

Epoxy

PRODUCT
DESCRIPTION

Ceilcote 680M Primer/Saturant is a low viscosity, 85% volume solids epoxy compound based on a unique adduct curing technology. This provides tolerance of surface moisture at temperatures down to 2°C (32°F) and the ability to cure in the presence of moisture. The addition of Ceilcote C#1 Powder provides conductivity where required.

INTENDED USES

Ceilcote 680M is recommended for application as a primer for steel and as a concrete sealer where non-dusting and/or mild chemical resistance is required. Applied in one or two coats over correctly prepared surfaces, it provides a moisture resistant barrier and improves the surface strength of concrete. It may also be used as a blast holding primer.

PRACTICAL
INFORMATION FOR
CEILCOTE 680M

Colour	Clear																							
Gloss Level	Not applicable																							
Volume Solids	85%																							
Typical Thickness	40-100 microns (1.6-4 mils) dry equivalent to 47-118 microns (1.9-4.7 mils) wet																							
Theoretical Coverage	11.30 m ² /litre at 75 microns d.f.t and stated volume solids 454 sq.ft/US gallon at 3 mils d.f.t and stated volume solids																							
Practical Coverage	Allow appropriate loss factors. Coverage will vary depending on the density of the concrete.																							
Method of Application	Airless spray, Brush, Roller																							
Drying Time	<div>Overcoating Interval with recommended topcoats</div> <table> <tr> <th>Temperature</th><th>Touch Dry</th><th>Hard Dry</th><th>Minimum</th><th>Maximum</th></tr> <tr> <td>10°C (50°F)</td><td>16 hours</td><td>30 hours</td><td>9 hours</td><td>4 weeks</td></tr> <tr> <td>20°C (68°F)</td><td>8 hours</td><td>24 hours</td><td>5 hours</td><td>4 weeks</td></tr> <tr> <td>35°C (95°F)</td><td>3 hours</td><td>8 hours</td><td>3 hours</td><td>2 weeks</td></tr> </table>				Temperature	Touch Dry	Hard Dry	Minimum	Maximum	10°C (50°F)	16 hours	30 hours	9 hours	4 weeks	20°C (68°F)	8 hours	24 hours	5 hours	4 weeks	35°C (95°F)	3 hours	8 hours	3 hours	2 weeks
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* Consult the relevant Ceilcote system Application Guideline for further information on cure and re-coat times.

REGULATORY DATA

Flash Point (Typical)	Part A 42°C (108°F); Part B 109°C (228°F)		
Product Weight	1.08 kg/l (9.0 lb/gal)		
VOC	1.50 lb/gal (180 g/l) 112 g/kg	EPA Method 24 EU Solvent Emissions Directive (Council Directive 2010/75/EU)	
	0.53 lb/gal (63 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 75 microns (3 mils) is required.

Ceilcote 680M 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.

Concrete Substrates

Concrete should be well cured prior to priming with Ceilcote 680M. 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	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) 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	3 part(s) : 1 part(s) by volume		
Working Pot Life	10°C (50°F) 2 hours	20°C (68°F) 45 minutes	35°C (95°F) 25 minutes
Airless Spray	Recommended		
Air Spray (Conventional)	Not recommended		
Brush	Recommended		
Roller	Recommended Use a short nap roller.		
Thinner	- DO NOT THIN		
Cleaner	Ceilcote T-410 Solvent N.B Clean all equipment immediately after use.		
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. 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 Ceilcote 680M 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.

For concrete substrates where film integrity spark testing of lining and coating systems applied over Ceilcote 680M is required, a conductive powder should be added. The type and quantity of powder per litre (and gallon) of mixed resin is as follows:

C-1 Powder 0.16kg/l (1.3lb/gal).

The powder must first be added and mixed into Part A resin prior to adding Part B.

Surface temperature must always be a minimum of 3°C (5°F) above dew point.

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

Do not apply when relative humidity exceeds 80% or when condensation is likely to occur.

Dehumidification (DH) air conditioning and/or heating equipment may be necessary to control environmental conditions.

Consult International Protective Coatings for temperature limits for specific end use requirements.

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 680M is designed for application to correctly prepared substrates.

It is compatible with various coatings and linings; consult International Protective Coatings for further advice.

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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.

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 (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
	20 litre	15 litre	20 litre	5 litre	5 litre
	4 US gal	3 US gal	5 US gal	1 US gal	1 US gal

For availability of other pack sizes, contact AkzoNobel.

SHIPPING WEIGHT (TYPICAL)	Unit Size	Part A	Part B
		32 lb	8.8 lb

*Please consult International Paint for further information

STORAGE	Shelf Life	18 months minimum at 25°C (77°F). Subject to re-inspection thereafter. Store in dry, shaded conditions away from sources of heat and ignition.
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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.

Issue date: 04/05/2020

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