

Novolac Vinyl Ester

PRODUCT DESCRIPTION

Ceilcote 6650 Ceilcrete is a trowel-applied novolac vinyl ester system designed specifically for the protection of steel and concrete against corrosive chemicals. The system includes a synthetic or fibreglass reinforcing layer.

Ceilcote 6650 Ceilcrete exhibits excellent resistance to a wide range of solvents, chlorinated aromatics and aliphatics.

INTENDED USES

Ceilcote 6650 Ceilcrete is typically used to provide a seamless durable lining to tanks and trenches, chimneys, concrete pipes and scrubbers where additional chemical resistance is required.

Its excellent chemical resistance makes it suitable for floor coating, secondary containment, equipment foundations and pump bases.

PRACTICAL INFORMATION FOR CEILCOTE 6650 CEILCRETE

Colour	Grey, Black
Gloss Level	Not applicable
Volume Solids	100% reactive
Typical Thickness	<p>Basecoat: (Resin + Powder)1500microns (60 mils) dry equivalent to 1765microns (71mils) wet, with a theoretical coverage of 1.27 sq.m/litre (55 sq.ft/US gallon)</p> <p>Laminate (Resin saturated reinforced mat):800microns (32mils) with a theoretical coverage of 1.34 sq.m/litre (50 sq.ft/US gallon)</p> <p>Topcoat: (Resin + Powder)1500microns (60 mils) dry equivalent to 1765microns (71mils) wet, with a theoretical coverage of 1.27 sq.m/litre (55 sq.ft/US gallon)</p>
Practical Coverage	0.60 m ² /litre at 1500 microns d.f.t and 85% volume solids 23 sq.ft/US gallon at 60 mils d.f.t and 85% volume solids (see Page 3 Product Characteristics)
Method of Application	Trowel, Roller

Drying Time

Temperature	Touch Dry	Hard Dry	Overcoating Interval with recommended topcoats	
			Minimum	Maximum
10°C (50°F)	3 hours	15 hours	12 hours	7 days ¹
15°C (59°F)	2.5 hours	11.5 hours	8 hours	7 days ¹
25°C (77°F)	60 minutes	3 hours	4 hours	7 days ¹
35°C (95°F)	45 minutes	2 hours	3 hours	3 days ¹

¹ When surface temperatures exceed 35°C (95°F) 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 32°C (90°F); Part B 77°C (171°F); Mixed 32°C (90°F)		
Product Weight	1.04 kg/l (8.7 lb/gal)		
VOC	1.36 lb/gal (163 g/l)	EPA Method 24	
	43 g/kg	EU Solvent Emissions Directive (Council Directive 1999/13/EC)	

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 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 surface profile of 75-100 microns (3-4 mils) is required.

Concrete Substrates

Concrete should be well cured prior to priming with the appropriate primer. The concrete surface should be dry and pass the plastic sheet test (ASTM D4263). All surfaces should be clean, dry and free from curing compounds, release agents, trowelling compounds, surface hardeners, efflorescence, grease, oil, dirt, old coatings and loose or disintegrating concrete. All concrete surfaces must also be abrasive blast cleaned to provide a roughened surface and remove laitance. The surface tensile strength (ASTM 4541) as prepared should be at least 2MPa (300 psi). Refer to the Concrete Surface Preparation Guidelines for more information.

APPLICATION

Mixing	Ceilcote 6650 Ceilcrete must always be mixed and applied in accordance with the detailed Application Guidelines for the subsequent system. The resin component of this material is supplied in two containers as a unit. Always mix a complete unit in the proportions supplied. Once the material has been mixed it must be used within the working pot life specified.	
	<ol style="list-style-type: none"> (1) Agitate Part A, then combine the entire contents of Part A and Part B and mix thoroughly with a power agitator. (2) Part C, the powder component, should be slowly added to the thoroughly mixed Part A and Part B whilst stirring with a power agitator. See Product Characteristics Section for details of quantities required. 	
Mix Ratio	1 litre Part A : 20ml Part B (1 gallon Part A : 2½ oz Part B)	
Working Pot Life	10°C (50°F)	15°C (59°F) 25°C (77°F) 35°C (95°F) 90 minutes 60 minutes 45 minutes 30 minutes
Airless Spray	Not suitable	
Brush	Recommended	Use for application of resin saturant and smoothing liquid
Roller	Recommended	Use for application of resin saturant and smoothing liquid
Trowel Thinner	Recommended	Use for application of basecoat and topcoat
Cleaner	DO NOT THIN	
Cleaner	Ceilcote T-410 Solvent (or MEK)	
Work Stoppages	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.	
	All surplus materials and empty containers should be disposed of in accordance with appropriate regional regulations/legislation.	

Novolac Vinyl Ester

PRODUCT CHARACTERISTICS

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

The Ceilcote 6650 Ceilcrete application shall be conducted by the Applicator Company using employees trained in the appropriate application procedures. It is strongly advised that both application and application supervision is only carried out by professional personnel who have been trained in the correct use of the products.

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 6650 Ceilcrete 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.

Surface temperature must always be a minimum of 3°C (5°F) 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 10°C (50°F) and 43°C (110°F).

Powder Grades

Ceilcote 6650 Ceilcrete is available in three grades; 6650, 6650AR and 6650B. The required, type and quantity of powder for each grade per litre (and gallon) of mixed resin is as follows:

6650	S-1 Powder	2.6-3.1kg/l (22-26lb/gal). Powder is added to both basecoat and topcoat.
6650AR	S-10AR Powder	2.6-3.1kg/l (22-26lb/gal). Powder is added to topcoat only.
6650B	B-4 Powder	1.7-2.2kg/l (14-18lb/gal). Powder is added to both basecoat and topcoat.

(AR = Abrasion Resistant Grade, B = Conductive Grade)

Application

Using a trowel, apply 1000-2000 microns (40-80 mils) of basecoat (target 1500 microns, 60 mils). Press the mat reinforcement into the basecoat, leaving no wrinkles or hollows and apply resin saturant until the reinforcement is translucent. Allow to cure and apply 1000-2000 microns (40-80 mils) of topcoat (target 1500 microns, 60 mils). Allow to cure.

Ceilcote 6650 Ceilcrete can be used as part of a **Ceilline system** as follows:

Prime using Ceilcote 680 or 680M primer followed by an elastomeric basecoat layer of Ceilcote Ceilline including the mat reinforcement. Complete with a final layer of Ceilcote 6650 Ceilcrete.

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 6650 Ceilcrete may be returned to service after the following intervals:

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

Ceilcote 6650 Ceilcrete is not intended to be used as a cosmetic finish and colour stability will not be achievable.

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.

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 6650 Ceilcrete should always be applied over correctly prepared primed substrates. Suitable primers are:

Ceilcote 380 Primer Ceilcote 370HT Primer

Ceilcote 6650 Ceilcrete may also form a constituent part of other systems such as

Ceilcote 232MR Ceilcote 282AR MR
Ceilcote 282MR Ceilcote 222HT MR
Ceilcote 6650 Ceilline

Novolac Vinyl Ester

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 6650 Ceilcrete 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 curing (refer to product datasheets for typical curing times) to ensure 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 curing. 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 (Parts A and B 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 litre	14.71 litre	20 litre	0.29 litre	0.7 litre
	4 US gal	4 US gal	5 US gal	12.5 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 litre	17.65 kg
4 US gal	39.9 lb	1 lb	

Powder component is typically supplied in 20kg or 50lb units depending upon supply location. Contact International Protective Coatings for further details.

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. During storage and shipment, Ceilcote 6650 Ceilcrete 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.

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.

Copyright © AkzoNobel, 10/04/2018.

All trademarks mentioned in this publication are owned by, or licensed to, the AkzoNobel group of companies.

www.international-pc.com