

## Selection & Specification Data

<b>Generic Type</b>	Ethyl Silicate, Inorganic Zinc
<b>Description</b>	Carboweld 17 FG is a fast drying, 2 component, zinc rich primer designed for the prefabrication priming of steel for marine, coastal and demanding industrial environments. It is a weldable, hard, abrasion resistant primer that provides cathodic protection. Use it to protect steel on marine vessels and off-shore structures during construction and in areas where welding, heat resistance, impact and abrasion resistance are necessary. It has been tested by DNV and certified by ABS to the IMO/PSPC standard for ballast tank linings.
<b>Features</b>	<ul style="list-style-type: none"> <li>• Weldable, pre-construction primer</li> <li>• Cathodic protection mechanism</li> <li>• Excellent undercutting resistance</li> <li>• ABS Certified to IMO/PSPC Standard</li> </ul>
<b>Color</b>	Gray (0700) and Red (0500)
<b>Finish</b>	N/A
<b>Dry Film Thickness</b>	0.5 - 1 mils (13 - 25 microns) per coat
<b>Solids Content</b>	By Volume 23% +/- 2% Measured in accordance with ASTM D 2697
<b>Theoretical Coverage Rate</b>	738 ft <sup>2</sup> /gal at 0.5 mils (18.1 m <sup>2</sup> /l at 12 microns) 369 ft <sup>2</sup> /gal at 1.0 mils (9.1 m <sup>2</sup> /l at 25 microns)  Allow for loss in mixing and application.
<b>VOC Values</b>	Thinner 21 5.7 oz/gal; 5.42 lbs/gal (650 g/l) As Supplied 5.37 lbs./gal (644 g/l)  These are nominal values
<b>Dry Temp. Resistance</b>	Continuous: 750 °F (399 °C) Non-Continuous: 800 °F (427 °C)
<b>Limitations</b>	This product may be used as a preconstruction primer for steel in limited immersion service such as sea water service. For potable water use; all "visible" zinc must be removed (abrasive sweep blasting) prior to the application of a certified potable water lining system.
<b>Topcoats</b>	May be coated with Acrylics or Epoxies depending on exposure and need.  Apply a mist coat of the topcoat before applying a full coat of the topcoat to minimize bubbling and cratering.

## Substrates & Surface Preparation

<b>General</b>	Surfaces must be dry and thoroughly cleaned to remove oil, dirt, dust, grease, mill scale and any other contaminants that can reduce abrasion.
<b>Steel</b>	Solvent clean per SSPC-SP1. Abrasive blast to Near White cleanliness (SSPC-SP10) to obtain a proper surface anchor profile; usually the inclusion of 15-20% of a sharp angular abrasive is recommended. Remove weld spatter & round sharp edges, grinding to a minimum 1/4" radius. Prime bare steel before flash rusting occurs.

## Substrates & Surface Preparation

**Special Instruction** When Carboweld 17 FG is to be overcoated with itself or other inorganic zinc rich materials, sweep blasting between coats is recommended.

## Mixing & Thinning

<b>Mixing</b>	Thoroughly mix each component using mechanical agitation. Pour the activator, part B, into part A (mixing ratio by volume: 2 part activator, part B, to 1 parts part A) and mix well using mechanical agitation. Continue to agitate the mixture during application of the product to keep the zinc pigment from settling out and the product uniform. Thin with Thinner 21.
<b>Thinning</b>	If thinner is required, thin only after mixing part A with part B. Thin up to 6% (7.7 oz/gal) with Thinner 21.
<b>Ratio</b>	<b>5.0-Gal</b> Carboweld 17 FG Part A: 1.65 gal Carboweld 17 FG Part B: 3.35 gal
<b>Pot Life</b>	24 hours at 75°F & 50% R.H., less at higher temperatures & humidities. <b>Do not mix more than can be applied during the product's useful pot life.</b>

## 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>	Spray with continuous agitation is recommended. Brush may be used for small touch-up areas. Mixing containers, pressure pots and fluid feed lines <u>must</u> be clean and dry. Old paint may be lifted by solvent in the coating and cause spray gun clogging. Moisture in equipment can cause gelation.
<b>Conventional Spray</b>	Binks 95 Spray Gun, 66 Tip, 66PE or 63 PB Nozzle, Atomization Pressure 30-40 psi, Fluid Pressure 10-20 psi. Use agitated pressure pot on same level or higher than spray gun with ½" I.D. minimum fluid hose for no longer than 50 feet. Increase hose size for longer runs.
<b>Airless Spray</b>	Use Teflon packings and continuous agitation. Spray Tip: 0.015-0.019" Pressure: 2000 psi Hose: 3/8" ID

## Application Conditions

Condition	Material	Surface	Ambient	Humidity
Minimum	40 °F (4 °C)	40 °F (4 °C)	40 °F (4 °C)	40%
Maximum	100 °F (38 °C)	100 °F (38 °C)	100 °F (38 °C)	90%

This product simply requires the substrate temperature to be above the dew point. Condensation due to substrate temperatures below the dew point can cause flash rusting on prepared steel and interfere with proper adhesion to the substrate. Special application techniques may be required above or below normal application conditions.

# Carboweld<sup>®</sup> 17 FG

## Curing Schedule

Surface Temp.*	Dry to Handle	Dry to Touch	Final Cure General
77 °F (25 °C)	10 Minutes	5 Minutes	7 Days
100 °F (38 °C)	7 Minutes	4 Minutes	7 Days
120 °F (49 °C)	5 Minutes	3 Minutes	7 Days

These times are based on a 1.0 mil (25 micron) dry film thickness. Higher film thickness, insufficient ventilation, low humidity or cooler temperatures will require longer cure times.

## Cleanup & Safety

**Cleanup** Use Thinner 21.

**Safety** Read and follow all caution statements on this product data sheet and on the MSDS for this product. Employ normal workmanlike safety precautions. Use adequate ventilation and wear gloves or use protective cream on face and hands if hypersensitive. Keep container closed when not in use.

## Packaging, Handling & Storage

**Shelf Life** Part A: 12 months at 75°F  
Part B: 24 months at 75°F

\*Shelf Life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers.

**Storage Temperature & Humidity** 40-110°F (4-43°C)  
0-90% RH

**Storage** Store Indoors.

**Shipping Weight (Approximate)** 5 Gal Kit - 55 lbs

**Flash Point (Setaflash)** Part A: 55°F (13°C)  
Part B: 45°F (7°C)



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