

Selection & Specification Data

Generic Type	Ethyl Silicate, Inorganic Zinc
Description	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. Formulated as a more economical version of Carboweld 17.
Features	<ul style="list-style-type: none"> ▪ Weldable, pre-construction primer ▪ Cathodic protection mechanism ▪ Excellent undercutting resistance
Color	Grey (0700) and Red (0500)
Topcoats	Acrylic & Epoxy topcoats are normally recommended. Apply a mist coat of the topcoat before applying a full coat of the topcoat to minimize bubbling and cratering.
Dry Film Thickness	0.50-1.0 mils
Solids Content	By Weight: 41% ± 2%
Theoretical Coverage Rate	369 ft ² /gallon @ 1 dry mil Allow for loss in mixing and application.
VOC Values	As supplied: 5.37 lbs./gal (644 g/l) Thinned: 5.7 oz/gal w/#21; 5.42 lbs/gal (650 g/l) These are nominal values
Dry Film Temp.	750°F in continuous service (dry) 800°F intermittent

Substrates & Surface Preparation

General	Surfaces must be dry and thoroughly cleaned to remove oil, dirt, dust, grease, mill scale and any other contaminants that can reduce abrasion.
Steel	Solvent clean per SSPC-SP1. Prep to Near White Blast SSPC-SP10 minimum. Shot Blasting is acceptable if a suitable surface anchor pattern is obtained; 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 the same day it is cleaned or before flash rusting occurs.

Special Information:

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

Application Equipment

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.

General Guidelines:

Spray Application (General) Spray with continuous agitation is recommended. Brush may be used for small touch-up areas. Mixing containers, pressure pots and fluid feed lines must 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.

Conventional Spray 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.

Airless Spray Use Teflon packings and continuous agitation.
Spray Tip: 0.015-0.019"
Pressure: 2000 psi
Hose: 3/8" ID

Mixing & Thinning

Mixing 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.

Ratio 5.0-Gal
Carboweld 17 FG Part A 1.65 gal
Carboweld 17 FG Part B 3.35 gal

Pot Life 24 hours @ 75°F & 50% R.H., less at higher temperatures & humidities. Do not mix more than can be applied during the product's useful pot life.

Thinning If thinner is required, thin only after mixing part A with part B. Thin up to 4.5% (5.7 oz/gal) with Thinner 21.

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.

Application Conditions

Condition	Material	Surface	Ambient	Humidity
Normal	60-85°F (16-30°C)	50-95°F (10-35°C)	50-95°F (10-35°C)	50-85%
Minimum	40°F (4°F)	40°F (4°F)	40°F (4°F)	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.

Curing Schedule

Surface Temp. & 50% RH	Dry to Touch	Dry to Handle	Topcoat & Cure
77°F (25°C)	5 min	10 min	7 days
100°F (38°C)	4 min	7 min	7 days
120°F (49°C)	3 min	5 min	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.

Packaging, Handling & Storage

Shipping Weight (Approximate)	5 Gal Kit 55 lbs
Flash Point (Setaflash)	Part A: 55°F (13°C) Part B: 45°F (7°C)
Storage (General)	Store indoors.
Storage Temperature & Humidity	40-110°F (4-43°C) 0-90% RH
Shelf Life	Part A: 12 months@75°F Part B: 12 months@75°F

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

