

Ceilcote® 180 Flakeline



Novolac Vinyl Ester

PRODUCT DESCRIPTION

Ceilcote 180 Flakeline is a heavy duty, glass flake reinforced, chemically resistant novolac vinyl ester lining for protection of steel against aggressive chemicals in immersion service.

INTENDED USES

Ceilcote 180 Flakeline is suitable for application in a wide range of environments and industries, such as fertiliser manufacture, petrochemical, metal finishing and refining, pulp and paper, power, textiles and transportation.

It has outstanding chemical resistance, permeation resistance and high temperature capability.

PRACTICAL INFORMATION FOR CEILCOTE 180 FLAKELINE

Color	Off White
Gloss Level	Not applicable
Volume Solids	100% reactive
Typical Thickness	30-76 mils (750-1900 microns) dry equivalent to 33.3-84.4 mils (833-2111 microns) wet per coat
Practical Coverage	36 sq.ft/US gallon at 40 mils d.f.t and 90% volume solids 0.90 m ² /litre at 1000 microns d.f.t and 90% volume solids (see Page 3 Product Characteristics)
Method of Application	Trowel

Drying Time

Temperature	Touch Dry	Hard Dry	Overcoating interval with self	
			Minimum	Maximum
50°F (10°C)	3 hours	8 hours	24 hours	4 weeks ¹
59°F (15°C)	2.5 hours	6.5 hours	24 hours	4 weeks ¹
77°F (25°C)	90 minutes	3 hours	4 hours	2 weeks ¹
95°F (35°C)	75 minutes	2 hours	3 hours	7 days ¹

¹ When surface temperatures exceed 95°F (35°C) or are exposed to direct sunlight, overcoating should take place as soon as the coating may be walked on, in order to avoid intercoat adhesion issues.

REGULATORY DATA

Flash Point (Typical)	Part A 91°F (33°C); Part B 171°F (77°C); Mixed 90°F (32°C)		
Product Weight	10.0 lb/gal (1.2 kg/l)		
VOC	1.68 lb/gal (202 g/l)	EPA Method 24	
	102 g/kg	EU Solvent Emissions Directive (Council Directive 1999/13/EC)	
	0.25 lb/gal (30 g/l)	ASTM D2369	

See Product Characteristics section for further details

Protective Coatings

Novolac Vinyl Ester

SURFACE PREPARATION

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

Oil or grease should be removed in accordance with SSPC-SP1 Solvent Cleaning.

Steel Substrates

For immersion service or service in humid conditions or elevated temperatures, this product should be applied to suitably primed surfaces which have been prepared by abrasive blast cleaning to Sa3 (ISO 8501-1:2007), SSPC SP5 or NACE #1. A minimum surface profile of 3 mils (75 microns) is required.

Concrete Substrates

Ceilcote 180 Flakeline is not suitable for application to concrete.

APPLICATION

Mixing	<p>Ceilcote 180 Flakeline is a multi-component product and as such the correct mixing ratios and working pot life must be strictly adhered to.</p> <p>(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.</p> <p>When FG-1 Dye is to be used, this should be incorporated into Part A, prior to addition of Part B, to achieve a uniform colour.</p> <p>Do not mix more material than can be applied within the recommended pot life.</p>			
Mix Ratio	1 gallon Part A : 2oz Part B (1 litre Part A : 15ml Part B)			
Working Pot Life	50°F (10°C) 60 minutes	59°F (15°C) 40 minutes	77°F (25°C) 40 minutes	95°F (35°C) 30 minutes
Plural component airless spray	Not suitable			
Airless Spray	Not suitable			
Brush	Suitable - Small areas only	Multiple coats may be required to achieve specified film thickness.		
Roller	Use for smoothing only.			
Trowel Thinner	Recommended DO NOT THIN			
Work Stoppages	Do not allow material to remain on equipment. Thoroughly clean all equipment with T-410 Solvent. 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. Once units have been mixed, work should continue until all mixed material has been used.			
Clean Up	<p>Clean all equipment immediately after use with T-410 Solvent. Frequency of cleaning will depend upon amount applied, temperature and elapsed time, including any delays.</p> <p>All surplus materials and empty containers should be disposed of in accordance with appropriate regional regulations/legislation.</p>			

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PRODUCT CHARACTERISTICS

This datasheet provides general guidance on the use of Ceilcote 180 Flakeline. 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 Ceilcote 180 Flakeline 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.

The detailed Application Guidelines for the relevant Ceilcote system should always be consulted prior to use.

Although Ceilcote 180 Flakeline is 100% reactive, depending upon the application conditions, the practical volume solids may be lower and International Protective Coatings suggest a value of 90% for estimating spreading rate.

Ceilcote 180 Flakeline is resistant to most acids, alkalis and solvents. Consult International Protective Coatings to confirm that the intended Ceilcote system is suitable for contact with the service conditions.

The Ceilcote 180 Flakeline system may be used for high temperature service with the selection of the appropriate primer; see the relevant Application Guidelines for further information.

Apply in good climatic conditions. The temperature of the surface to be coated should be between 50°F (10°C) and 113°F (45°C) and at least 5°F (3°C) above the dew point. In line with good painting practice, application should not take place in conditions which are deteriorating, e.g. dew point is falling or there is a risk of condensation forming. Ensure adequate ventilation is provided throughout application and curing. Dehumidification (DH), air conditioning and/or heating equipment may be necessary to control environmental conditions.

Where the overcoating interval is exceeded, confirm recoatability by wiping with styrene monomer. If the surface becomes 'tacky', adhesion is acceptable. If not softened by styrene, the surface must be sweep blasted or mechanically abraded to provide a non-glossy, abraded surface. Primed surface must be dry and free of foreign matter at time of lining, coating or flooring application.

Following correct installation, Ceilcote 180 Flakeline may be returned to service after the following intervals:

50°F (10°C): 48 hours
70°F (20°C): 24 hours
90°F (35°C): 16 hours

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 affect VOC values determined using EPA Method 24.

SYSTEMS COMPATIBILITY

Ceilcote 180 Flakeline is designed to be used in combination with a number of Ceilcote primers, linings or coatings. Please consult the specification and Application Guidelines.