

**SELECTION & SPECIFICATION DATA**

<b>Generic Type</b>	Modified epoxy
<b>Description</b>	This epoxy is a fast-curing, heavy-duty, high-build anti-corrosive coating with a broad range of uses in marine and other corrosive environments. It is an excellent choice for the protection of ship hull exteriors, above and below the water line, ballast tanks, etc. Offshore applications include splash zones, subsea, jackets, production decks, drilling rig legs and pontoons in immersed exposures.
<b>Features</b>	<ul style="list-style-type: none"> <li>• Excellent immersion performance in both fresh and sea water</li> <li>• Suitable as a rust preventive coating in ballast tanks and hull applications</li> <li>• Ideal for sub-sea installations, jackets and other areas exposed to sea water</li> <li>• Can be applied as low as 5°C (40°F)</li> <li>• Good flexibility</li> <li>• Very good abrasion resistance</li> <li>• High solids; low VOC</li> </ul>
<b>Color</b>	1702 (Off White) is standard
<b>Finish</b>	Semi-Gloss
<b>Primer</b>	Self-priming
<b>Dry Film Thickness</b>	5 - 20 mils (127 - 508 microns) per coat  Normally applied in 175 microns (7 mil) thicknesses. May be applied up to 500 microns (20 mils) in one or more coats depending on application.
<b>Solids Content</b>	By Volume 85% +/- 2%
<b>Theoretical Coverage Rate</b>	1363 ft <sup>2</sup> /gal at 1.0 mils (33.5 m <sup>2</sup> /l at 25 microns) 273 ft <sup>2</sup> /gal at 5.0 mils (6.7 m <sup>2</sup> /l at 125 microns) 68 ft <sup>2</sup> /gal at 20.0 mils (1.7 m <sup>2</sup> /l at 500 microns) Allow for loss in mixing and application.
<b>VOC Values</b>	<b>As Supplied</b> : 120 g/l (1 lbs/gal)  These are nominal values.
<b>Dry Temp. Resistance</b>	Continuous: 250°F (121°C) Non-Continuous: 300°F (149°C)  Epoxies discolor (darken) when exposed to elevated temperatures.
<b>Approvals</b>	<ul style="list-style-type: none"> <li>• Det Norske Veritas, Standard Testing Classification of Ballast Tank Coatings, rev. 4/2 *</li> <li>• IMO Performance Standard for Protective Coatings. *</li> <li>• DNV Type Approval Certificate *</li> <li>• NORSOK M-501 System no. 7 Submerged</li> <li>• NS 5417-1998 Norwegian waterpower</li> </ul> <p>* For product manufactured by Carboline Norge AS</p>
<b>Limitations</b>	Epoxies lose gloss, discolor and eventually chalk in sunlight exposure. Not recommended for immersion in aromatic or ketone solvents or strong oxidizing acids.
<b>Topcoats</b>	Normally not topcoated for immersion service, otherwise topcoat according to Carboline recommendations.

### SUBSTRATES & SURFACE PREPARATION

<b>General</b>	Surfaces must be clean and dry. Employ adequate methods to remove dirt, dust, oil and all other contaminants that could interfere with adhesion of the coating in accordance with SSPC-SP 1. Carboline Surface Cleaner 3 is recommended.  Steel, concrete or suitable primer such as Carbozinc 858. Can be applied directly to galvanised steel, aluminium and stainless steel.
<b>Steel</b>	<b>Immersion:</b> NACE No. 2/SSPC-SP 10 with a 2.0-3.0 mil (50-75 microns) surface profile. <b>Non-Immersion:</b> NACE No. 3/SSPC-SP 6 with a 2.0-3.0 mil (50-75 microns) surface profile for maximum protection. SSPC-SP 2, SSPC-SP 3, NACE No. 4/SSPC-SP 7, NACE/SSPC WJ-1 to WJ-4, or SSPC-SP 14 are also acceptable methods.  For alternate methods contact Carboline Technical Service.
<b>Galvanized Steel</b>	Clean per SSPC-SP 16 with 0.5 - 3.0 mils (12-75 micron) anchor profile or prime as recommended by your Carboline Sales Representative. Refer to the specific primer's Product Data Sheet for substrate preparation requirements.
<b>Concrete</b>	Prepare in accordance with NACE No. 6/SSPC-SP 13 and create profile of ICRI CSP 2 to 5 that is suitable for the intended service.
<b>Previously Painted Surfaces</b>	Clean and lightly sand or abrade to roughen and degloss the surface. Existing coating must attain a minimum 3A rating in accordance with ASTM D3359 adhesion test.
<b>Phosphatized Steel</b>	Clean to remove all contaminants per SSPC-SP 1.

### MIXING & THINNING

<b>Mixing</b>	Power mix separately, then combine and power mix. DO NOT MIX PARTIAL KITS.
<b>Thinning</b>	Up to 15% with Thinner 2
<b>Ratio</b>	1:1 Ratio (Part A to B) by Volume
<b>Pot Life</b>	2 Hours at 24°C (75°F) and less at higher temperatures.

### APPLICATION EQUIPMENT GUIDELINES

Listed below are general equipment guidelines for the application of this product. Job site conditions may require modifications to these guidelines to achieve the desired results.

<b>Spray Application (General)</b>	The following spray equipment has been found suitable and is available from manufacturers such as Binks, DeVilbiss and Graco.
<b>Airless Spray</b>	Pump Ratio: 30:1 (min.) Volume Output: 3.0 gpm min. Material Hose: 3/8" I.D. min. Tip Size: 0.019-0.025" Output Pressure: 2200-2400 psi Filter Size: 60 mesh  PTFE packings are recommended and available from the pump manufacturer.

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**Brush & Roller (General)** | Recommended for small areas only. Multiple coats may be required to obtain desired appearance, recommended dry film thickness and adequate hiding.

**Brush** | Use a medium bristle brush.

**Roller** | Use a medium nap solvent resistant roller cover.

## APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	40°F (4°C)	35°F (2°C)	35°F (2°C)	0%
Maximum	95°F (35°C)	125°F (52°C)	100°F (38°C)	85%

Industry standards are for substrate temperatures to be 3°C (5°F) above the dew point. Condensation due to substrate temperatures below the dew point can cause flash rusting on prepared steel. Special application techniques may be required above or below normal application conditions.

## CURING SCHEDULE

Surface Temp.	Dry to Recoat	Final Cure
40°F (4°C)	17 Hours	15 Days
50°F (10°C)	10 Hours	12 Days
60°F (16°C)	6.5 Hours	9 Days
68°F (20°C)	4 Hours	7 Days
77°F (25°C)	3 Hours	5 Days

These times are based on 5 - 8 mils (127 - 203 microns) dry film thickness. Higher film thicknesses, insufficient ventilation, and/or cooler temperatures will require longer cure times and could result in solvent entrapment and premature failure. Maximum recoating time is 1-2 months depending on temperature and curing conditions. If exceeded, contact Carboline for further information about recoating procedures

## CLEANUP & SAFETY

**Cleanup** | Use Thinner 2. In case of spillage, absorb and dispose of in accordance with local applicable regulations.

**Safety** | Read and follow all caution statements on this product data sheet and on the SDS for this product. Employ normal workmanlike safety precautions. Use adequate ventilation. Keep container closed when not in use.

**Ventilation** | When used in enclosed areas, thorough air circulation must be used during and after application until the coating is cured. The ventilation system should be capable of preventing the solvent vapor concentration from reaching the lower explosion limit for the solvents used. User should test and monitor exposure levels to insure all personnel are below guidelines. If not able to monitor levels, use MSHA/NIOSH approved respirator.

**Caution** | This product contains flammable solvents. Keep away from sparks and open flames. All electrical equipment and installations should be made and grounded in accordance with applicable regulations. In areas where explosion hazards exist, workmen should be required to use nonferrous tools and wear conductive and non-sparking shoes.

# Carbomastic<sup>®</sup> 18 FC

## PRODUCT DATA SHEET



### PACKAGING, HANDLING & STORAGE

<b>Packaging</b>	Part A: 10 litres (2.6 gallons) Part B: 10 litres (2.6 gallons)
<b>Shelf Life</b>	Part A: Minimum 24 months at 24°C (75°F) Part B: Minimum 24 months at 24°C (75°F)  Shelf life: keep at recommended storage conditions and in original unopened containers.
<b>Storage Temperature &amp; Humidity</b>	5°C-45°C (41°F - 113°F) 0-100% Relative Humidity  Store Indoors.
<b>Storage</b>	This product is solvent based and not affected by excursions below these published storage temperatures, down to -17°C (10°F), for a duration of no more than 14 days. Always inspect the product prior to use to make sure it is smooth and homogeneous when properly mixed.
<b>Shipping Weight (Approximate)</b>	20 liter (5.3 gallon) kit - 32.5 kg (71.7 lbs)
<b>Flash Point (Setaflash)</b>	Part A: 27°C (80°F) Part B: 32°C (90°F)

### WARRANTY

To the best of our knowledge the technical data contained herein is true and accurate on the date of publication and is subject to change without prior notice. User must contact Carboline Company to verify correctness before specifying or ordering. No guarantee of accuracy is given or implied. We guarantee our products to conform to Carboline quality control. We assume no responsibility for coverage, performance, injuries or damages resulting from use. Carbolines sole obligation, if any, is to replace or refund the purchase price of the Carboline product(s) proven to be defective, at Carbolines option. Carboline shall not be liable for any loss or damage. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY CARBOLINE, EXPRESS OR IMPLIED, STATUTORY, BY OPERATION OF LAW, OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. All of the trademarks referenced above are the property of Carboline International Corporation unless otherwise indicated.