

Hybrid Epoxy

PRODUCT DESCRIPTION

An ultra-high solids, low temperature cure, two component polycyclamine cured lining system utilizing advanced epoxy technology, designed for single-leg application.

Envioline 2405LT is designed for low temperature curing down to -7°C (19°F).

INTENDED USES

Intended to provide high corrosion protection, with a rapid cure in a single coat scheme, for the internals of steel storage tanks, pipes and vessels for service in crude oil up to 149°C (300°F). Its low surface energy of 36 Dynes/cm allows enhanced cargo release properties.

Envioline 2405LT is specifically designed for application and improved cure time at low temperature.

For use under other aggressive service conditions, including high temperature produced water, consult the Product Characteristics.

PRACTICAL INFORMATION FOR ENVIROLINE 2405LT

Colour	Green, Light Grey
Gloss Level	Not applicable
Volume Solids	96% ± 2% (measured according to ISO 3233)
Typical Thickness	500-750 microns (20-30 mils) dry equivalent to 521-781 microns (20.8-31.2 mils) wet
Theoretical Coverage	1.92 m ² /litre at 500 microns d.f.t and stated volume solids 77 sq.ft/US gallon at 20 mils d.f.t and stated volume solids
Practical Coverage	Allow appropriate loss factors
Method of Application	Heated Plural Component Airless Spray, Airless Spray

Drying Time

Temperature	Touch Dry	Hard Dry	Overcoating interval with self	
			Minimum	Maximum
-7°C (20°F)	40 hours	48 hours	*	*
0°C (32°F)	16 hours	22 hours	*	*
5°C (41°F)	7 hours	17 hours	*	*
15°C (59°F)	4 hours	7 hours	*	*

* Envioline 2405LT is designed as a single coat system. See page 3 Product Characteristics for further information on touch up/repair.

REGULATORY DATA

Flash Point (Typical)	Part A 101°C (214°F); Part B 57°C (135°F)
Product Weight	1.509 kg/l (12.6 lb/gal)
VOC	0.62 lb/gal (75 g/l) EPA Method 24

See Product Characteristics section for further details

Protective Coatings

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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.

Steel

Best performance will always be achieved when Enviroline 2405LT is applied to surfaces prepared by abrasive blast cleaning to Sa3 (ISO 8501-1:2007) or SSPC-SP5. Where Enviroline 2405LT is not to be used in high heat and/or aggressive service, preparation to an absolute minimum of Sa2½ (ISO 8501-1:2007) or SSPC-SP10 at time of coating application may be acceptable. Contact International Protective Coatings for further information.

A sharp, angular profile of 75-125 microns (3-5 mils) is recommended.

Enviroline 2405LT 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.

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

APPLICATION

Mixing	Enviroline 2405LT should be heated to 25°C (77°F) prior to application.	
	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	25°C (77°F) 35 minutes	
Plural Component Airless Spray	Recommended	See Application Guidelines for further information.
Airless Spray	Recommended	Tip Range 0.48-0.73 mm (19-29 thou) Total output fluid pressure at spray tip not less than 211 kg/cm ² (3000 p.s.i.)
Brush	Suitable - Small areas and stripe coating only	
Roller	Suitable - Small areas and stripe coating only	
Thinner	DO NOT THIN	
Cleaner	Enviroline 71C (or International GTA203)	
Work Stoppages	Thoroughly clean 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.	
Clean Up	Clean all equipment immediately after use with Enviroline 71C.	
	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 Enviroline 2405LT Application Guidelines should be consulted prior to use.

Enviroline 2405LT may also be used under continuous dry temperatures of up to 177°C (350°F).

This datasheet provides general guidance on the use of Enviroline 2405LT. 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 2405LT 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.

Stripe coating is an essential part of good working practice and as such should form part of any lining specification. For Enviroline 2405LT, stripe coats should be applied to or overcoated by a full coat application within a 60 minute window, i.e. 'wet-on-wet'.

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. The remaining full scheme should then be applied 'wet on wet', as above.

The minimum application and cure temperature for Enviroline 2405LT for either single leg or twin feed application is -7°C (19°F). Ensure that adequate ventilation is maintained throughout the curing cycle. Substrate temperature must always be a minimum of 3°C (5°F) above dew point. The minimum mixed paint temperature for airless spray application is 25°C (77°F).

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. For all touch-ups/repairs, it will be necessary to thoroughly abrade the surface of the lining with coarse emery paper followed by solvent wash. The repaired areas shall be retested and allowed to cure as specified before placing the finished lining into service.

Return to Service

The following minimum cure times are recommended for Enviroline 2405LT to achieve its full chemical resistance properties.

<u>Temperature</u>	<u>Cure Schedule</u>
-7°C (19°F)	10 days
0°C (32°F)	5 days
5°C (41°F)	3 days
15°C (59°F)	3 days

Cure schedule refers to the minimum time at the specified substrate temperature prior to immersion in all chemicals as per the chemical resistance list. This does not take into consideration any specific curing requirements for third party approvals.

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.

SYSTEMS COMPATIBILITY

Enviroline 2405LT is intended for use as a single product system and as such, should not be overcoated with any other product.

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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

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 AkzoNobel for further advice.

PACK SIZE	Unit Size	Part A		Part B	
		Vol	Pack	Vol	Pack
	5 US gal	3 US gal	5 US gal	1.5 US gal	3 US gal

For availability of other pack sizes, contact AkzoNobel.

SHIPPING WEIGHT (TYPICAL)	Unit Size	Part A	Part B
		5 US gal	61.1 lb

STORAGE	Shelf Life	
		12 months at 25°C (77°F). Subject to re-inspection thereafter. Store in dry, shaded conditions away from sources of heat and ignition.

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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