

ALK-110 Series

Industrial Alkyd Enamel

Product data sheet

ALK-110 Industrial Alkyd Enamel is recommended for industrial use on primed or un-primed metal surfaces that require cost-effective, one coat industrial alkyd applications.

With its quick dry time, fast turnaround in a shop setting may be achieved. Suitable applications include metal fabrication, heavy duty equipment, agricultural equipment and industrial equipment.

Product highlights

- Fast drying
- Good exterior performance
- Direct-to-metal capable
- Available in a wide range of color and gloss (with flattener)
- Can enhance appearance properties with ALK-201 Hardener

Associated product codes

- ALK-110: High Gloss Clear
- ALK-110LG: Low Gloss Clear
- ALK-110HW: High Gloss White
- ALK-110YL: Yellow Base
- ALK-201: Hardener

Physical constants ¹	ALK-110	ALK-110 w/ALK-201 (optional)*
Solids % by weight	48.0 ± 7.0	52.0 ± 8.0
Solids % by volume	34.8 ± 3.0	36.0 ± 6.0
HAPs	<3.6 lbs./gal. (432 g/L)	<3.6 lbs./gal. (432 g/L)
Photo-chemically reactive	Yes	Yes
Weight/Gallon	7.8 – 10.3 lbs./gal. (936 – 1188 g/L)	7.8 – 10.3 lbs./gal. (936 – 1188 g/L)
VOC Max (less exempts)	4.8 lbs./gal. (576 g/L)	4.8 lbs./gal. (576 g/L)
VOC Max (actual)	4.8 lbs./gal. (576 g/L)	4.8 lbs./gal. (576 g/L)

* If needed, B component can be added to improve hardness and durability

Directions for use

Substrate preparation

The surface to be coated must be sanded and free of all contamination (including dust, dirt, oil, grease, and oxidation). Chemical treatment and the use of a conversion coating will improve the performance properties of the coating system. We recommend that adhesion and system compatibility be checked prior to full application.

Substrate	Application Recommendations: Direct to Properly Prepared Substrate
Cold Rolled Steel	Very good
Hot Rolled Steel	Very good
Galvaneal	Not recommended over zinc substrates
Galvanized	Not recommended over zinc substrates
Aluminum	Fair – Good
Plastic/Fiberglass	Adhesion check is recommended due to variability of substrate

¹ All values are theoretical, depend on color and are ready to spray. Actual values could vary slightly due to manufacturing variability. Constants vary from color to color.

Directions for use (continued)

Mix directions

Mix Directions	Stir thoroughly before and occasionally during use	
Thinning	Q30, Q50, Q160, Q70 or Q80 as needed	
Line/Flush Clean Up	Q60 or Q30	
	ALK-110	ALK-110 w/ALK-201 (optional)
Blend Ratio	N/A	15:1
Pot Life	N/A	3 hours

Application equipment*

	Application	Application Viscosity
Conventional Cup Gun	1.4 – 1.8 mm needle/nozzle w/40–50 psi at the gun	25 - 40" #2 EZ Zahn
Conventional With Pressure Pot	1.4 – 1.8 mm needle/nozzle w/40–50 psi at the gun 20 - 25 fluid pressure	30 - 45" #2 EZ Zahn
HVLP (with or without pressure pot)	1.4 – 1.8 mm needle/nozzle w/10 psi at the cap	20 - 40" #2 EZ Zahn
Airless	0.011" – 0.014" tip at 1500 – 2200 psi fluid pressure	45 - 80" #2 EZ Zahn
Air-Assisted Airless	0.011" – 0.014" tip at 900 - 1300 psi fluid pressure	40 - 60" #2 EZ Zahn
Brush or Roll	Polyester or nylon brush or short nap roller	
Electrostatic	Add 5% of Q70 to help pattern, atomization and wrap	

*For additional application information, refer to product application guide

Application

	ALK-110
Apply	1-2 Coats with 10 min flash
Recommended Wet Film Build	2.5 - 3.3 mils (64 - 84 microns)
Recommended Dry Film Build	1.0 - 2.0 mils (25 - 51 microns)
Coverage (at 1 mil no loss)	510 - 606 sq. ft/gal (47 - 56 meters sq./3.785L)

Dry times

	ALK-110	ALK-110 w/ALK-201
Air Dry @77°F (25°C) 50% RH		
To Touch	10 – 20 minutes	
To Handle	45 – 60 minutes*	
To Recoat	Before 4 hours or after 3 days ²	
Force Dry	10 minutes air dry, bake 20 minutes @ 160°F (71°C)	

*Paint film is not fully cured for 7 days. Drying time may vary, depending on film build, color selection, temperature, humidity, and degree of air movement

² If recoated between 4 hours and 3 days, lifting of previous finish will occur. Before 4 hours the coating is adequately solubilized to prevent lifting. After 3 days, the coating has cured enough where solvent resistance is achieved.

Technical data³

Performance properties

Test	ASTM Method	ALK-110	ALK-110 w/ALK-201
Pencil Hardness	D3363	2B – 3B	HB – F
Gravelometer	D3170	5	8
Gloss @ 60°	D523	10 – 90	10 – 90
Adhesion	D3359	4B	5B
In Service Temperature Limit ⁴	–	180°F (82°C)	180°F (82°C)

Chemical Resistance

Test	ASTM Method	ALK-110	ALK-110 w/ALK-201
MEK	D1308	Severe wrinkle	Slight stain
10% NaOH (Sodium Hydroxide)	D1308	Severe wrinkle	Slight stain
10% HCl (Hydrochloric acid)	D1308	Slight wrinkle	Pass
10% H ₂ SO ₄	D1308	Pass	Pass
Gasoline	D1308	Slight wrinkle	Slight stain
Water ⁵	D1308	Pass	Pass

Weather resistance

Test	ASTM Method	ALK-110	ALK-110 w/ALK-201
Salt Spray 250 hours	B117		
Corrosion Creep	D1654	5A – 7A	6A
Scribe Blisters	D714	8F	8D, 6D, 4M
Face Blisters	D714	8F	8M, 6F
Humidity 100 hours	D2247		
5 Minute Adhesion Recovery	D3359	4B	5B
1 Hour Adhesion Recovery	D3359	4B	5B
24 Hour Adhesion Recovery	D3359	4B	5B
QUV-B: 60° angle	D4587		
250 hour gloss retention	D523	53.1%	42.9%

³ The application and performance property data above is believed to be reliable based on laboratory findings. It is for the buyer to satisfy itself on the suitability of the product for its particular use. Variation in environment, procedures of use or extrapolation may cause unsatisfactory results. All test results assume proper cure and preparation of test substrates. Unless otherwise stated, all results were obtained spraying product direct to metal on BONDERITE® 1000.

⁴ As you approach 150° F depending on the pigmentation, the color may change, but the film integrity will be maintained up to 180°F.

⁵ Although resistant to intermittent exposure, not recommended for immersion.

Safety

These materials are designed for application only by professional, trained personnel, using proper equipment under controlled conditions and are not intended for sale to the general public.

Safe application of paints and coatings requires knowledge of equipment, materials, and individual training. Directions and precautionary information on both equipment and products should be carefully read and strictly observed for personal safety and property protection. Consideration must be given to eliminate conditions, which may generate hazardous atmospheres during spray application or subject operations or bystanders to injury or illness.

Special precautions must be taken when utilizing spray equipment, particularly airless equipment. High-pressure injection of coatings into the skin by airless equipment may cause serious injury requiring immediate medical attention at a hospital. Treatment advice may also be obtained from Poison Centers.

Air quality should be maintained with adequate ventilation; applicators can achieve additional protection by wearing respirators and other protective garments such as gloves and overalls. In all cases, wear protective eye equipment. During the application of all coating materials, all flames, welding, and smoking must be prohibited. Explosion proof equipment must be used when coating these materials in confined areas.

Precautionary information

Before using the products listed herein, carefully read each product label and follow directions for use. Please read and observe all warnings and precautionary information on all product labels. Prevent all contact with skin and eyes and breathing of vapors and spray mist. Repeated inhalation of high vapor concentrations may cause a series of progressive effects including irritation of the respiratory system, permanent brain and nervous system damage and possible unconsciousness and death in poorly ventilated areas. Eye watering, headaches, nausea, dizziness, and loss of coordination are indications that solvent levels are too high. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

KEEP OUT OF THE REACH OF CHILDREN

Medical response

Emergency medical or spill control information: US (412) 434-4515; Canada (514) 645-1320; and Mexico 01-800-00-21-400. Please have label information available.

Safety Data Sheets (SDS) for the PPG products mentioned in this publication are available through [versolon.com](https://www.versolon.com) (Safety, SDS Search) or through your PPG store or distributor. For additional information regarding this product, see the SDS and label information.

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