



## 2.8 VOC Polyurethane Enamel

# AUE-280 / AUE-280LG

AUE-280 is a 2.8 VOC Polyurethane Enamel that is recommended for interior and exterior use on properly prepared and or primed metal surfaces. This product provides a wide balance of performance properties, including excellent flow and leveling, film hardness and good exterior durability.

This resin is available in high and low gloss bases that when combined, provide intermediate gloss levels. Suitable applications for the higher gloss include metal fabrication, castings, cabinets, machinery, and heavy equipment. For the lower gloss, AUE-280 is particularly suited for use on electronics components, metal furniture, and exterior signs and metalwork, as well as cabinets and machinery.

### Features and Benefits:

- Intermixable high and low gloss bases
- Excellent corrosion and chemical resistance
- Excellent flow and smoothness characteristics
- Excellent gloss and color retention
- Fast dry for quick turnaround

### Associated Products:

- AUE-280 2.8 VOC Polyurethane Enamel
- AUE-280LG 2.8 VOC Polyurethane Enamel – Low Gloss
- AUE-281 Catalyst for AUE-280 & AUE-280LG
- UA-11 Urethane Accelerator
- UE-28 Urethane Extender
- AUE2-FP901, Factory-packaged Black
- AUE2-FP951, Factory-packaged White
- Exempt Solvent (Q30 – Acetone)

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

	AUE-280 w/ tints	AUE-280 w/ tints : AUE-281 : UA-11 or UE-28	AUE-280LG w/ tints	AUE-280LG w/ tints : AUE-281
Percent solids (by weight)	61.6 – 74.2%	67.02 – 76.01%	35.8 – 51.3%	45.85 – 57.7%
Percent solids (by volume)	55.3 – 61.8%	61.28 – 66.02%	26.2 – 31.8%	36.75 – 41.51%
HAPs	≤ 0.1 lbs/gal	≤ 0.1 lbs/gal	≤ 0.1 lbs/gal	≤ 0.1 lbs/gal
Photo-chemically reactive	No	No	No	No
Flashpoint	AUE-280 = 109°F, AUE-280LG = 17°F, AUE-281 = 334°F, Q30 = -4°F			
RTS Combinations:	AUE-280 w/ tints	AUE-280 w/ tints : AUE-281 : UA-11 or UE-28	AUE-280LG w/ tints	AUE-280LG w/ tints : AUE-281
Volume Ratio	As is	4 : 1 : 6 oz/RTS gal	As is	6 : 1
Applicable Use Category	Single-Stage Coating	Single-Stage Coating	Single-Stage Coating	Single-Stage Coating
VOC Actual	323 – 373 (g/L) 2.70 – 3.11 (lbs/gal)	292 – 331 (g/L) 2.44 – 2.76 (lbs/gal)	169 – 213 (g/L) 1.41 – 1.77 (lbs/gal)	145 – 182 (g/L) 1.21 – 1.52 (lbs/gal)
VOC Regulatory (less water less exempt)	323 – 373 (g/L) 2.70 – 3.11 (lbs/gal)	292 – 331 (g/L) 2.44 – 2.76 (lbs/gal)	334 – 419 (g/L) 2.79 – 3.50 (lbs/gal)	252 – 316 (g/L) 2.10 – 2.64 (lbs/gal)
Density	1003 – 1234 (g/L) 8.37 – 10.30 (lbs/gal)	1029 – 1230 (g/L) 8.59 – 10.26 (lbs/gal)	1028 – 1254 (g/L) 8.58 – 10.46 (lbs/gal)	1046 – 1239 (g/L) 8.73 – 10.34 (lbs/gal)
Volatiles wt.	26.2 – 37.0 %	24.1 – 32.0 %	48.8 – 62.9 %	42.3 – 53.1 %
Water wt.	0.0 – 0.2 %	0.0 – 0.1 %	0.0 – 0.2 %	0.0 – 0.1 %
Exempt wt.	0.0 %	0.0 %	34.9 – 42.6 %	30.3 – 35.9 %
Water vol.	0.0 – 0.2 %	0.0 – 0.1 %	0.0 – 0.2 %	0.0 – 0.1 %
Exempt vol.	0.0 %	0.0 %	49.2 %	42.2 %

# AUE-280 / AUE-280LG

## 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	Direct to properly treated substrate
Cold Rolled Steel	Refer to CPCTB01 for approved primers (no direct to metal application)
Hot Rolled Steel	Refer to CPCTB01 for approved primers (no direct to metal application)
Galvaneal	Refer to CPCTB01 for approved primers (no direct to metal application)
Galvanized	Refer to CPCTB01 for approved primers (no direct to metal application)
Aluminum	Refer to CPCTB01 for approved primers (no direct to metal application)
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: Stir thoroughly before and occasionally during use.



Thinning:

AUE-280 can be thinned up to 10% with Q30. Q30 will **not** raise the VOC above 2.8 lbs/gal.  
AUE-280LG should not be thinned.



Blend Ratio:

AUE-280			AUE-280LG*		
AUE-280	:	AUE-281 + UA-11 or UE-28	AUE-280LG	:	AUE-281
4	:	1 + 6 oz/RTS gal	6	:	1



Pot Life @ 77°F (25°C):

1 hour with UA-11  
1 ½ – 2 hours with UE-28

3 – 4 hours

Spray Viscosity Range:

#3 Zahn 15 – 25 seconds

#3 Zahn 10 – 20 seconds

Unopened Shelf Life:

AUE-280 = 4 years

AUE-280 LG (gallons) = 2 years  
AUE-280LG (pails, drums) = 1 year

\* Intermediate gloss levels can be achieved. See "Miscellaneous" section for details

### Application Equipment:

Conventional/Compliant:	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:	Not recommended
Electrostatic:	No recommendation



### Application:

Apply: 1 – 2 medium coats with a 10 – 15 minute flash. 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.



	AUE-280	AUE-280LG
Recommended Wet Film Build:	2.6 – 3.6 mils	3.6 – 6.8 mils
Recommended Dry Film Build:	1.7 – 2.2 mils	1.5 – 2.5 mils
Square Foot Coverage @ 1 mil no loss:	983 – 1,059 sq. ft.	589 – 665 sq. ft.

### Dry Times:

Air Dry @ 77°F (25°C) 50% RH:



	AUE-280 w/UA-11	AUE-280 w/UE-28	AUE-280LG
To Touch	30 – 45 minutes	45 minutes – 1 hour	20 – 30 minutes
To Handle	2 – 2 ½ hours	2 ½ – 3 ½ hours	1 – 1 ½ hours
Recoat	After 1 hour to 3 days	After 1 hour to 3 days	After 1 hour to 3 days
Force Dry	20 minutes @ 140°F after 10 minute air dry		N/A

\* 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.

\*\* 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.

# AUE-280 / AUE-280LG

## Technical Data\*

### Performance Properties:

Test	ASTM Method	Results	
		AUE-280	AUE-280LG
Gloss @ 60° Angle*	D523	85 – 90	10 – 20
Pencil Hardness	D3363	F	HB – H
Gravelometer	D3170	7 – 8	7 – 8
Adhesion	D3359	5B	5B
In Service Dry Temperature Limit**		300°F (93°C)	

\* Intermediate gloss levels can be achieved. See 'Miscellaneous' section for details.

\*\* As you approach 300°F (93°C), depending on the pigmentation, the color may change, but the film integrity will be maintained until 300°F (93°C).

### Chemical Resistance:

Chemical	ASTM Method	Results	
		AUE-280	AUE-280LG
MEK	D1308	Ring	Ring
10% NaOH (Sodium Hydroxide)	D1308	Pass	Pass
10% HCl (Hydrochloric acid)	D1308	Pass	Pass
10% H <sub>2</sub> SO <sub>4</sub> (Sulphuric acid)	D1308	Pass	Pass
Gasoline	D1308	Ring/discolor	Ring/discolor
Water†	D1308	Pass	Pass

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

### Weather Resistance:

*System Tested:*  
**BONDERITE® 1000**  
**W43181A**  
**AUE-280 or AUE-280LG**

	ASTM Method	Results	
		AUE-280	AUE-280LG
<b>Salt Spray – 500 hours</b>	B117		
Corrosion Creep	D1654	9A	9A
Scribe Blisters	D714	8MD, 2M	None
Face Blisters	D714	None	None
<b>Humidity – 1000 hours</b>	D2247		
5 Minute Recovery Adhesion	D3359	4B – 5B	4B – 5B
1 Hour Recovery Adhesion	D3359	4B – 5B	4B – 5B
24 Hour Recovery Adhesion	D3359	4B – 5B	4B – 5B
<b>QUV-UVA: 60° angle</b>	D4587		
200 hour retention	D523	95 – 100%	85 – 95%
500 hour retention	D523	95 – 100%	85 – 95%
<b>QUV-UVB: 60° angle</b>	D4587		
200 hour retention	D523	90 – 95%	75 – 90%
500 hour retention	D523	85 – 90%	50 – 75%

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.

### Intermediate Gloss Levels

Description	60° gloss	AUE-280LG parts (by vol)	AUE-280 parts (by vol)
Matte / Eggshell	10 – 20	1	0
Satin	20 – 40	4	1
Semi-Gloss	40 – 60	2	1

Please note that if AUE-280LG is present in the color mix at any level, the mix ratio of 6:1 must be used.

# AUE-280 / AUE-280LG

**2.8 VOC**  
**Polyurethane Enamel**

## 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 MEXICO 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](http://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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