

Ceilcote® 282 Flakeline



Novolac Vinyl Ester

PRODUCT DESCRIPTION

Ceilcote 282 Flakeline is a glass flake-filled, corrosion resistant lining system specifically designed for flue gas desulphurization environments.

INTENDED USES

Typical applications for Ceilcote 282 Flakeline include GGH units, absorber outlet ducts, steel stack/chimney flues and unscrubbed or raw gas duct streams.

It is also suitable for continuous immersion on steel seawater absorber towers and as a membrane under inorganic linings and glass, brick or block tile linings.

PRACTICAL INFORMATION FOR CEILCOTE 282 FLAKELINE

Color	Off White, Gray
Gloss Level	Not applicable
Volume Solids	100% reactive
Typical Thickness	15-25 mils (375-625 microns) dry equivalent to 17.6-29.4 mils (441-735 microns) wet per coat
Practical Coverage	76 sq.ft/US gallon at 18 mils d.f.t and 85% volume solids 1.89 m ² /litre at 450 microns d.f.t and 85% volume solids (see Page 3 Product Characteristics)
Method of Application	Airless Spray, Roller, Brush

Drying Time

Temperature	Touch Dry	Hard Dry	Overcoating interval with self	
			Minimum	Maximum
50°F (10°C)	5.5 hours	24 hours	12 hours ¹	7 days
59°F (15°C)	4 hours	16 hours	8 hours ¹	7 days
77°F (25°C)	2 hours	5 hours	4 hours ¹	7 days
95°F (35°C)	90 minutes	3 hours	3 hours ¹	3 days

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 93°F (34°C); Part B 171°F (77°C); Mixed 90°F (32°C)		
Product Weight	10.6 lb/gal (1.27 kg/l)		
VOC	1.80 lb/gal (216 g/l)	EPA Method 24	
	114 g/kg	EU Solvent Emissions Directive (Council Directive 1999/13/EC)	
	0.76 lb/gal (92 g/l)	ASTM D2369	

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 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 surfaces which have been prepared by abrasive blast cleaning to Sa3 (ISO 8501-1:2007), SSPC SP5 or NACE #1. For dry environments, abrasive blast cleaning to Sa2½ (ISO 8501-1:2007), SSPC SP10 or NACE #2 will be suitable. A minimum surface profile of 3 mils (75 microns) is required.

Concrete Substrates

Ceilcote 282 Flakeline is also suitable for application to concrete in certain conditions; please see Product Application Guidelines for further information.

APPLICATION

Mixing	<p>Ceilcote 282 Flakeline must always be mixed and applied in accordance with the detailed Application Guidelines for the subsequent system. 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.</p> <p>(1) Agitate Base (Part A) with a power agitator. (2) Combine entire contents of Initiator (Part B) with Base (Part A) and mix thoroughly with power agitator.</p> <p>Do not mix more material than can be applied within the recommended pot life.</p>			
Mix Ratio	1 gallon Part A : 2½oz Part B (1 litre Part A : 20ml Part B)			
Working Pot Life	50°F (10°C) 60 minutes	59°F (15°C) 50 minutes	77°F (25°C) 50 minutes	95°F (35°C) 20 minutes
Airless Spray	Recommended	Tip Range 27-37 thou (0.69-0.94 mm) Total output fluid pressure at spray tip not less than 2204 psi (155 kg/cm²)		
Brush	Suitable - Touch up and small areas only	Multiple coats may be required to achieve specified film thickness.		
Roller	Suitable - Touch up and small areas only	Multiple coats may be required to achieve specified film thickness.		
Thinner Cleaner	DO NOT THIN Ceilcote T-410 Solvent (or International GTA203)			
Work Stoppages	Do not allow material to remain in hoses, guns or spray equipment. Thoroughly flush all equipment with Ceilcote T410 or International GTA203. Once units of material 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	Clean all equipment immediately after use with T-410 Solvent. 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.			

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PRODUCT CHARACTERISTICS

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

The exact specification with regards to dry film thickness and number of coats will be provided by International Protective Coatings prior to application start up.

Although Ceilcote 282 Flakeline is 100% reactive, depending upon the application conditions, the practical volume solids may be lower and International Protective Coatings suggest a value of 85% for estimating spreading rate.

Elevated storage temperatures reduce shelf life. Uncatalysed Ceilcote 282 Flakeline is stable for 3 months from date of manufacture when stored below 77°F (25°C) in its original sealed containers. Ceilcote 282 Flakeline should never be stored in direct sunlight. It is recommended that material temperatures be kept as low as possible via refrigeration if necessary in order to prolong shelf life and pot life during airless spray application. It is important to take into consideration that material temperatures will increase following mixing. A recommended storage temperature range is 46°F-66°F (8°C-19°C).

Surface temperature must always be a minimum of 5°F (3°C) above dew point. Ensure adequate ventilation is provided throughout application and curing. Dehumidification (DH) air conditioning and/or heating equipment may be necessary to control environmental conditions.

For all application steps, the surface temperature, air temperature and material temperature should be between 50°F (10°C) and 110°F (43°C)

When working outside or in direct sunlight, concrete "gassing" or "breathing" may occur when the surface temperature is rising due to sunlight or increasing ambient temperature. This can cause bubbles or holes in the applied floor, lining or coating. When this problem occurs it is necessary to shade the surface from sunlight and/or apply the material in the cooler evening or at night so that initial cure can take place without air escaping from the concrete. Consult International Protective Coatings for more detailed recommendation.

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 282 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

Ceilcote 282 Flakeline is not intended to be used as a cosmetic finish and color stability will not be achievable.

Maximum continuous dry temperature resistance for Ceilcote 282 Flakeline is 400°F (204°C).

Ceilcote 282 Flakeline can be used as part of the following systems:

Lining System

Prime using Ceilcote 380 or 370HT primer. Apply additional primer and immediately apply a mat reinforcement leaving no wrinkles or hollows. Use additional material where necessary until the reinforcement is translucent. Complete using one or more layers of Ceilcote 282 Flakeline.

MR System

Prime using Ceilcote 380 or 370HT primer followed by a basecoat of Ceilcote 6650 Ceilcrete including the mat reinforcement layer. Complete using one or more layers of Ceilcote 282 Flakeline.

CeilLine System

Prime using Ceilcote 680 or 680M primer followed by an elastomeric basecoat layer of Ceilcote CeilLine including the mat reinforcement. Complete using one or more layers of Ceilcote 282 Flakeline.

Further application details may be found on the data sheets of the individual products mentioned.

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 282 Flakeline should be applied to correctly prepared substrates. However, it is suitable for application to the following primers:

Ceilcote 370HT Primer

Ceilcote 380 Primer

Ceilcote 282 Flakeline may also form a constituent part of other systems such as

Ceilcote 282 Ceilline

Ceilcote 282 Lining

Ceilcote 282MR

Ceilcote 282AR Flakeline

Ceilcote 282 Flakeline is usually 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:

- Definitions & Abbreviations
- Surface Preparation
- Paint Application
- Theoretical & Practical Coverage
- Ceilcote 282 Flakeline Application Guidelines

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 drying (Refer to product datasheets for typical drying times) to keep solvent concentrations within 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 drying. 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
	15 liter	14.71 liter	20 liter	0.29 liter	0.7 liter
	4 US gal	4 US gal	5 US gal	10 fl oz	1 US pint

For availability of other pack sizes contact International Protective Coatings

SHIPPING WEIGHT (TYPICAL)	Unit Size	Part A	Part B
		15 liter	20.44 kg
4 US gal	46.7 lb	1 lb	

STORAGE	Shelf Life
	6 months at 68°F (20°C). Subject to re-inspection thereafter. Store in dry, shaded conditions away from sources of heat and ignition. During storage and shipment, Ceilcote 282 Flakeline initiator must not be exposed to temperatures exceeding 30°C (90°F). Refrigeration recommended. Best practice would be to hold Parts A and B in separate stores.

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 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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