



2.8 VOC Alkyd Enamel Topcoat

ALK28 Topcoat/ALK28-901

ALK28 Topcoat is an economical, fast-drying, general purpose, 2.8 VOC alkyd enamel intended for industrial use on properly prepared and/or primed substrates.

Potential applications include trailers, metal fabrication, castings, cabinets, machinery and heavy equipment.

ALK28 Topcoat can be applied via conventional, HVLP, pressure pot or airless application.

Features and Benefits:

- Can be applied over primer or DTM
- Good water spot resistance
- Quick dry for increased throughput
- Good blocking for early banding and stacking

Associated Products:

- ALK28-901 Black
- ALK-201 Hardener
- Q30 Acetone

Physical Constants: *All values are theoretical and depends on color. Actual values could vary slightly due to manufacturing variability.*

	ALK28 as is	ALK28 w/ 10% Q30	ALK28 w/ 20% Q30	ALK28 w/ALK-201	ALK28 w/ ALK-201 & 10% Q30	ALK28 w/ ALK-201 & 20% Q30
Percent solids (by weight)	57.8%	53.8%	50.4%	59.4%	55.4%	51.9%
Percent solids (by volume)	48.9%	44.4%	40.7%	50.8%	46.2%	42.3%
HAPs	≥ 0.2 lbs/gal	≥ 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	No
Volume Ratio	As Is	10 : 1	10 : 2	15 : 1	15 : 1 : 1.6	15 : 1 : 3.2
Applicable Use Category	Single-Stage Coating	Single-Stage Coating	Single-Stage Coating	Single-Stage Coating	Single-Stage Coating	Single-Stage Coating
VOC Actual	280 (g/L) 2.34 (lbs/gal)	255 (g/L) 2.13 (lbs/gal)	234 (g/L) 1.95 (lbs/gal)	274 (g/L) 2.29 (lbs/gal)	249 (g/L) 2.08 (lbs/gal)	229 (g/L) 1.91 (lbs/gal)
VOC Regulatory (less water less exempt)	334 (g/L) 2.79 (lbs/gal)	334 (g/L) 2.79 (lbs/gal)	334 (g/L) 2.79 (lbs/gal)	323 (g/L) 2.70 (lbs/gal)	323 (g/L) 2.70 (lbs/gal)	323 (g/L) 2.70 (lbs/gal)
Density	1080 (g/L) 9.01 (lbs/gal)	1054 (g/L) 8.79 (lbs/gal)	1032 (g/L) 8.61 (lbs/gal)	1083 (g/L) 9.03 (lbs/gal)	1056 (g/L) 8.81 (lbs/gal)	1035 (g/L) 8.63 (lbs/gal)
Volatiles wt. %	42.2	46.2	49.6	40.6	44.6	48.1
Water wt. %	0.0	0.1	0.1	0.0	0.1	0.1
Exempt wt. %	16.2	21.8	26.8	15.1	20.9	25.9
Water vol. %	0.0	0.1	0.1	0.0	0.1	0.1
Exempt vol. %	16.0	23.6	29.9	15.0	22.7	29.1

Flashpoint

ALK28 only = -6°F (-21°C), ALK-201 only = 113°F (45°C), Q30 only = 4°F (-16°C)



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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	Application Recommendations
Cold Rolled Steel	Direct to substrate - Very good over properly prepared substrate
Hot Rolled Steel	Direct to substrate - Good over properly prepared substrates
Galvaneal	Direct to substrate - Not Recommended
Galvanized	Direct to substrate - Not Recommended
Aluminum	Direct to substrate - Fair over properly prepared substrates
Plastic / Fiberglass	Coating system performance must be confirmed on the actual plastic/fiberglass substrate being used because of the variability of plastic/fiberglass substrates. Surface must be free of all contamination prior to application of any coating.

Note: For acceptable compatibility between this topcoat and CPC primers please see the CPC Primer/Topcoat compatibility chart (CPCTB01). **Do NOT use over ZNP-200 Epoxy Zinc Rich Primer.**

Mix Directions: Mix Directions: Thoroughly agitate component A on mechanical shaker prior to mixing. Stir thoroughly before and occasionally during use.



Thinning: Thinning with non-exempt solvents will result in VOC greater than 3.5 lbs/gal. Recommend Q30 (Acetone) 10% – 25% as needed.



	ALK28	ALK28 w/ ALK-201
Blend Ratio:	Add 10% – 25% Q30 Acetone	15:1 + 10% – 25% Q30 Acetone
Pot Life @ 77°F (25°C):	N/A	2 Hours when reduced with acetone first



Spray Viscosity Range: #3 EZ Zahn 20 – 25 seconds #3 EZ Zahn 20 – 25 seconds

Unopened Shelf Life: (each component) ALK28 = 1 year ALK-201 = 2 years unopened

Application Equipment:



Conventional
Without Pressure Pot: 1.3 – 1.8 mm needle/nozzle with 50 – 70 psi at the gun
With Pressure Pot: 1.1 – 1.4 mm needle/nozzle with 50 – 70 psi at the gun

HVLP
Without Pressure Pot: 1.3 – 1.8 mm needle/nozzle with 10 psi output at the gun or per manufacturer
With Pressure Pot: 1.1 – 1.4 mm needle/nozzle with 10 psi output at the gun or per manufacturer

Airless: 0.013 – 0.017 tip, 2100 – 2500 psi fluid pressure

Air-Assisted Airless: 0.013 – 0.017 tip, 800 – 1200 psi fluid pressure, 10 – 20 psi atomizing air

Brush or Roll: Not Recommended

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.

Recommended
Wet Film Build (as is): 3.0 – 4.0 mils

Recommended
Dry Film Build: 1.5 – 2.0 mils

Square foot coverage @ 1.0 mil no loss:	As is = 784	15 : 1 with ALK-201 = 814
	With 10% Q30 = 712	With ALK-201 + 10% Q30 = 741
	With 20% Q30 = 652	With ALK-201 + 20% Q30 = 678

Dry Times:



Air Dry @ 77°F (25°C) 50% RH:	As Is	With ALK-201 at 15 : 1
Dry to Touch	2 hours	3 hours
Dry to Handle	3 hours*	4 hours*
To Recoat	Before 1 hour or after 24 hours with a light scuff**	Before 1 hour or after 24 hours with a light scuff
Force Dry @ 140°F (60°C):	10 minutes flash, 30 minutes	10 minutes flash, 30 minutes



* 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.

** ALK28 without ALK-201: If recoated between 1 hour and 24 hours, lifting of the previous finish will occur. Before 1 hour 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.

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Technical Data*

Performance Properties:

	Test	ASTM Method	Result	
			With 10% – 20% Q30 Acetone	15 : 1 with ALK-201 + 10% – 20% Q30 Acetone
B1000 Cold Rolled Steel ALK28	Gloss @ 60° Angle	D523	85 – 90	85 – 90
	Pencil Hardness	D3363	4B	3B
	Adhesion	D3359	5B	5B
	Mandrel	D522	Pass	Pass
	In Service Temperature Limit - Dry		240°F (116°C)	240°F (116°C)

Note: As you approach 240°F (116°C) depending on the pigmentation, the color may change, but the film integrity will be maintained up to 240°F (116°C).

Chemical Resistance: Test method: One hour spot test

	Chemical	ASTM Method	Result	
			With 10% – 20% Q30 Acetone	15 : 1 with ALK-201 + 10% – 20% Q30 Acetone
B1000 Cold Rolled Steel ALK28	Xylene	D1308	Slight Swell	Slight Swell
	10% HCl (Hydrochloric acid)	D1308	Pass	Pass
	Diesel	D1308	Slight Swell	Slight Swell
	Gasoline	D1308	Swell / Stain / Gloss Loss	Slight Swell
	Water †	D1308	Pass	Pass

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

Weather Resistance:

	ASTM Method	Result	
		With 10% – 20% Q30 Acetone	15 : 1 with ALK-201 + 10% – 20% Q30 Acetone
E coat primed steel ALK28	Salt Spray – 250 hours	B117	
	Corrosion Creep	D1654	8A
	Scribe Blisters	D714	8F
	Face Blisters	D714	None
	Humidity – 100 hours	D2247	
	5 Minute Recovery Adhesion	D3359	5B
	1 Hour Recovery Adhesion	D3359	5B
	24 Hour Recovery Adhesion	D3359	5B
	QUV-UVA: 60° angle	D4587	
	200 hour retention	D523	88%
400 hour retention	D523	84%	91%

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.

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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.

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

MEDICAL RESPONSE

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



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.



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