



**Protective
&
Marine
Coatings**

MACROPOXY® 646-100 FAST CURE EPOXY

PART A
PART B

B58-620
B58V620

SERIES
HARDENER

Revised 5/11

PRODUCT INFORMATION

4.52

PRODUCT DESCRIPTION

MACROPOXY 646-100 FAST CURE EPOXY is a high solids, less than 100 g/L VOC, high build, fast drying, polyamide epoxy designed to protect steel and concrete in industrial exposures. Ideal for maintenance painting and fabrication shop applications. The high solids content ensures adequate protection of sharp edges, corners, and welds. This product can be applied directly to marginally prepared steel surfaces.

- Low VOC, <100 g/L
- Low odor
- Outstanding application properties
- Chemical resistant
- Abrasion resistant

PRODUCT CHARACTERISTICS

Finish: Semi-Gloss
Color: Mill White and a wide range of colors available through tinting
Volume Solids: 73% ± 2%, mixed
 Mill White
Weight Solids: 83% ± 2%, mixed
 Mill White
VOC (EPA Method 24): Unreduced: <100 g/L; .83 lb/gal
 mixed Reduced 10%: <100 g/L; .83 lb/gal
Mix Ratio: 1:1 by volume

Recommended Spreading Rate per coat:

| | Minimum | Maximum |
|---|-------------|--------------|
| Wet mils (microns) | 7.0 (175) | 13.5 (338) |
| Dry mils (microns) | 5.0* (125) | 10.0* (250)* |
| ~Coverage sq ft/gal (m ² /L) | 116 (2.8) | 232 (5.7) |
| Theoretical coverage sq ft/gal (m ² /L) @ 1 mil / 25 microns dft | 1168 (28.6) | |

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

*See Recommended Systems on reverse side. See Performance Tips section also.

Drying Schedule @ 7.0 mils wet (175 microns):

| | @ 40°F/4.5°C | @ 77°F/25°C 50% RH | @ 100°F/38°C |
|-------------------|--------------|-----------------------|--------------|
| To touch: | 4-5 hours | 2 hours | 1.5 hours |
| To handle: | 48 hours | 8 hours | 4.5 hours |
| To recoat: | | | |
| minimum: | 48 hours | 8 hours | 4.5 hours |
| maximum: | 1 year | 1 year | 1 year |
| Cure for | | | |
| service: | 10 days | 7 days | 4 days |
| immersion: | 14 days | 7 days | 4 days |

If maximum recoat time is exceeded, abrade surface before recoating.
 Drying time is temperature, humidity, and film thickness dependent.

Pot Life: 10 hours 4 hours 2 hours
Sweat-in-time: 30 minutes 30 minutes 15 minutes

Shelf Life: 36 months, unopened
 Store indoors at 40°F (4.5°C) to 100°F (38°C).
Flash Point: 61°F (16°C), PMCC, mixed
Reducer/Clean Up: Reducer R7K111 or Oxsol 100

RECOMMENDED USES

- Marine applications
- Fabrication shops
- Pulp and paper mills
- Power plants
- Offshore platforms
- Refineries
- Chemical plants
- Tank exteriors
- Water treatment plants
- Mill White is acceptable for immersion use for salt water and fresh water
- Not acceptable for potable water
- Suitable for use in USDA inspected facilities
- Conforms to AWWA D102 OCS #5

PERFORMANCE CHARACTERISTICS

Substrate*: Steel
Surface Preparation*: SSPC-SP10/NACE 2
System Tested*:
 1 ct. Macropoxy 646-100 Fast Cure @ 6.0 mils (150 microns) dft
 *unless otherwise noted below

| Test Name | Test Method | Results |
|---|--|--|
| Abrasion Resistance | ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load | 84 mg loss |
| Accelerated Weathering - QUV ¹ | ASTM D4587, QUV-A, 12,000 hours | Passes |
| Adhesion | ASTM D4541 | 1,037 psi |
| Corrosion Weathering ¹ | ASTM D5894, 36 cycles, 12,000 hours | Rating 10 per ASTM D714 for blistering; Rating 9 per ASTM D610 for rusting |
| Direct Impact Resistance | ASTM D2794 | 30 in. lb. |
| Dry Heat Resistance | ASTM D2485 | 250°F (121°C) |
| Exterior Durability | 1 year at 45° South | Excellent, chalks |
| Flexibility | ASTM D522, 180° blend, 3/4" mandrel | Passes |
| Immersion | 1 year fresh and salt water | Passes, no rusting, blistering, or loss of adhesion |
| Pencil Hardness | ASTM D3363 | 3H |
| Salt Fog Resistance ¹ | ASTM B117, 6,500 hours | Rating 10 per ASTM D610 for rusting; Rating 9 per ASTM D1654 for corrosion |
| Water Vapor Permeance | ASTM D1653, Method B | 1.16 grains/day |

Epoxy coatings may darken or discolor following application and curing.

Footnotes:

¹ Zinc Clad II Plus Primer