300-600 microns (12-24 mils) when used as an unreinforced system for walls or as a laminate gel coat. 400-1,000 microns (16-40 mils) for use as a single coat on tank floors. 1,250-1,400 microns (50-56 mils) when used as a laminate with fibre glass. Thickness is dependent upon application method and specification.
Theoretical Coverage	Unreinforced: 2.50 m ² /litre at 400 microns d.f.t and stated volume solids 100 sq.ft/US gallon at 16 mils d.f.t and stated volume solids Laminate: Thickness and coverage are dependent upon the configuration of the surface to be coated
Practical Coverage	Allow appropriate loss factors
Method of Application	Plural Component Airless Spray, Airless Spray, Brush, Roller

Drying Time

Temperature	Touch Dry	Hard Dry	Overcoating interval with self	
			Minimum	Maximum
10°C (50°F)	10 hours	36 hours	36 hours	28 days ¹
15°C (59°F)	9 hours	20 hours	20 hours	28 days ¹
25°C (77°F)	6 hours	12 hours	12 hours	28 days ¹
40°C (104°F)	2 hours	5 hours	5 hours	10 days ¹

¹ The values quoted relate to use within an enclosed tank environment. For situations where UV exposure between coats is likely, maximum overcoating intervals will be shorter. Contact International Protective Coatings for more details.

REGULATORY DATA

Flash Point (Typical) Part A >101°C (214°F); Part B 49°C (120°F); Mixed 75°C (167°F)

Product Weight 1.33 kg/l (11.1 lb/gal)

VOC 0.58 lb/gal (70 g/lit) 38 g/kg
EPA Method 24 (24 hours)
EU Solvent Emissions Directive
(Council Directive 2010/75/EU)

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 75-100 microns (3-4 mils) is recommended.

Interline 984 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 982 to 15-25 microns (0.6-1.0 mils) dry film thickness before oxidation occurs. Alternatively, the blast standard can be maintained by use of dehumidification.

Interline 982 can hold a blast for up to 28 days in the semi-protected environment of a tank interior. If moisture is present on the surface, oxidation will occur and reblasting will be required.

Interline 984 may also be applied over Intergard 269 for some cargoes; see page 3. The Intergard 269 can be overcoated up to 30 days after application; for longer overcoating periods (up to 90 days), the surface should be abraded and fresh water washed.

Laminate Systems

Prior to application of the laminate all weld seams, lap joints, plate edges or other designated areas should be caulked using Interline 921.

Gel Coat Application

Prior to application of the gel coat, the entire surface to be coated should be abraded to remove any protruding fibre glass strands or other irregularities. The surface should then be vacuum cleaned.

Concrete Surfaces

Refer to International Protective Coatings' Concrete Surface Preparation Guidelines for further information.

APPLICATION

Mixing	The detailed Interline 984 Application Guidelines should be consulted prior to use. 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.			
	<ol style="list-style-type: none"> (1) Agitate Base (Part A) with a power agitator. (2) Agitate Curing Agent (Part B) with a power agitator. (3) Combine entire contents of Curing Agent (Part B) with Base (Part A) and mix thoroughly with power agitator. 			
Mix Ratio	2 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)
	60 minutes	50 minutes	30 minutes	15 minutes
Plural Component	Suitable	Consult International Protective Coatings for specific recommendations. See Product Characteristics		
Airless Spray	Recommended	Tip Range 0.53-0.68 mm (21-27 thou) Total output fluid pressure at spray tip not less than 211 kg/cm ² (3000 p.s.i.)		
Air Spray (Pressure Pot)	Not recommended			
Brush	Suitable - small areas only	Typically 150-200 microns (6.0-8.0 mils) can be achieved		
Roller	Suitable - small areas only	Typically 150-200 microns (6.0-8.0 mils) can be achieved		
Thinner	Not suitable	DO NOT THIN		
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 984 Application Guidelines should be consulted prior to use.

When utilising Interline 984 as a glass fibre laminate system, please refer to the detailed Interline 984 Technical Specification for Glass Fibre Reinforced Systems.

Exact specification for total dry film thickness and number of coats will be dependent upon service end use requirements. Consult International Protective Coatings for specific advice regarding tank lining applications.

Interline 984 should be applied and inspected in accordance with the detailed Interline 984 Application Guidelines.

Heavily pitted areas should be stripe coated by brush, to ensure good "wetting" of the surface.

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).

Exposure to unacceptably low temperatures and/or high humidities during or immediately after application may result in incomplete cure and surface contamination that could jeopardise subsequent intercoat adhesion.

The cured film should be essentially free of runs, sags, drips, inclusions or other defects. All deficiencies and defects should be corrected. Repaired areas should be rested and allowed to cure as specified before placing the finished lining into service. Consult International Protective Coating Interline 984 Application Guidelines for detailed repair procedures.

Return to Service

The following minimum cure times are recommended for Interline 984

<u>Temperature</u>	<u>Schedule 1</u>	<u>Schedule 2</u>
10°C (50°F)	3 days	10 days
15°C (59°F)	2 days	7 days
25°C (77°F)	1 day	6 days
35°C (95°F)	18 hours	4 days
40°C (104°F)	12 hours	3 days

Schedule 1 refers to the minimum cure time at the specified substrate temperature prior to conducting a tank hydrotest or immersion in purely aliphatic petroleum products (e.g diesel or kerosene, however not gasoline or gasoline/alcohol blends).

Schedule 2 refers to the minimum cure time at the specified substrate temperature prior to immersion in all other chemicals as per the chemical resistance list.

This material is recommended for the storage of aviation fuel. It is also suitable for storage of unleaded gasoline, although blends containing methanol may be detrimental.

Intergard 269 may only be used as a holding primer for storage of crude oil/water mixes and refined hydrocarbon cargoes.

For storage of cargoes above ambient temperatures, consult International Protective Coatings for further details.

In common with all epoxies Interline 984 will chalk and discolour on exterior exposure. However, these phenomenon are not detrimental to chemical resistance performance.

This product has the following specification approvals:

- Compliance with DEF-STAN 80-97 annex G for the lining of bulk aviation fuel tanks
- Spanish Norma INTA 164402-A
- Meets the performance standard, EI1541 which are the test requirements for EI1530 compliance
- DEP 30.48.00.31- Gen. systems LT1-N and LT1-M for crude oil service
- Compliant with the requirements of MIL PRF 23236

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.

SYSTEMS COMPATIBILITY

Interline 984 can be applied directly to correctly prepared bare steel. However, it is suitable for application over the following primer:

- Interline 982
- Ceilmate 680M (to be used as a sealer for concrete application)
- Intergard 269

This product can also be applied over Interline 921 caulk where this material has been specified.

Interline 984 should only be topcoated with itself, and should never be overcoated with another product.

Consult International Protective Coatings to confirm that Interline 984 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 984 Application Guidelines
- Interline 984 Technical Specification for Glass Fibre Reinforced Systems

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
	15 US gal	10 US gal	5 US gal	5 US gal	5 US gal
	18 litre	12 litre	20 litre	6 litre	10 litre

For availability of other pack sizes, contact AkzoNobel.

SHIPPING WEIGHT (TYPICAL)	Unit Size	Part A	Part B
		18 litre	17.15 kg
	15 US gal	113.9 lb	60.7 lb
	U.N.Shipping No.	UN3082 (Part A) : UN2924 (Part B)	

STORAGE	Shelf Life
	18 months minimum at 25°C (77°F). Subject to re-inspection thereafter. Store in dry, shaded conditions away from sources of heat and ignition. International Paint recommends storage above 10°C (50°F) at all times to ensure stability of the product.

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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