

## Epoxy Phenolic

**PRODUCT DESCRIPTION**

Enviroline 3910 is a two component, solvent-free, epoxy phenolic lining with excellent flexibility which can be applied as a single coat system.

**INTENDED USES**

Designed for use in the rail market as a lining for the protection of ferrous substrates where storage and carriage of a broad range of commodities are required. It is suitable for use in rail cars, including jumbo hopper cars, intended to store and transport plastic pellets and dry bulk products.

Enviroline 3910 is formulated with ultra-high solids, resulting in low odor, low VOCs and zero HAPs, and is compliant with the requirements of United States' FDA regulations. Enviroline 3910 also has excellent edge retentive properties and its low surface energy of 36 Dynes/cm allows enhanced cargo release properties.

**PRACTICAL INFORMATION FOR ENVIROLINE 3910**

<b>Color</b>	Blue, Green
<b>Gloss Level</b>	Not applicable
<b>Volume Solids</b>	100% ± 2% (measured according to ISO 3233)
<b>Typical Thickness</b>	10-12 mils (250-300 microns) dry equivalent to 10-12 mils (250-300 microns) wet
<b>Theoretical Coverage</b>	146 sq.ft/US gallon at 11 mils d.f.t and stated volume solids 3.64 m <sup>2</sup> /liter at 275 microns d.f.t and stated volume solids
<b>Practical Coverage</b>	Allow appropriate loss factors
<b>Method of Application</b>	Airless Spray, Plural Component Airless Spray

**Drying Time**

			Overcoating interval with self	
<b>Temperature</b>	<b>Touch Dry</b>	<b>Hard Dry</b>	<i>Minimum</i>	<i>Maximum</i>
50°F (10°C)	14 hours	25 hours	2 hours	21 days
77°F (25°C)	5 hours	16 hours	2 hours	21 days
104°F (40°C)	3 hours	5 hours	2 hours	21 days

**REGULATORY DATA**

<b>Flash Point (Typical)</b>	Part A 261°F (127°C); Part B 226°F (108°C); Mixed 226°F (108°C)		
<b>Product Weight</b>	12.5 lb/gal (1.5 kg/l)		
<b>VOC</b>	0.79 lb/gal (95 g/l)	EPA Method 24	

See Product Characteristics section for further details

## Protective Coatings

## Epoxy Phenolic

### SURFACE PREPARATION

All surfaces to be coated should be clean and free from contamination. Prior to application all surfaces should be assessed and treated in accordance with ISO 8504:2000. 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.

#### Steel

Best performance will always be achieved when Enviroline 3910 is applied to surfaces prepared by abrasive blast cleaning to SSPC-SP5 or Sa3 (ISO 8501-1:2007). Where Enviroline 3910 is not to be used in high heat and/or aggressive service, preparation to an absolute minimum of SSPC-SP10 or Sa2½ (ISO 8501-1:2007) at time of coating application may be acceptable. Contact International Protective Coatings for further information.

A sharp, angular surface profile of 3-4 mils (75-100 microns) is recommended.

Enviroline 3910 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. The preferred method of holding the blast standard is by dehumidification.

### APPLICATION

<b>Mixing</b>	Material is supplied in two containers as a unit. Complete units should be stored, mixed and applied in accordance with the Enviroline 3910 Application Guidelines.	
<b>Mix Ratio</b>	3 part(s): 1 part(s) by volume	
<b>Working Pot Life</b>	77°F (25°C) 25 minutes	104°F (40°C) 15 minutes
<b>Plural component airless spray</b>	Recommended	Refer to Enviroline 3910 Application Guidelines for more details.
<b>Airless Spray</b>	Suitable	Tip Range 19-25 thou (0.48-0.64 mm) Total output fluid pressure at spray tip not less than 3185 psi (224 kg/cm <sup>2</sup> )
<b>Brush</b>	Suitable	Can be used for the touch-up of small areas or for stripe coating of welds and edges.
<b>Roller</b>	Suitable - Small areas only	
<b>Thinner Cleaner</b>	DO NOT THIN Enviroline 71C	
<b>Work Stoppages</b>	Do not allow material to remain in hoses, gun or spray equipment. Thoroughly flush all equipment with Enviroline 71C. 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.	
<b>Clean Up</b>	Clean all equipment immediately after use with Enviroline 71C. 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.	

All surplus material and empty containers should be disposed of in accordance with appropriate regional regulations/legislation.

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### PRODUCT CHARACTERISTICS

Always consult the Enviroline 3910 Application Guidelines prior to use.

This datasheet provides general guidance on the use of Enviroline 3910. Specific project requirements will be dependent upon the service end use and operating conditions of the tank or vessel. Always consult International Protective Coatings to confirm that Enviroline 3910 is suitable for contact with the product to be stored.

The detailed project coating specification provided by International Protective Coatings must be followed at all times.

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

For plural component airless spray application, best results will be achieved when the product is heated prior to application; Part A (Resin) to a maximum of 140°F (60°C) and Part B (Hardener) to a maximum of 86°F (30°C). For airless spray application, best results will be achieved when each component of the product is heated prior to application to 77-86°F (25-30°C). The minimum mixed paint temperature for airless spray application is 77°F (25°C).

Stripe coating is an essential part of good working practice and as such should form part of any lining specification. For heavily pitted or porous steel, spray apply approximately 50% of the required film thickness and follow immediately with a short nap roller or squeegee to work material into the bottom of pitted areas.

Use the following chart for preferred temperature conditions. These conditions plus adequate ventilation must be maintained throughout the curing cycle.

	<u>Substrate Temperature</u>	<u>Air Temperature</u>
<b>Preferred</b>	70-120°F (21-49°C)	70-100°F (21-38°C)
<b>Minimum</b>	55°F (13°C)	55°F (13°C)

After the coating system has cured hard, the dry film thickness should be measured using a suitable non-destructive magnetic gauge to verify the minimum 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.

Enviroline 3910 may be post-cured to expedite curing or increase chemical resistance for extremely aggressive environments. Post-cure for a minimum of 2 hours at 125°F (52°C) for maximum resistance. For post cure conditions specific to rail car application, see the relevant Enviroline 3910 Application Guidelines.

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.

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### SYSTEMS COMPATIBILITY

Enviroline 3910 is designed as a single coat system for application directly to correctly prepared substrates. Enviroline 3910 should only be overcoated with itself.

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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](http://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 in accordance with the advice given on this sheet, the Safety Data Sheet and the container(s), and should not be used without reference to the Safety Data Sheet (SDS).

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	Unit Size	Part A		Part B	
		Vol	Pack	Vol	Pack
	5 US gal	3 US gal	5 US gal	1 US gal	1 US gal
For availability of other pack sizes contact International Protective Coatings					
SHIPPING WEIGHT (TYPICAL)	Unit Size	Part A		Part B	
		101.5 lb		20.5 lb	
STORAGE	Shelf Life	12 months 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.*

*This Technical Data Sheet is available on our website at [www.international-marine.com](http://www.international-marine.com) or [www.international-pc.com](http://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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