

Novolac Vinyl Ester

PRODUCT DESCRIPTION

Ceilcote 282HB Flakeline is a glass flake filled novolac vinyl ester high build lining for use on steel substrates.

Ceilcote 282HB Flakeline has excellent resistance to hot flue gas environments. The coating system can achieve a dry film thickness of up to 1350 microns (54 mils) in a single coat with or without the use of a primer. The intent is to eliminate one application step where similar coating systems require two separate applications. Ceilcote 282HB Flakeline is normally applied on metal surfaces with proper surface preparation.

INTENDED USES

Designed for use in elevated temperature FGD applications including flue gas ducts, stack flues, dry scrubbers, bag houses, hot electrostatic precipitators.

Ceilcote 282HB Flakeline demonstrates excellent chemical resistance in a variety of services. Utilisation of glass flake gives the product excellent permeation resistance.

High Build (HB) application to reduce number of coats required (can be applied single coat), minimises application time and potential inter-coat issues.

Resistant to different renewable/bio feedstocks and refined products (fuels) including animal/vegetable oils and fats, biodiesel, ethanol etc. Resistant to unlimited fatty acid content and higher temperature service.

PRACTICAL INFORMATION FOR CEILCOTE 282HB FLAKELINE

Colour	Grey, Off White			
Gloss Level	Not applicable			
Volume Solids	93% ± 2%			
Typical Thickness	750-1250 microns (30-50 mils) dry equivalent to 806-1344 microns (32.2-53.8 mils) wet			
Theoretical Coverage	0.93 m ² /litre at 1000 microns d.f.t and stated volume solids 37 sq.ft/US gallon at 40 mils d.f.t and stated volume solids			
Practical Coverage	Allow appropriate loss factors. Coverage will vary according to individual systems; consult the relevant Application Guidelines and specification for further information.			
Method of Application	Airless Spray			
Drying Time	Overcoating Interval with recommended topcoats			
Temperature	Touch Dry	Hard Dry	<i>Minimum</i>	<i>Maximum</i>
10°C (50°F)	90 minutes	3 hours	4 hours	28 days ¹
25°C (77°F)	60 minutes	2 hours	2 hours	28 days ¹
40°C (104°F)	15 minutes	45 minutes	60 minutes	28 days ¹

¹ Surfaces in direct sunlight must be recoated within 4 hours.

REGULATORY DATA

Flash Point (Typical)	Part A 31°C (88°F); Part B 56°C (133°F); Mixed 31°C (88°F)		
Product Weight	1.378 kg/l (11.5 lb/gal)		
VOC	2.26 lb/gal (271 g/l)	EPA Method 24	
	0.53 lb/gal (64 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 lining application, all surfaces should be assessed and treated in accordance with 8504:2000.

Oil or grease should be removed in accordance with SSPC-SP1 solvent cleaning.

Steel Substrates

For immersion or intermittent splash and spillage conditions, abrasive blast to “White Metal” in accordance with SSPC SP5, NACE 1 or ISO 8503-1 Sa3. A minimum surface profile of 100 microns (4 mils) is required. If a holding primer is required for Ceilcote 282HB Flakeline, then only use Ceilcote 370HT or Ceilcote 380 Primer at 50 - 125 microns (2-5 mils) as advised.

Where a holding primer is required for service temperatures at or above 80°C (176°F) this should be Ceilcote 370HT Primer only.

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.	
Mix Ratio	51 part(s) : 1 part(s) by volume	
Working Pot Life	10°C (50°F)	25°C (77°F) 40°C (104°F)
	90 minutes	45 minutes 5 minutes
Airless Spray	Recommended	Tip Range 0.9-1.09 mm (35-43 thou) Total output fluid pressure at spray tip not less than 155 kg/cm ² (2204 p.s.i.)
Air Spray (Pressure Pot)	Not suitable	
Air Spray (Conventional)	Not suitable	
Brush	Suitable - small areas only	
Roller	Not suitable	
Thinner	DO NOT THIN	
Cleaner	Ceilcote T-410 Solvent (or MEK)	
Work Stoppages	Do not allow material to remain in hoses, gun or spray equipment. Thoroughly flush 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.	
Clean Up	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.	
	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.

This datasheet provides general guidance on the use of Ceilcote 282HB Flakeline. Specific project requirements will be dependent upon the service end use and operating conditions. Always consult International Protective Coatings to confirm that Ceilcote 282HB 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 Ceilcote 282HB Flakeline application shall be conducted by the Applicator Company using employees trained in the appropriate application procedures. It is strongly advised that both supervisory and application personnel on site shall have attended a Ceilcote Applicator Training Program.

Elevated storage temperatures reduce shelf life. Uncatalysed Ceilcote 282HB Flakeline is stable for 3 months from date of manufacture when stored below 25°C (77°F) in its original sealed containers. Ceilcote 282HB 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 8°C-19°C (46°F-66°F).

Ceilcote 282HB Flakeline is recommended to be applied by airless spray; application by brush, may require multiple coats and is suggested for small area or areas where spraying is not an option. Surface texture and uniformity will vary with brush application.

Ceilcote 282HB Flakeline can be specified as a single coat application at 750 to 1250 microns (30 to 50 mils) DFT per coat in order to achieve optimum performance. This product must **not** be thinned as the use of thinners may severely inhibit the curing mechanism of the coating.

Surface temperature must always be a minimum of 3°C (5°F) above dew point. The relative humidity during application and curing should not exceed 80%. This product will not cure adequately below 10°C (50°F) For maximum performance ambient curing temperatures should be above 10°C (50°F). Dehumidification (DH) air conditioning and/or heating equipment may be necessary to control environmental conditions.

Do not apply if substrate temperature is more than 43°C (110°F). If temperature drops below 10°C (50°F) for short durations, consult International Protective Coatings representative.

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. When surface temperatures exceed 43°C (110°F), or when exposed to direct sunlight, Ceilcote 282HB Flakeline should be overcoated as soon as hard dry to avoid intercoat adhesion problems. Surfaces in direct sunlight must be recoated within 4 hours.

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

Consult International Protective Coatings for temperature limits for specific environments. Ceilcote 282HB Flakeline is not intended to be used as a cosmetic finish and colour stability will not be achievable.

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 282HB Flakeline is designed to be used in combination with a number of Ceilcote primers, linings or coatings. Please consult the specification and Application Guidelines.

The following primers are recommended for Ceilcote 282HB Flakeline:

Ceilcote 370HT Primer
Ceilcote 380 Primer

The following topcoats are recommended for Ceilcote 282HB Flakeline:

Ceilcote 222GF Flakeline
Ceilcote 222LSE Flakeline
Ceilcote 282 Flakeline TC
Ceilcote 282AR Flakeline

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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 282HB 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 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
	4 US gal	4 US gal	5 US gal	0.1 US gal	0.13 US gal
	25 US gal	25 US gal	30 US gal	0.57 US gal	1 US gal

For availability of other pack sizes, contact AkzoNobel.

SHIPPING WEIGHT (TYPICAL)	Unit Size	Part A	Part B
	25 US gal	326.1 lb	5.8 lb
	4 US gal	49.3 lb	0.8 lb

STORAGE	Shelf Life
	6 months at 20°C (68°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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