

PRODUCT DESCRIPTION

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

INTENDED USES

To provide corrosion protection to the internals of steel storage tanks containing an extensive range of products, including crude oil, unleaded gasoline blends, MTBE, alcohols, aviation fuels, and aromatic and aliphatic solvents.

Interline 984 has been specifically formulated to rapidly develop chemical resistance properties, and also provide extended recoat intervals to assist with contract schedules. Coated substrates can be rapidly returned to service in as little as 24 hours, thereby significantly reducing downtime.

Capable of being used as either a single coat unreinforced system, or in conjunction with fibreglass to form a glass reinforced laminate system.

Suitable for application over concrete for lining and secondary containment purposes.

PRACTICAL INFORMATION FOR INTERLINE 984

Color	Yellow, Green, White
Gloss Level	Not applicable
Volume Solids	100%
Typical Thickness	12-24 mils (300-600 microns) when used as an unreinforced system for walls or as a laminate gel coat. 16-40 mils (400-1,000 microns) for use as a single coat on tank floors. 50-56 mils (1,250-1,400 microns) when used as a laminate with fibreglass. Thickness is dependent upon application method and specification.
Theoretical Coverage	Unreinforced: 100 sq.ft/US gallon at 16 mils d.f.t and stated volume solids 2.50 m ² /liter at 400 microns 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
50°F (10°C)	10 hours	36 hours	36 hours	28 days ¹
59°F (15°C)	9 hours	20 hours	20 hours	28 days ¹
77°F (25°C)	6 hours	12 hours	12 hours	28 days ¹
104°F (40°C)	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 Part A >214°F (101°C); Part B 120°F (49°C); Mixed 167°F (75°C)

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

VOC 0.58 lb/gal (70 g/lt)
38 g/kg
EPA Method 24 (24 hours)
EU Solvent Emissions Directive
(Council Directive 1999/13/EC)

See Product Characteristics section for further details

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

Interline 984 must be applied before oxidation of the steel occurs. If oxidation does occur the entire oxidized 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 0.6-1.0 mils (15-25 microns) 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.

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 fiberglass strands or other irregularities. The surface should then be vacuum cleaned.

Concrete Surfaces

Refer to International Protective Coatings for specific recommendations.

APPLICATION

Mixing	Interline 984 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.			
	(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	50°F (10°C)	59°F (15°C)	77°F (25°C)	104°F (40°C)
	60 minutes	50 minutes	30 minutes	15 minutes
Plural component airless spray	Suitable	Consult International Protective Coatings for specific recommendations. See Product Characteristics.		
Airless Spray	Recommended	Tip Range 21-27 thou (0.53-0.68 mm) Total output fluid pressure at spray tip not less than 3000 psi (211 kg/cm ²)		
Air Spray (Pressure Pot)	Not recommended			
Brush	Suitable - Small areas only	Typically 6.0-8.0 mils (150-200 microns) can be achieved		
Roller	Suitable - Small areas only	Typically 6.0-8.0 mils (150-200 microns) 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.			

PRODUCT CHARACTERISTICS

The detailed Interline 984 Working Procedures should be consulted prior to use.

When utilizing 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 the service end use requirements. Consult International Protective Coatings for specific advice regarding tank lining applications.

Apply by airless spray only. Application by other methods, e.g. brush or roller, may require more than one coat and is suggested for small areas only or initial stripe coating.

Interline 984 can be applied by standard 63:1 ratio airless spray equipment when the paint temperature is maintained between 59-77°F (15- 25°C). At lower temperatures an in-line heater of a suitable pressure rating may be used to assist with pumping and atomisation of the product. Additionally, Interline 984 is suitable for application by plural component airless spray equipment capable of accurate proportioning, which allows more flexible application at high temperatures, especially when applying a glass reinforced laminate system.

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

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

Do not apply at steel temperatures below 50°F (10°C).

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

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. Dry film thicknesses in excess of 20 mils (500 microns), can be checked using a suitable high voltage pulsating type holiday detector, set at 100 volts per mil (25 microns d.f.t.). Excessive voltage may produce a holiday in the coating film. 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 984 Working Procedures 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>
50°F (10°C)	3 days	10 days
59°F (15°C)	2 days	7 days
77°F (25°C)	1 day	6 days
95°F (35°C)	18 hours	4 days
104°F (40°C)	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.

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:

- DEF stan 80-97 for the lining of bulk aviation fuel tanks.
- Compliant with EI 1541 - Performance requirement for Protective Coatings used in aviation fuel storage tank linings and piping.
- U.S. Military Specification MIL PRF 4556F.
- Spanish Norma INTA 164402-A.

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.

Low molecular weight reactive additives, which will form part of the film during normal ambient cure conditions, will also effect 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

Celcote 680M (to be used as a sealer for concrete application)

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.

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 (Base and Curing Agent 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 sensitization 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 liter	12 liter	20 liter	6 liter	10 liter
For availability of other pack sizes contact International Protective Coatings					
SHIPPING WEIGHT	Unit Size	Part A		Part B	
		Vol	Pack	Vol	Pack
	18 liter	17.15 kg		10.02 kg	
	15 US gal	113.9 lb		60.7 lb	
	U.N.Shipping No.	UN3082 (Base) : UN2924 (Curing Agent)			
STORAGE	Shelf Life	18 months minimum at 77°F (25°C). Subject to re-inspection thereafter. Store in dry, shaded conditions away from sources of heat and ignition. International Paint recommends storage above 50°F (10°C) at all times to ensure stability of the product.			

Disclaimer

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 International Paint 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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