

SELECTION & SPECIFICATION DATA

Generic Type	Fast Drying Phenalkamine Mastic Epoxy Primer with MIO and Zinc phosphate additives
Description	Versatile corrosion resistant coating with zinc phosphate and MIO additive, fast drying. Used either as a primer or intermediate coat.
Features	<ul style="list-style-type: none"> • Versatile corrosion resistant coating. Used either as a primer or intermediate coat. • Surface tolerant • VOC compliant to current AIM regulations • Contains MIO and Zinc phosphate • High corrosion resistance • High adhesion performance • Fast Drying
Color	Primer colors (0700) Gray
Finish	Matte
Primer	Self-priming. May be applied over zinc rich primers. A mist coat may be required to minimize bubbling over inorganic zinc rich primers.
Dry Film Thickness	100-250 microns DFT per coat as a primer or an intermediate.
Solids Content	By Volume 79% +/- 3%
Theoretical Coverage Rate	31.1 m ² /l at 25 microns (1267 ft ² /gal at 1.0 mils) Allow for loss in mixing and application.
Theoretical Coverage Rates	5.06 m ² /kg - 100 micron 2.02 m ² /kg - 250 micron Allow for loss in mixing and application.
VOC Values	As Supplied : 200 g/l For color Grey
Dry Temp. Resistance	Continuous: 93°C (199°F) Non-Continuous: 121°C (250°F) Discoloration and loss of gloss is observed above 93°C (200°F).
Limitations	Epoxies lose gloss, discolor and eventually chalk in sunlight exposure. The product may turn slightly reddish. This will not affect the performance of the coating but rather a cosmetic issue.
Topcoats	Acrylics, Alkyds, Epoxies, Polyurethanes

SUBSTRATES & SURFACE PREPARATION

General	According to SSPC SP-1, the surface to be applied must be free from oil, rust, dirt, etc. should be properly cleaned of all kinds of substances. In accordance with ISO 8501-3, all kinds of burrs, weld residues and manufacturing defects on the surface should be removed by mechanical means.
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Carboguard 616 MIO ZP

PRODUCT DATA SHEET



SUBSTRATES & SURFACE PREPARATION

Steel | For most applications: SSPC-SP6 (ISO 8501 Sa 2 ½) to achieve a (25-50 micron) scraping profile. For some applications, SSPC-SP2 or SSPC-SP3 (ISO 8501 St.2 or St.3) is acceptable.

Galvanized Steel | Galvanizing requires a rough surface for optimum adhesion/performance of high build epoxies. Clean contaminants from SSPC SP1; make sure that there are no chemical treatments that could interfere with adhesion; and abrade the surface to produce a suitable roughness (usually 1 mil). SSPC-SP7 or SP11 are acceptable methods.
In addition, before spray cleaning, galvanized surfaces should be checked for "wet storage stains". Spray cleaning should not be used to remove a wet storage stain. The "waiting time" required for the spray current to remove the wet tank stain can damage the galvanized surface. SURFACE PREPARATION SPECIFICATIONS See also additional information on Brush Blasting Cleaning standards for Coated and Uncoated Galvanized Steel, Stainless Steel and Non-Ferrous Metals. A minimum surface roughness of 25 microns is recommended.

IMPORTANT: During surface preparation, surface temperature should be 3°C above dew point.

PERFORMANCE DATA (TYPICAL VALUES)

All test data was generated under laboratory conditions. Field testing results may vary.

Test Method	System	Results
Adhesion (ASTM D4541)	DEFELSKO Positest Pull-off Adhesion Tester Sa 2½ grade and 40-75 micron surface profile 6 mm cold rolled steel panel 616 MIO ZP Grey (120 µ)	21,6 MPa (Pneumatic)
Adhesion (ASTM D4541)	DEFELSKO Positest Pull-off Adhesion Tester Sa 2½ grade and 40-75 micron surface profile 6 mm cold rolled steel panel 616 MIO ZP Grey + MG22-1333 White	21,6 Mpa (Pneumatic)
Salt Spray Corrosion Test	C&W Salt Spray Cabinet Sa 2½ grade and 40-75 micron surface profile 6mm cold rolled steel panel 100 µm DFT 616 MIO ZP Grey	No paint defects or corrosion/ rust formation after 1400 hours
Salt Spray Corrosion Test (ASTM B117)	C&W Salt Spray Cabinet St 2 grade 6 mm cold rolled steel panel 100 µm DFT 616 MIO ZP Grey	No paint defects or corrosion/ rust formation after 1400 hours

MIXING & THINNING

Mixing | Power mix separately, then combine and power mix. DO NOT MIX PARTIAL KITS.

Thinning | After the paint is thoroughly mixed, Thinner #10 can be used. 15-20% thinner is allowed for air gun application. Up to 15% for Airless applications. In brush and roller applications, thinner thinner is recommended at the maximum rate of 5% for the smooth spreading of the paint on the surface.

Ratio | 1/1 (both by volume or weight) with Part B

Pot Life | 4.5 Hours at 25°C
Pot life ends when coating thickens and loses application properties. Pot life times will be 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.

Spray Application (General) | The following spray equipment has been found suitable and is available from manufacturers such as Binks, DeVilbiss and Graco.

Conventional Spray | It can be applied with an air spray gun with a nozzle diameter of 1.5 - 1.8 from the bottom / top of the chamber.

Airless Spray

- Pump Ratio: 30:1 (min.)*
- GPM Output: 2.5 (min.)
- Material Hose: 3/8" I.D. (min.)
- Tip Size: 0.015"-0.021"
- Output PSI: 2100-2300
- Filter Size: 60 mesh

Brush & Roller (General) | Multiple coats may be required to obtain desired appearance, recommended dry film thickness and adequate hiding. Avoid excessive re-brushing or re-rolling. For best results, tie-in within 10 minutes at 75°F (24°C).

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	5°C (41°F)	5°C (41°F)	2°C (36°F)	0%
Maximum	35°C (95°F)	35°C (95°F)	35°C (95°F)	80%

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.	Dry to Handle	Touch Dry	Hard Cure	Minimum Topcoat Time	Maximum Recoat Time
23°C (73°F)	1.5 Hours	4.5 Hours	8 Hours	4.5 Hours	60 Days

These times are based on 50% relative humidity and 4.0-6.0 mil (100-150 micron) dry film thickness for atmospheric exposures. Higher film thickness, insufficient ventilation or cooler temperatures will require longer cure times and could result in solvent entrapment and premature failure. Excessive humidity or condensation on the surface during curing can interfere with the cure, can cause discoloration and may result in a surface haze. Any haze or blush must be removed by water washing before recoating. If the maximum recoat times have been exceeded, the surface must be abraded by sweep blasting or sanding prior to the application of additional coats. For force curing, contact Carboline Technical Service for specific requirements.

CLEANUP & SAFETY

Cleanup | Use Thinner #2 or Acetone. 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. Hypersensitive persons should wear protective clothing, gloves and use protective cream on face, hands and all exposed areas.

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CLEANUP & SAFETY

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 sure or 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 the National Electric Code. In areas where explosion hazards exist, workers should be required to use non-ferrous tools and wear conductive and non-sparking shoes.

PACKAGING, HANDLING & STORAGE

Shelf Life	Part A & B: Min. 12 months at 75°F (24°C) *Shelf Life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers.
Shipping Weight (Approximate)	<ul style="list-style-type: none">• 1 kit Net weight 30 kg (Gross weight: 32.945 kg)• Comp. A: Net weight 10 Lt (Gross weight: 16.625 kg)• Comp. B: Net weight 10 Lt (Gross weight: 16.320 kg)
Storage Temperature & Humidity	<ul style="list-style-type: none">• 40° - 110°F (4° - 43°C)• 0-100% Relative Humidity
Flash Point (Setaflash)	<ul style="list-style-type: none">• Part A: 12°C• Part B: 27°C
Storage	Store Indoors.

WARRANTY

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