



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 (m²/L)	116 (2.8)	232 (5.7)
Theoretical coverage sq ft/gal (m²/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 - QUV¹	ASTM D4587, QUV-A, 12,000 hours	Passes
Adhesion	ASTM D4541	1,037 psi
Corrosion Weathering¹	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° bend, 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 Resistance¹	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