Commercial Performance Coatings

CPCPB231

Low VOC Polyurethane Enamel - Low Gloss

AUE-400LG

AUE-400LG Low VOC Polyurethane Enamel – Low Gloss is recommended for interior and exterior use on properly prepared and or primed metal surfaces that require a fast dry, low gloss, durable finish. This topcoat offers very good chemical and corrosion resistance and is available in kit format for easy-to-mix use.

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

Features and benefits:

- Very good chemical and corrosion resistance
- Excellent impact resistance and good flexibility
- Easy to spray and builds film well
- Can be used as textured finish

Associated Products:

- AUE-400LG Low VOC Polyurethane Enamel - Low Gloss
- AUE-421 Urethane Catalyst
- UA-11 Urethane Accelerator
- AUE-3540 Gloss Enhancer

Physical Constants:

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

	AUE-400LG tints only	AUE-400LG w/ AUE-421 & UA11	AUE-400LG w/ AUE-3540 tints only	AUE-400LG w/ AUE-3540 & AUE-421 & UA11
Percent solids (by weight)	66.0 - 77.8%	64.70 – 75.12%	61.3 - 76.7%	60.79 – 74.06%
Percent solids (by volume)	52.3 - 60.3%	52.32 – 58.79%	52.2 - 60.3%	52.2 – 58.73%
HAPs	≤ 0.10 lbs/gal	≤ 0.10 lbs/gal	≤ 0.10 lbs/gal	≤ 0.10 lbs/gal
Photo-chemically reactive	No	No	No	No
Volume Ratio	As is	5.6 : 1 : 6 oz/rts gal	As is	5.6 : 1 : 6 oz/rts gal
Applicable Use Category	Single-Stage Coating	Single-Stage Coating	Single-Stage Coating	Single-Stage Ctg
VOC Actual	331 - 411 (g/L) 2.76 - 3.43 (lbs/gal)	350 – 415 (g/L) 2.94 - 3.48 (lbs/gal)	334 – 417 (g/L) 2.78 – 3.48 (lbs/gal)	355 – 420 (g/L) 2.97 – 3.51 (lbs/gal)
VOC Regulatory (less water less exempt)	334 - 415 (g/L) 2.79 - 3.46 (lbs/gal)	353 - 418 (g/L) 2.95 - 3.49 (lbs/gal)	337 – 418 (g/L) 2.81 – 3.49 (lbs/gal)	355 – 421 (g/L) 2.96 – 3.51 (lbs/gal)
Density	1222 - 1547 (g/L) 10.19 - 12.9 (lbs/gal)	1188 - 1451 (g/L) 9.9 - 12.1 (lbs/gal)	1077 – 1475 (g/L) 8.98 – 12.30 (lbs/gal)	1070 – 1393 (g/L) 8.92 – 11.61 (lbs/gal)
Volatiles wt. %	22.2 - 34	24.9 - 35.3	23.3 – 38.7	25.9 – 39.2
Water wt. %	0.0 - 0.2	0.0 - 0.2	0.0 – 0.2	0.0 – 0.2
Exempt wt. %	0.5 - 0.6	0.4 - 0.5	0.2 – 0.4	0.1 – 0.3
Water vol. %	0.0 - 0.3	0.0 - 0.2	0.0 – 0.3	0.0 – 0.2
Exempt vol. %	0.9	0.7	0.3 – 0.6	0.2 – 0.5

Flashpoint
AUE-400LG - 99°F (43°C), AUE-421 - 80°F (45°C)
UA-11 - 96°F (36°C), AUE-3540 - 63°F (17°C)

PPG

AUE-400LG

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	Refer to CPCTB01 for approved primers.
Hot Rolled Steel	Refer to CPCTB01 for approved primers.
Galvaneal	Refer to CPCTB01 for approved primers.
Galvanized	Refer to CPCTB01 for approved primers.
Aluminum	Refer to CPCTB01 for approved primers.
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 acceptable compatibility between this topcoat and CPC primers please see the CPC Primer/Topcoat compatibility chart (CPCTB01).*

Mix Directions: Stir thoroughly before and occasionally during use. To each pigmented gallon of AUE-400LG component A (103.5 oz.), add the entire contents of 1 short filled quart container (18.5 oz) of AUE-421, component B (clear curing agent), and 6 oz of UA-11 Urethane accelerator, component C.

Mix Directions: Agitate thoroughly and allow it to digest 5 minutes before using.

NOTE: *Moisture contamination in components can result in poor properties of applied films or vgelling of the material. Do not open until ready to use.*

Thinning: Recommend thinning to 3.5 VOC with Q60 (MEK), or other PPG urethane grade reducers.

Blend Ratio: Packaged as a kit

AUE-400LG	+	AUE-421	+	UA11
103.5 oz. (pigmented gallon)		18.5 oz. (quart container)		6 oz.

Pot Life @ 77°F (25°C): 2 – 2.5 hours

Spray Viscosity Range: #3 Zahn 25 – 35 seconds #2 Zahn 45 – 55 seconds

Unopened Shelf Life: (each component)
AUE-400LG = 4 years
AUE-421: Unopened = 2 years, opened = 14 days
UA-11: Unopened = 5 years, opened = 1 year

Application Equipment:

Conventional: 1.0 – 1.4 mm needle/nozzle on pressure pot, 1.4 – 1.6 mm needle/nozzle without pot; 50 – 70 psi at the gun.

HVLP: 1.0 – 1.4 mm needle/nozzle on pressure pot, 1.4 – 1.6 mm needle/nozzle without pot; 10 psi output at the tip.

Airless: No recommendation

Air-Assisted Airless: No recommendation

Brush or Roll: No recommendation

Electrostatic: No recommendation

Application:

Apply: 1 - 2 medium coats with a 10 - 15 minute flash between coats.
Apply only when air, product, and surface temperature are above 50°F (10°C) and when surface temperature is at least 5°F (3°C) above the dew point.

Recommended Wet Film Build: 2.6 – 3.8 mils

Recommended Dry Film Build: 1.5 – 2.0 mils

Square Foot Coverage @ 1 mil: 837 – 943 sq. ft. (Dry film per U.S. gallon - depending on color)

Dry Times:

Air Dry @ 77°F 50% RH:

To Touch: 30 minutes – 1 hour

To Handle: 2 – 3 hours

Dry: 24 hours*

Recoat: 2 hours – 4 days

Force Dry: After 10 minutes flash
Bake 10 minutes @ 180°F
Bake 20 minutes @ 140°F
Bake 30 minutes @ 120°F

*Drying time may be accelerated with up to 6oz of UA-11 per gallon.

**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.*

AUE-400LG

Technical Data*

Performance Properties:

Test	ASTM Method	Results	
		AUE-400LG	Satin / Semi-gloss (w/AUE-3540)
Gloss @ 60° Angle	D523	15 – 30	30 – 45 / 65 – 85
Pencil Hardness	D3363	HB – F	HB – F
Adhesion	D3359	5B	5B
Gravelometer	D3170	6 – 7	6 – 7
In Service Temperature Limit**		300°F (149°C)	

***As you approach 300°F (149°C), depending on the pigmentation, the color may change, but the film's integrity will be maintained up to 300°F (149°C).*

Chemical Resistance:

Chemical	ASTM Method	AUE-400LG results
MEK	D1308	Medium gloss loss
10% NaOH (Sodium Hydroxide)	D1308	Pass
10% HCl (Hydrochloric acid)	D1308	Pass
10% H_2SO_4 (Sulphuric acid)	D1308	Pass
Gasoline	D1308	Mild gloss loss
Diesel	D1308	Pass
Water†	D1308	Pass

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

Weather Resistance:

System (Salt and Humidity)
BONDERITE® 1000
CRE-904
AUE-400LG

	ASTM Method	AUE-400LG results
Salt Spray – 500 hours	B117	
Corrosion Creep	D1654	8A
Scribe Blisters	D714	None
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-UVB: 60° angle	D4587	
200 hour retention	D523	36 – 60%
500 hour retention	D523	26 – 50%

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:

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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 and in MÉXICO 01-800-00-21-400. Have label information available.

Safety Data Sheets (SDS) for the PPG products mentioned in this publication are available through www.ppgcommercialcoatings.com (Safety, SDS Search) or your PPG Distributor.

For additional information regarding this product, see the SDS and LABEL information.

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