

Epoxy Phenolic

PRODUCT DESCRIPTION

A two component, chemically resistant phenolic epoxy novolac tank lining.

INTENDED USES

To provide corrosion protection for the internals of steel storage tanks, vessels, spools, pipes and rail cars.

Also suitable for lining vessels containing crude oil up to 320°F (160°C), vegetable oils (including palm oils) for temperatures up to 194°F (90°C) and molten sulfur.

PRACTICAL INFORMATION FOR INTERLINE 994

Color	Buff, Gray
Gloss Level	Semi Gloss
Volume Solids	70% ± 2%
Typical Thickness	4-8 mils (100-200 microns) dry equivalent to 5.7-11.4 mils (143-286 microns) wet
Theoretical Coverage	160 sq.ft/US gallon at 7 mils d.f.t and stated volume solids 4 m ² /liter at 175 microns d.f.t and stated volume solids
Practical Coverage	Allow appropriate loss factors
Method of Application	Airless Spray, Brush, Roller

Drying Time

Temperature	Touch Dry	Hard Dry	Overcoating interval with self	
			Minimum	Maximum
50°F (10°C)	6 hours	24 hours	60 hours	10 days
59°F (15°C)	5.5 hours	16 hours	50 hours	14 days
77°F (25°C)	3 hours	6 hours	36 hours	14 days
104°F (40°C)	2 hours	3 hours	16 hours	14 days

Overcoating data refers to application of second full coat over first full coat. See Page 3 for further information.

REGULATORY DATA

Flash Point (Typical)	Part A 82°F (28°C); Part B 84°F (29°C); Mixed 82°F (28°C)		
Product Weight	13.9 lb/gal (1.67 kg/l)		
VOC	2.42 lb/gal (290 g/l) 187 g/kg	EPA Method 24 EU Solvent Emissions Directive (Council Directive 1999/13/EC)	
	257 g/l Chinese National Standard GB23985		

See Product Characteristics section for further details

Protective Coatings

Epoxy Phenolic

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 Sa2.5 (ISO 8501-1:2007) or SSPC-SP10. For aqueous cargoes in elevated temperature service, the minimum standard of surface preparation should be abrasive blast clean to SSPC-SP5 or Sa3 (ISO 8501-1:2007). A sharp, angular surface profile of 2-3 mils (50-75 microns) is required.

The preferred method of holding the blast standard is by dehumidification. Interline 994 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.

Areas of breakdown, damage, weld seams etc., should be prepared to the specified standard (e.g. SSPC SP10 or Sa2½ (ISO 8501-1:2007) or power tool cleaned to SSPC SP11 or Pt3 (JSRA SPSS:1984)).

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.			
	It is recommended that Interline 994 is allowed a 20 minute induction period after mixing, prior to commencing application.			
Mix Ratio	7.38 part(s) : 1 part(s) by volume			
Working Pot Life	50°F (10°C) 6 hours	59°F (15°C) 5 hours	77°F (25°C) 3 hours	104°F (40°C) 1 hour
Airless Spray	Recommended	Tip Range 15-23 thou (0.38-0.58 mm) Total output fluid pressure at spray tip not less than 2503 psi (176 kg/cm ²)		
Brush	Recommended - Small areas only	Multiple coats may be required to achieve specified film thickness.		
Roller	Recommended - Small areas only	Multiple coats may be required to achieve specified film thickness.		
Thinner	DO NOT THIN			
Cleaner	International GTA822 or International GTA415			
Work Stoppages	Do not allow material to remain in hoses, gun or spray equipment. Thoroughly flush all equipment with International GTA822 or International GTA415. 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 GTA822 or International GTA415. 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. Do not exceed pot life limitations.			
	All surplus materials and empty containers should be disposed of in accordance with appropriate regional regulations/legislation.			

Epoxy Phenolic

PRODUCT CHARACTERISTICS

The detailed Interline 994 Application Guidelines should be consulted prior to use.

International Protective Coatings should be consulted to confirm that Interline 994 is suitable for the range of chemicals to be stored. For storage of certain chemicals, a mandatory heated post-cure is required. Interline 994 provides high temperature immersion resistance, for example, pressurized process water up to 365°F (185°C). However, for in-service temperatures above 212°F (100°C), International Paint should be consulted for confirmation of specification. This product severely yellows when exposed to sunlight, and should not be used on tank exteriors where color stability is important.

For molten sulfur railcar service only, Interline 994 may be applied in one or two coats to achieve a total system dft of 8 ± 2 mils (200 ± 50 microns). After application, post-curing may be used to improve productivity; consult the Interline 994 Application Guidelines for detailed guidance.

Interline 994 is compliant with the requirements of United States' FDA regulations and is suitable for use in rail cars intended to store and transport liquid and dry foodstuffs. Consult International Protective Coatings for further details.

Apply in good weather. Surface temperature must always be a minimum of 5°F (3°C) above dew point. When applying Interline 994 in confined spaces, ensure adequate ventilation.

Interline 994 should be brought up to 59°F (15°C) prior to mixing and application. In winter months, paint should be stored above 59°F (15°C) for a minimum of 48 hours to achieve the required minimum paint temperature.

Interline 994 will not cure adequately below 50°F (10°C). At no time during the application must the steel temperature fall below 50°F (10°C) and this temperature must be maintained throughout the application and for a minimum period of 48 hours after application of the final coat of the system. In addition, the relative humidity must not exceed 50% for temperatures in the range 50-68°F (10-20°C), or exceed 80% for temperatures greater than 68°F (20°C).

The drying times and overcoating intervals may alter due to various on-site factors such as tank configuration, ventilation rates etc.

Further overcoating interval information;

	50°F (10°C)	59°F (15°C)	77°F (25°C)	104°F (40°C)
3rd coat over 2nd coat	42 hours	32 hours	20 hours	14 hours
Full coat over stripe coat	24 hours	24 hours	8 hours	4 hours

Stripe coating is an essential part of good working practice and as such should form part of any lining specification. Stripe coats may not be overcoated wet-on-wet for this product; refer to the Interline 994 Application Guidelines for information on drying intervals.

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, or initial stripe coating.

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 994 Working Procedures for proper repair procedures.

Return to Service

The following minimum cure times are recommended for Interline 994

	50°F (10°C)	59°F (15°C)	77°F (25°C)	104°F (40°C)
Temporary (Water)*	4 days	4 days	4 days	4 days
Cargo	14 days	11 days	7 days	5 days

* Temporary immersion refers to water testing to highlight any "holidays" in the coating and must not exceed 7 days. On emptying, the tanks must be dried out.

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 994 will normally be applied to correctly prepared steel substrates. Interline 994 should only be overcoated with itself.

Epoxy Phenolic

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.

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.

PACK SIZE	Unit Size	Part A		Part B	
		Vol	Pack	Vol	Pack
	20 liter	17.61 liter	20 liter	2.39 liter	2.5 liter
	5 US gal	3.52 US gal	5 US gal	0.48 US gal	0.5 US gal
For availability of other pack sizes contact International Protective Coatings					
SHIPPING WEIGHT (TYPICAL)	Unit Size	Part A		Part B	
	20 liter	31.17 kg		2.29 kg	
	5 US gal	54.6 lb		4.5 lb	
STORAGE	Shelf Life	12 months minimum at 77°F (25°C). Subject to re-inspection thereafter. Store in dry, shaded conditions away from sources of heat and ignition.			

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 representative that this data sheet is current prior to using the product.

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