PPG Protective & Marine Coatings

MEGASEAL™ HPU

High Performance Urethane

Product Data/Application Instructions

- Unique, high-solids, high-build, multifunctional coating
- High gloss, self-priming coating
- Excellent gloss retention
- Direct to metal and concrete in selected environments
- Outstanding abrasion, reverse and direct impact resistance
- Good chemical and stain resistance
- Tough and flexible coating

MegaSeal™ HPU displays high gloss and excellent color and gloss retention during extended service periods. The direct-to-metal capabilities of MegaSeal HPU provide a single-coat system at reduced installation cost for use in protected environments. Compatible over prepared, smooth cold-rolled steel and abrasive blasted hot-rolled steel.

MegaSeal HPU has excellent adhesion to concrete providing a durable, glossy, easy-to-clean flooring system. May be used over MegaSeal TF as a durable, weather-resistant topcoat for extra heavy duty service.

Typical Uses

- Concrete walls and floors

Recommended Systems

Substrate	Primer	Finish Coat
Concrete	MegaSeal TF	MegaSeal HPU
Masonry	MegaSeal TF	MegaSeal HPU

*Other PPG epoxy primers are also acceptable.
Refer to specific primer's product data sheets and application instructions for detailed application and surface preparation information. Apply test patch to intact coating to confirm compatibility and adhesion.

When MegaSeal TF is used as a primer for MegaSeal HPU the maximum topcoat time is one month; MegaSeal TF 2-7 days, 400 with 861 Accelerator – 14 days. Clean and roughen surface if topcoat time is exceeded.

Products

99-1900	Clear Resin
99-1901	White Resin
99-1910	Pearl Gray Resin
99-1991	Neutral Tint Base
99-1993	Light Tint Base
99-1995	Deep Tint Base
99-1933	Cure

Physical Data

Finish	Gloss
Color	See PPG PMC color chart

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Yellow, red and orange colors will fade faster than other colors due to the replacement of lead-based pigments with lead-free pigments in these colors.

Components	2	
Curing mechanism	Solvent release and chemical reaction	
Volume solids (ASTM D2697 modified)	73% ± 3%	
DFT per coat	5 mils (125 microns)	
Coats	1	
Theoretical coverage	ft^2/gal	m^2/L
1 mil (25 microns)	1171	29
5 mils (125 microns)	234	5.7
VOC (EPA 24) mixed	0.7 lb/gal	84 g/L
Temperature resistance, dry	ºF	ºC
Continuous	200	93
Intermittent	250	121
Flash point (SETA)	°F	°C
cure	122	50
resin	40	4
mixed	40	4

Typical Properties

Physical

Impact resistance (ASTM D2794) @ 5 mils		
direct	140 in . lbs	15.8 N . m
reverse	50 in . lbs	5.6 N . m

Chemical Resistance Guide

Environment	Splash and Spillage	Fumes and Weather
Acidic	E	E
Alkaline	E	E
Salt Solutions		
Acidic	E	E
Neutral	E	E
Alkaline	E	E
Seawater	E	E
Fresh water	E	E
Solvents	G	E
Petroleum products	E	E

F-Fair G-Good E-Excellent NR- Not Recommended

This table is only a guide to show typical resistance of MegaSeal HPU. Contact your sales representative for your particular corrosion protection needs.

Environmental Conditions

Temperature air or surface	ºF	ºC
MegaSeal HPU	40 to 120	4 to 49

Surface temperature must be at least 5ºF (3ºC) above dew point to prevent condensation.

Surface Preparation

Coating performance is, in general, proportional to the degree of surface preparation. All surfaces must be clean, dry and free of oil, grease, dirt, salt deposits or other contamination.

Concrete – Clean concrete and masonry surfaces, abrasive blast (ASTM D4259) or acid etch (ASTM D4260). Fill concrete voids with MegaSeal CF or MesaSeal CR.

Application Data

Applied over prepared masonry and primed concrete.

Surface preparation	
Concrete	See specific primer
Masonry	ASTM D4261
Previously coated surface	SSPC-SP1, 3 or 7

Appearance will vary depending on substrate and application method.

Mixing ratio (by volume)	1 part cure to 4 parts resin

Pot life (hours) ºF/ºC

	90/32	70/21	50/10	32/0
MegaSeal HPU	1 ½	2 ½	5	-

Environmental Conditions

Temperature, air or surface	ºF	ºC
MegaSeal HPU	40 to 120	4 to 49

Surface temperatures must be at least 5ºF (3ºC) above dew point to prevent condensation.

Drying time (ASTM D1640) hours ºF/ºC

	90/32	70/21	50/10	32/0
touch	1	2 ½	4	-
through	5	10	72	-

Recoat time hours ºF/ºC

	90/32	80/26	70/21	50/10	32/0
minimum	4	5 ½	8	48	-
maximum	12	24	168	168	-

Drying times are dependent on air and surface temperatures as well as film thickness, ventilation and relative humidity. Maximum recoating time is highly dependent upon actual surface temperatures – not simply ambient air temperatures. Surface temperatures should be monitored, especially with sun-exposed or otherwise heated surfaces. Higher surface temperatures shorten the maximum recoat window.

Roughen surface if maximum recoat time is exceeded.

Adhere to all application instructions, precautions, conditions and limitations to obtain the maximum performance. For conditions outside the requirements or limitations described, contact your sales representative.

Application Equipment

Power mixer – Jiffy mixer powered by an air or explosion-proof electric motor.

Airless and electrostatic spray – Standard equipment Graco, DeVilbiss, Nordson-Bede, Speeflo or others having a 28:1 or higher pump ratio and a fluid tip with a 0.015 to 0.021 inch (0.38 to 0.53 mm) orifice.

Conventional, air assisted airless and electrostatic spray – DeVilbiss, Binks or Graco production spray equipment with moisture and oil trap in the main air supply line.

Brush – Natural bristle. Maintain a wet edge.

Roller – Solvent resistant. Level any air bubbles with a bristle brush.

When brush or roller applied, multiple coats may be needed to achieve dry film thickness.

Application Procedure

1. Flush equipment with epoxy thinner or equipment cleaner

2. Stir resin thoroughly, add cure and mix until uniform. Do not mix more material than will be used within pot life time. Mixing ratio is 4 parts resin to 1 part cure by volume.

3. If thinning is necessary, add up to 1 ounce xylene per gallon of MegaSeal HPU to maintain compliance with SCAQMD Rule 1113. Alternately, exempt thinner such as t-butzl acetate or Oxsol 100 can be used.

4. When applying by spray, adjust pressures for equipment configuration and environmental conditions to ensure proper atomization.

5. Apply a wet coat in even, parallel passes; overlap each pass 50%.

Drying time (ASTM D1640) hours ºF/ºC

	90/32	70/21	50/10	32/0
touch	1	2 ½	4	-
through	5	10	72	-

Recoat time (hours) ºF/ºC

	90/32	80/26	70/21	50/10	32/0
minimum	4	5 ½	8	48	-
maximum	12	24	168	168	-

Roughen surface or use Amerase™ if maximum recoat time is exceeded. Note: When applying directly over organic zinc at full thickness, bubbling may occur. A mist coat/full coat technique may be required to prevent application bubbling.

6. For colors, application of 8 mil wet film thickness (thinned) will normally provide 5 mil dry thickness. Clear coat at 5 mils WFT will normally provide 3 mil DFT.

7. Clean all equipment with epoxy thinner or equipment cleaner immediately after use.

Note: Moisture sensitive – keep cure container tightly closed. Repeated moisture exposure will cause gellation and gassing; handle bulged containers with caution. Lids may eject forcibly.

Repair

Spot blast or power tool clean bare substrate to the requirements shown under surface preparation. Feather edges of intact coating. Remove dust, dirt and contamination before recoating.

Shipping Data

Packaging unit	5 gal
cure	1 gal in 1 gal can
fast dry cure	4 gal in 5 gal can

Shipping weight (approx)	lbs	kg
5-gal unit		
resin	58.0	26.4
cure	10.4	4.7

Shelf life when stored indoors at 40° to 100°F (4° to 38°C)
resin 1 year from shipment date and cure 1 year from manufacturer date.

Numerical values are subject to normal manufacturing tolerances, color and testing variances. Allow for application losses and surface irregularities. See application instructions for complete information and safety precautions.

Safety Precautions

Read each component's material safety data sheet before use. Mixed material has hazards of both components. Safety precautions must be strictly followed during storage, handling, and use.

This product is for industrial use only. Not for residential use.

Warranty

PPG warrants only its title to the products, and that the products will be set forth in the warranty statement, if any, on the products labeling or in the absence of any such warranty statement that the products will conform to PPG's applicable published specifications. PPG's sole obligation and Buyer's exclusive remedy in connection with the products shall be limited, at PPG's option, to either replacement of products not conforming to this Warranty or credit to Buyer's account in the invoiced amount of the nonconforming products. Any claim under this Warranty must be made by Buyer to PPG in writing within five (5) days of Buyer's discovery of the claimed defect, but in no event later than the expiration of the applicable shelf life, or one year from the delivery date, whichever is earlier. Buyer's failure to notify PPG of such nonconformance as required herein shall bar Buyer from recovery under this Warranty.

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