



Performance Coatings & Finishes

Amerlock® 400 GFK

High-solids glassflake epoxy coating

Product Data/ Application Instructions

- High-build glassflake coating packaged as a kit containing Amerlock 400 resin with 400 cure and Amercoat 880 Glassflake additive.
- High-performance general maintenance coating for new or old steel
- Can be overcoated with wide range of topcoats
- Compatible with prepared damp surfaces
- Compatible with adherent rust remaining on prepared surfaces
- Cures through wide temperature range
- Up to 20 mils in a single coat
- Resists high humidity and moisture
- Temperature resistance to 450°F on insulated and uninsulated surfaces

Amerlock's low solvent level reduces the chances for film pinholing and solvent entrapment at the substrate-coating interface, often a major cause of coating failure with conventional epoxies and lower solids systems.

Typical Uses

Amerlock 400 Glassflake may be used in areas where blasting is impractical or impossible. Over a wide range of substrates and as a maintenance coating, Amerlock 400 Glassflake protects steel structures in industrial facilities, bridges, tank exteriors, marine weathering, offshore, oil tanks, piping, roofs, water towers and other exposures. Amerlock 400 GFK has good chemical resistance to splash/spillage and fumes.

Adhere to all instruction, precautions, conditions and limitations during storage, handling application and drying periods to obtain maximum performance. For conditions outside the requirements or limitations described, contact your Ameron representative.

Surface Preparation

Coating performance is, in general, proportional to the degree of surface preparation. Abrasive blasting is usually the most effective and economical method. When this is impossible or impractical, Amerlock 400 GFK can be applied over mechanically-cleaned surfaces.

Amerlock 400GFK may be used over most types of properly prepared, tightly adhering coatings. A test patch is recommended over existing coatings.

Steel – Remove all loose rust, dirt, moisture, grease or other contaminants. Power-tool clean, SSPC-SP3 or hand-tool clean, SSPC-SP2. For more severe environments, dry abrasive blast, SSPC-SP7. Water blasting is also acceptable. For high-heat applications on uninsulated substrates, abrasive blast per SSPC-SP6. For insulated substrates, abrasive blast per SSPC-SP10. In both cases, a 2-3 mil profile must be obtained.

Concrete – Acid etch (ASTM D4260) or abrasive blast (ASTM D4259) new concrete.

Galvanizing – Remove oil or soap film with detergent or emulsion cleaner, Galvaprep® or blast lightly with fine abrasive.

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

Physical Data

Finish Color	Flat See color card		
<i>Amerlock 400 Glassflake has shade differences from the standard Ameron color card.</i>			
Components	3		
Curing mechanism	Solvent release and chemical reaction between components		
Volume solids (ASTM D2697 modified)	84% ± 3%		
Dry film thickness (per coat)	8-20 mils (200-500 microns)		
Coats	1		
Theoretical coverage	ft ² /gal	m ² /L	
1 mil (25 microns)	1347	33	
8 mils (200 microns)	168	4.1	
20 mils (500 microns)	67	1.6	
VOC	lb/gal	g/L	
mixed	1.4	172	
mixed/thinned	1.8	213	
Temperature resistance,	wet		dry
	F°	C°	F° C°
continuous	100	38	425 218
intermittent	100	38	450 232

Some discoloration and darkening will occur at temperatures greater than 200°F, this will not affect film integrity or coating performance

Flash point (SETA)	°F	°C
400 cure	85	29
400 resin	131	57
Amercoat 861	300	149
Amercoat® 8	67	19
Amercoat 65	78	25
Amercoat 12	2	-17

Application Data

Applied over	Steel, concrete, galvanizing aluminum		
Surface preparation	SSPC-SP2, 3, 6, 7 or 10		
steel	ASTM D4259 or 4260		
concrete	Galvaprep® or light abrasive blast		
galvanizing	Alodine®, Alumiprep® or light abrasive blast		
Aluminum	Airless or conventional spray.		
Method	As packaged, mix full kits only.		
Mixing ratio	°F/°C		
Pot life (hours)	90/32	70/21	50/10
Mixed kit	1	2½	4
accelerated ½ pt 861	1	1½	2½
accelerated 1 pt 861	½	1	1½
Environmental conditions	°F °C		
Temperature	23 to 120 0 to 50		
air and surface	50°F (10°C) minimum		
material			

Surface temperatures must be at least 5°F (3°C) above dew point to prevent condensation. At freezing temperatures, surface must be free of ice.

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 with 30:1 pump ratio minimum (when temperature above 80°F) or 45:1 pump ratio or larger (when temperature is below 80°F), with surge tank filters removed. Graco Hydra-Mastic gun 207-300 and tip 0.035-inch or larger, with a 3/8- to 1/2-inch spray hose.

Conventional spray – Mastic gun such as Binks 7E2 with 64 x 191 nozzle, or Binks 18D with 69C x 191 nozzle.

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

Application Procedures

1. Flush equipment with thinner or Amercoat 12 before use.
2. Stir resin to disperse pigments.
3. Add Amerlock 400 cure to 400 resin. Mix thoroughly until uniformly blended to a workable consistency. Add Amercoat 880 Glassflake and disperse to a uniform consistency.
4. Do not mix more material than can be used within the expected pot life.
5. For optimum application material should be from 50 to 90°F (10 to 32°C). Above 110°F (43°C) sagging may occur.
6. Use only Ameron recommended thinners. Above 85°F (29°C) use Amercoat 8; at lower temperatures use Amercoat 65. A small amount of thinner greatly reduces viscosity. Excessive thinning will cause running or sagging. Thin as follows:

Airless – no more than 1/4 pint (30 ml/L) of Amercoat 8 or 65 per gallon.

Conventional – no more than 1/2 pint (60 ml/L) of Amercoat 8 or 65 per gallon.

7. Apply in even, parallel passes; overlap 50 percent to avoid holidays, bare areas and pinholes. If required, cross spray at right angles.
8. Ventilate confined areas with clean air between coats and during curing periods following final coat. Ventilating air temperature and relative humidity must be such that condensation will not form on the surface between coats.
9. Repair any damaged areas by brush or spray.
10. Clean equipment with thinner or Amercoat 12 immediately after use.

Safety Precautions

Read each component's material safety data sheet before use. Mixed material has hazards of each components.

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

Limitation of Liability

Ameron's liability on any claim of any kind, including claims based upon Ameron's negligence or strict liability, for any loss or damage arising out of, connected with, or resulting from the use of the products, shall in no case exceed the purchase price allocable to the products or part thereof which give rise to the claim. **In no event shall Ameron be liable for consequential or incidental damages.**

Recoat/Topcoat time	°F/°C			
Minimum (hours)	90/32	70/21	50/10	
Mixed kit with 400 cure	8	16	30	
Mixed kit with 400 cure/1pt 861	4	7	16	
Maximum time				
400 cure	3 months			
400 cure/1pt 861	1 month			
Drying time (ASTM D1640) @ 8 mils (hours)				

	°F/°C			
	90/32	70/21	50/10	32/0
Mixed kit with 400 cure nonaccelerated				
touch	4 1/2	9	28	96
through	12	20	40	140
accelerated				
touch 1/2 pt 861	3	5	24	72
through 1/2 pt 861	6	10	30	96
touch 1 pt 861	2	4	15	48
through 1 pt 861	5	9	24	72
Thinner	Amercoat 8 or 65			
Equipment cleaner	Thinner or Amercoat 12			

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

This mixed product is photochemically reactive as defined by the South Coast Air Quality Management District's Rule 102 or equivalent regulations.

Shipping Data

Packaging unit	2 gal	5 gal		
400 cure	1-gal in 1-gal can	2.5-gal in 2.5-gal can		
400 resin	1-gal in 1-gal can	2.5-gal in 2.5-gal can		
880 Glassflake	3.62 lbs in 1-gal can	9.05 lbs in 3-gal can		
		(Previously Enviro Pack)		
Shipping weight (approx)	lbs	kg	lbs	kg
400 cure	12.5	5.7	31.8	14.4
400 resin	12.2	5.5	35.0	15.9
880 Glassflake	4.4	2.0		

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

Warranty

Ameron warrants its products to be free from defects in material and workmanship. Ameron's sole obligation and Buyer's exclusive remedy in connection with the products shall be limited, at Ameron'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 Ameron 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 Ameron of such nonconformance as required herein shall bar Buyer from recovery under this Warranty.

Ameron makes no other warranties concerning the product. No other warranties, whether express, implied, or statutory, such as warranties of merchantability or fitness for a particular purpose, shall apply. In no event shall Ameron be liable for consequential or incidental damages.

Any recommendation or suggestion relating to the use of the products made by Ameron, whether in its technical literature, or in response to specific inquiry, or otherwise, is based on data believed to be reliable; however, the products and information are intended for use by Buyers having requisite skill and know-how in the industry, and therefore it is for Buyer to satisfy itself of the suitability of the products for its own particular use and it shall be deemed that Buyer has done so, at its sole discretion and risk. Variation in environment, changes in procedures of use, or extrapolation of data may cause unsatisfactory results.



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