



Low VOC Acrylic Modified Alkyd Enamel / Low Gloss

# ALK-300E / ALK-300ELG

ALK-300E is a fast-drying, exterior grade, 3.5 VOC alkyd enamel intended for industrial use on properly prepared and/or primed metal surfaces. Example applications include metal fabrication, castings, cabinets, machinery, and heavy equipment.

ALK-300E provides performance properties such as excellent film hardness, fast drying, and very good gloss.

**Features and benefits:**

- Provides a range of gloss levels
- Has excellent film hardness
- Is quick drying for fast turnaround time
- Direct-to-metal capable for interior use applications

**Associated Products:**

- ALK-300E Low VOC Acrylic Modified Alkyd Enamel
- ALK-300ELG Low VOC Acrylic Modified Alkyd Enamel
- ALK-31 Drier for ALK-300
- ALK-201 Catalyst for ALK-200/ALK-300

**Physical Constants:** *All values are theoretical, depend on color and are Ready-to-Spray. Actual values could vary slightly due to manufacturing variability.*

	ALK-300E w/ tints only	ALK-300E w/ ALK-31	ALK-300E w/ ALK-300E & ALK-201	ALK-300ELG w/ tints only	ALK-300ELG w/ ALK-31
Percent solids (by weight)	59.6 – 72.4%	58.6 – 71.3%	60.3 – 72.0%	62.6 – 74.4%	61.5 – 73.4%
Percent solids (by volume)	51.7 – 58.6%	50.5 – 57.4%	52.4 – 58.4%	54.1 – 61.5%	52.9 – 60.2%
HAPs	≤ 0.2 lbs/gal	≤ 0.2 lbs/gal	≤ 0.2 lbs/gal	≤ 0.2 lbs/gal	≤ 0.2 lbs/gal
Photo-chemically reactive	No	No	No	No	No
Volume Ratio	As is	32 : 1	15 : 1 : ½	As is	32 : 1
Applicable Use Category	Single-Stage Coating	Single-Stage Coating	Single-Stage Coating	Single-Stage Coating	Single-Stage Coating
VOC Actual	340 – 417 (g/L) 2.84 – 3.48 (lbs/gal)	352 – 425 (g/L) 2.94 – 3.55 (lbs/gal)	343 – 403 (g/L) 2.85 – 3.36 (lbs/gal)	319 – 399 (g/L) 2.66 – 3.34 (lbs/gal)	331 – 409 (g/L) 2.79 – 3.41 (lbs/gal)
VOC Regulatory (less water less exempt)	341 – 417 (g/L) 2.85 – 3.49 (lbs/gal)	352 – 426 (g/L) 2.94 – 3.56 (lbs/gal)	342 – 403 (g/L) 2.85 – 3.37 (lbs/gal)	319 – 399(g/L) 2.67 – 3.34 (lbs/gal)	331 – 409 (g/L) 2.76 – 3.41 (lbs/gal)
Density	1027 – 1292 (g/L) 8.56 – 10.77 (lbs/gal)	1023 – 1279 (g/L) 8.53 – 10.66 (lbs/gal)	1030 – 1280 (g/L) 8.59 – 10.67 (lbs/gal)	1063 – 1327 (g/L) 8.86 – 11.06 (lbs/gal)	1058 – 1313 (g/L) 8.82 – 10.95
Volatiles wt. %	27.7 – 40.4	28.7 – 41.4	27.1 – 38.8	25.6 – 37.4	26.7 – 38.5
Water wt. %	0.0 – 0.2	0.0 – 0.2	0.0 – 0.2	0.0 – 0.2	0.0 – 0.2
Exempt wt. %	0.0	0.0	0.0	0.0	0.0
Water vol. %	0.0 – 0.2	0.0 – 0.2	0.0 – 0.2	0.0 – 0.2	0.0 – 0.2
Exempt vol. %	0.0	0.0	0.0	0.0	0.0

Flashpoint

ALK-300E only - 79°F, ALK-300ELG only - 101°F  
ALK-31 only - 115°F, ALK-201 only - 113°F



# ALK-300E / ALK-300ELG

## 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). A chemical treatment (or conversion coating) will improve adhesion and performance properties of the finished coat. Variability can occur with substrates, preparation, application method or environment. We recommend that adhesion and system compatibility be checked prior to full application.

Substrate	Direct to properly treated substrate
Cold Rolled Steel	Good
Hot Rolled Steel	Good
Galvaneal	Not Recommended
Galvanized	Not Recommended
Aluminum	Fair
Plastic / Fiberglass	Surface should be free of all contamination. Because of the variability of plastic/fiberglass substrates, coating performance should be confirmed on the actual plastic/fiberglass substrate being used.

**Note:** For improved performance between this topcoat and CPC primers please see the CPC Primer/Topcoat compatibility chart (CPCTB01).

### Mix Directions:



**Mix Directions** Thoroughly agitate component A on mechanical shaker prior to mixing. Stir thoroughly before and occasionally during use. When using ALK-201, allow the mixture to digest for 15 minutes before using. ALK-31 should be added to the resin prior to tinting. ALK-31 is dark in color and care should be taken when used in light/clean colors as they may darken or appear dirty.

**Thinning** May reduce to 3.50 VOC with Q50 (Aromatic 100).



**Blend Ratio:**

	ALK-300E (w/ ALK-31)	ALK-300E with ALK-201 (w/ ALK-31)	ALK-300ELG (w/ ALK-31)
RTS (w/ 4 oz ALK-31 to full gallon for improved dry)	RTS	15:1 (w/ 4 oz ALK-31 to full gallon for improved dry)	RTS (w/ 4 oz ALK-31 to full gallon for improved dry)



**Pot Life @ 77°F:** N/A      6 hours      N/A

**Spray Viscosity Range:** #3 EZ Zahn 15 – 25 seconds    #3 EZ Zahn 15 – 25 seconds    #3 EZ Zahn 18 – 28 seconds

**Unopened Shelf Life:** 2 years      2 years      2 years

### Application Equipment:



**Conventional (with or without Pressure Pot):** 1.4 – 1.8 mm needle/nozzle with 50 – 70 psi at the gun

**HVLP (with or without Pressure Pot):** 1.3 – 1.6 mm needle/nozzle with 10 psi output at the gun or per manufacturer.

**Airless:** No recommendation

**Air-Assistd Airless:** No recommendation

**Brush or Roll:** No recommendation

**Electrostatic:** No recommendation

### Application:



**Apply:** 1 – 2 medium coats with 10 – 15 minute flash. Apply only when air, product, and surface temperature are above 60°F (16°C) and when surface temperature is at least 5°F (3°C) above the dew point.

	ALK-300E (with ALK-31)	ALK-300E/ALK201 (with ALK-31)	ALK-300ELG (with ALK-31)
Recommended Wet Film Build:	2.8 – 3.7 mils	2.8 – 3.7 mils	2.8 – 3.7 mils
Recommended Dry Film Build:	1.5 – 2.0 mils	1.5 – 2.0 mils	1.5 – 2.0 mils
Square Foot Coverage @ 1.0 mil no loss:	811 – 913 sq. ft.	840 – 936 sq. ft.	848 – 950 sq. ft.

### Dry Times:



Air Dry @ 77°F 50% RH:	ALK-300E (with ALK-31)	ALK-300E with ALK201 (with ALK-31)	ALK-300ELG (with ALK-31)
Dry to Touch	30 minutes	45 minutes	30 minutes
Dry to Handle	2 hours*	2.5 hours*	2 hours*
To Recoat	Before 6 hours or after 24 hours to 4 days**	2 hours to 4 days	Before 6 hours or after 24 hours to 4 days**



**Force Dry:** After 10 minute flash: 30 minutes @ 120F

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

\*\* ALK-300E and ALK-300ELG without ALK-201: If recoated between 6 hours and 24 hours, lifting of the previous finish will occur. Before 6 hours the coating is adequately solubilized to prevent lifting, where after 24 hours to 4 days, the coating has cured enough where solvent resistance is achieved.

# ALK-300E / ALK-300ELG

## Technical Data\*

### Performance Properties:

Test	ASTM Method	ALK-300E (with ALK-31)	ALK-300E/ALK-201 (with ALK-31)	ALK-300ELG (with ALK-31)
Gloss @ 60° Angle	D523	85 – 95	85 – 95	10 – 20
Pencil Hardness	D3363	HB	HB	HB
Adhesion	D3359	4B – 5B	5B	3B – 4B
Chip Resistance	D3170	4	8	2
In Service Temperature Limit**		150°F	150°F	150°F

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

### Chemical Resistance:

Chemical ASTM D1308	ALK-300E (with ALK-31)	ALK-300E/ALK-201 (with ALK-31)	ALK-300ELG (with ALK-31)
Toluene	Medium blister, ring	Mild ring	Mild ring, blister
10% NaOH (Sodium Hydroxide)	Medium blister, ring	Mild ring	Mild ring
10% HCl (Hydrochloric acid)	Pass	Pass	Pass
10% H <sub>2</sub> SO <sub>4</sub> (Sulphuric acid)	Pass	Pass	Pass
Gasoline	Mild ring, yellow	Slight ring, yellow	Fail
Isopropyl Alcohol	Mild ring	Mild ring	Mild ring
Water †	Pass	Pass	Pass

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

### Weather Resistance:

	ASTM Method	ALK-300E (with ALK-31)	ALK-300E/ALK-201 (with ALK-31)	ALK-300ELG (with ALK-31)
<b>Salt Spray – 100 hours</b>	B117			
Corrosion Creep	D1654	7A	7A	7A
Scribe Blisters	D714	6D, 8D	6D, 8D	6M, 8D
Face Blisters	D714	None	None	None
<b>Humidity – 100 hours</b>	D2247			
5 Minute Recovery Adhesion	D3359	4B	5B	3B
1 Hour Recovery Adhesion	D3359	2B	5B	3B
24 Hour Recovery Adhesion	D3359	3B	5B	3B
<b>QUV-UVA: 60° angle</b>	D4587			
200 hour retention	D523	81 – 100%	88 – 100%	63 – 83%
500 hour retention	D523	78 – 99%	85 – 99%	63 – 78%

All tests results assume proper cure and preparation of test substrates. Unless otherwise stated, all results were obtained spraying product direct to metal on Bonderite 1000.

\*The application and performance property data above are 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 of data may cause unsatisfactory results.

**Miscellaneous:** Not to be used on zinc substrates.

## 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 operators 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 coatings materials, all flames, welding and smoking must be prohibited. Explosion proof equipment must be used when coating these materials in confined areas.

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### PRECAUTIONARY INFORMATION

Before using the products listed herein, carefully read each product label and follow directions for its 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

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### MEDICAL RESPONSE

Emergency Medical or Spill Control Information (412) 434-4515; CANADA (514) 645-1320  
Have label information available.



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**Material Safety Data Sheets for the PPG products mentioned in this publication are available through your PPG Distributor.**

For additional information regarding this product, see the MSDS AND LABEL information.

## PPG Industries Commercial Coatings

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