

Amerlock[®] Sealer

100% solids epoxy sealer

Product Data/ Application Instructions

- Solventless sealer and tiecoat
- Penetrates rust and adheres to aged coatings
- Compatible with aged coatings
- Accepts broad range of topcoats
- Compatible with damp substrates
- Resists high humidity and moisture
- Primer for concrete surfaces
- Curing compound for new concrete

Typical Uses

Amerlock Sealer is a penetrating sealer for marginally prepared steel and aged coatings. Its low viscosity and excellent wetting properties allow it to penetrate rust and discontinuities in existing coatings which in turn improves adhesion of subsequent topcoats. Amerlock Sealer has excellent resistance to corrosive environments.

Amerlock Sealer is also used as a concrete primer/sealer and as a concrete curing compound. When used as a concrete curing compound, Amerlock Sealer is applied to concrete slabs immediately after pouring and finishing, or to formed concrete surfaces as soon as the forms are removed (three days after initial pour). Concrete must cure a minimum of 14 days (total) prior to topcoating with epoxy surfacers or coatings.

Typical Systems Using Amerlock Sealer

First Coat	Second Coat	Third Coat
Amerlock Sealer	Amercoat 370, 385, or Amerlock 2, 400	Amercoat 450 Series, Amershield, or none
Amerlock Sealer	Amercoat 100A, 110C, 120A, or PSX 758	Amerlock 2, 400 Amershield, or none

Physical Data

Finish	Gloss	
Color	Clear	
Components	2	
Curing mechanism	Chemical reaction	
Volume solids (calculated)	100%	
Dry film thickness per coat	1.5 mils (38 microns)	
Coats	1 or 2	
Theoretical coverage 1.5 mils (38 microns)	ft ² /gal 1069	m ² /L 27.1
VOC (theoretical) mixed	lb/gal 0.0	g/L 0.0
Temperature resistance, dry continuous	°F 200	°C 93
intermittent	250	121
Flash point (SETA)	°F	°C
Amerlock Sealer resin	>212	>100
Amerlock Sealer cure	>212	>100
Amercoat 12	2	-17
Amercoat 65	81	27

Formerly Amercoat 3431

Surface Preparation

Coating performance is, in general, proportional to the degree of surface preparation. All surfaces must be clean, dry and free of all contaminants.

Amerlock Sealer is intended for less than ideal surfaces. Amerlock Sealer may be used over most types of properly prepared and tightly adhering coatings. A test patch is recommended for use over existing coatings to insure compatibility.

Steel – Remove all loose rust, dirt, moisture, grease or other contaminants from surface. Power-tool clean SSPC-SP3 or hand-tool clean SSPC-SP2. For more severe environments, dry abrasive blast SSPC-SP7. Water jetting is also acceptable.

Aluminum – Remove oil, grease or soap film with neutral detergent or emulsion cleaner. Treat with Alodine® 1200, Alumiprep® or equivalent, or power tool clean or blast lightly with fine abrasive.

Galvanizing – Remove oil or soap film with detergent or emulsion cleaner, then use zinc treatment such as Galvaprep® or equivalent or power tool clean or blast lightly with fine abrasive.

Concrete – All surfaces to be coated must be strong and sound, contain no additives or hardeners, and should not be treated with sealers or conventional curing compounds containing waxes, silicones, or silicates. New slabs (horizontal surfaces) should have a float finish or broom finish as described in ACI Specification 301. Finishing shall be within Class A tolerance, when using Amerlock Sealer as a concrete curing compound and applying epoxy surfacing. For existing slabs with a trowelled finish, see ‘Primer’ below.

Primer – Water-cured concrete or existing structures must be cured a minimum of 14 days and have attained 80 percent of its final strength. When cured, surface must either be prepared per ASTM D4259 or ASTM D4260 with muriatic acid using equal parts of acid to water by volume.

A suitably finished surface must have a uniform surface texture exposing fine aggregate resembling coarse sandpaper. If required, repeat acid etching or abrasive blasting until the surface texture is uniform.

Concrete surfaces cured with conventional curing compounds or contaminated with form oils must be completely cleaned by ASTM D4259. Acid etching is not acceptable, as it will not normally remove these contaminants.

Curing compound – Formed surfaces should be adequately vibrated to minimize air pockets and holes. Suitable form facing material should be used to produce a smooth form finish as described in ACI Specification 301. Do not use form release agents based on oils, which will deposit a residue on the concrete. When Amerlock Sealer is used as a curing compound the forms should be removed within three days and the Amerlock Sealer applied immediately. New concrete which will be cured with Amerlock Sealer does not require blasting or etching. Remove fins and projections from formed concrete, and ensure that all surfaces are free from oil or contaminants. Cure concrete a minimum of 14 days prior to applying epoxy surfacing. When applying epoxy surfacing the Amerlock Sealer must be roughened when maximum topcoat time is exceeded.

Apply as soon as possible after pouring and finishing the concrete.

Application Equipment

The following is a guide; suitable equipment from other manufacturers may be used. Changes in pressure, hose and tip size may be needed for proper spray characteristics.

Airless spray – Standard equipment such as Graco Bulldog Hydra-Spray or larger with a 0.13- to 0.021-in. (0.38 to 0.53 mm) fluid tip.

Conventional spray – Industrial equipment such as DeVilbiss MBC or JGA spray gun with 78 or 765 air cap and “E” fluid tip, or Binks No. 18 or 62 gun with a 66 x 63 PB nozzle set up. Separate air and fluid pressure regulators, and a moisture and oil trap in the main air supply line are recommended.

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

Brush – Natural bristle. Maintain wet edge.

Roller – Use industrial roller. Level any air bubbles with bristle brush.

Application Data

Applied over	Prepared steel, or concrete, galvanizing, aluminum or aged coatings			
Method	Airless or conventional spray, brush or roller			
Mixing ratio (by volume)	1 part resin to 1 part cure			
Pot life (minutes)	°F/°C			
	90/32	70/21	50/10	
	35	60	100	
Environmental conditions				
Temperature	°F		°C	
air	32 to 120		0 to 49	
surface	32 to 120		0 to 49	
Drying time (ASTM D1640) (hours)	°F/°C			
	90/32	70/21	50/10	32/0
touch	8	12	18	28
hard	22	28	36	52
Recoat/topcoat time (hours)	°F/°C			
	90/32	70/21	50/10	32/0
minimum	18	24	30	38
maximum ^{***}	1 month			

^{***}Roughen surface if max recoat/topcoat time exceeded.

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.

Thinner Amercoat 65

Equipment cleaner

Thinner or Amercoat 12

Application Procedure

1. Flush equipment with thinner or Amercoat 12.
2. Add Amerlock Sealer cure to Amerlock Sealer resin. Mix thoroughly until uniformly blended.

Pot life (minutes)	°F/°C		
2 gal unit	90/32	70/21	50/10
	35	60	100

3. Thinning is not normally recommended. If needed for workability add Amercoat 65 up to ¼ pint per gallon of mixed Amerlock Sealer.
4. Apply wet coat in even parallel passes, overlapping each pass by 50%.
5. Amerlock Sealer is low in viscosity. Apply one coat at 1.5 mils or sufficient thickness to completely cover and penetrate steel. Porous surfaces may require an additional coat of Amerlock Sealer.
6. Clean all equipment with thinner or Amercoat 12 immediately after use.

On slabs, puddled areas of water must not remain. On formed surfaces no running water may be evident.

Primer - When used over acid-etched concrete apply immediately after water rinsing. Abrasive blasted concrete must be thoroughly cleaned to remove all loose material, then may be moistened with water. A damp surface aids in primer/sealer penetration into the surface.

Brush out any primer/sealer which puddles in low areas on slabs (horizontals) or runs or sags on formed surfaces (verticals) during application.

After overnight curing, coated surface may vary in appearance. Areas which appear to have no evidence of primer/sealer indicate a high porosity. In these areas, a second application is recommended. Surfaces not properly primed or sealed may result in bubbling of surfacer. Avoid thick glossy areas of Amerlock Sealer. Roughen these areas prior to topcoating.

Curing compound - When used as a curing compound, Amerlock Sealer must be applied to slabs (horizontals) immediately after the final finishing operation or upon disappearance of the "sheen" of surface moisture. On formed surfaces (verticals), apply immediately after form removal. (Forms should be removed within three days after concrete is poured.) If there is any drying or appreciable loss of moisture, spray the surface with water and allow to reach a uniform damp condition with no excess water on the surface.

Immediately after use, clean all application equipment with Amercoat 12.

Safety Precautions

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

CAUTION - Improper use and handling of this product can be hazardous to health and cause fire or explosion.

Do not use this product without first taking all appropriate safety measures to prevent property damage and injuries. These measures may include, without limitation: implementation of proper ventilation, use of proper lamps, wearing of proper protective clothing and masks, tenting and proper separation of application areas. Consult your supervisor. Proper ventilation and protective measures must be provided during application and drying to keep spray mists and vapor concentrations within safe limits and to protect against toxic hazards. Necessary safety equipment must be used and ventilation requirements carefully observed, especially in confined or enclosed spaces, such as tank interiors and buildings.

This product is to be used by those knowledgeable about proper application methods. PPG makes no recommendation about the types of safety measures that may need to be adopted because these depend on application environment and space, of which PPG is unaware and over which it has no control.

If you do not fully understand these warnings and instructions or if you cannot strictly comply with them, do not use the product.

Note: Consult Code of Federal Regulations Title 29, Labor, parts 1910 and 1915 concerning occupational safety and health standards and regulations, as well as any other applicable federal, state and local regulations on safe practices in coating operations.

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

Shipping Data

Packaging unit	2-gal	
Amerlock Sealer resin	1 gal in 3-gal can	
Amerlock Sealer cure	1 gal in 1-gal can	
Shipping weight (approx)	lb	kg
2-gal unit		
Amerlock Sealer resin	13.5	6.1
Amerlock Sealer cure	11.0	5.0

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

Numerical values are subject to normal manufacturing tolerances, colors and testing variances. Allow for application losses and surface irregularities.



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