



0.8 VOC DTM Polyurethane

AUE-080

AUE-080 is a high build, single stage urethane topcoat formulated for direct-to-metal applications or over approved primers.

AUE-080 is created with either AUE-081 (fast dry) or AUE-083 (slow dry) binders which can be intermixed to achieve varying dry speeds.

These products are easy to mix and apply with airless, air-assisted airless and conventional spray equipment.

AUE-080 is compliant for application in areas with VOC requirements of a maximum of 0.8 lbs/gal (96 g/l) or less.

Features and Benefits:

- Intermixable slow and fast-dry bases
- Apply direct-to-metal
- Airless or Air-assisted application capable
- 0.8 VOC capable

Associated Products:

- AUE-081, 0.8 VOC DTM POLYURETHANE – FAST DRY
- AUE-083, 0.8 VOC DTM POLYURETHANE – SLOW DRY
- AUE-080H, 2K Urethane Hardener for AUE-080
- Q30 – Acetone
- TFS321-50 Exempt Reducer
- OXSOL® solvent

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

	AUE-081 w/ tints	AUE-081 w/ tints : AUE-080H : OXSOL	AUE-083 w/ tints	AUE-083 w/ tints : AUE-080H : OXSOL
Percent solids (by weight)	43.0-56.7%	37.2-51.4 %	44.8-58.0 %	38.4-57.5 %
Percent solids (by volume)	43.0-48.8 %	38.4-46.2 %	45.4-51.2 %	40.0-52.7 %
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-081 = 70°F, AUE-083 = 106°F / AUE-080H = 116°F, Oxsol = 109°F			
RTS Combinations:	AUE-081 w/ tints	AUE-081 w/ tints : AUE-080H : OXSOL	AUE-083 w/ tints	AUE-083 w/ tints : AUE-080H : OXSOL
Volume Ratio:	As is	4 : 1 : ½-1	As is	4 : 1 : 0-1
Applicable Use Category	Single-Stage Ctg.	Single-Stage Ctg.	Single-Stage Ctg.	Single-Stage Ctg.
VOC Actual	59 (g/L) 0.49 (lbs/gal)	40-43 (g/L) 0.33-0.36 (lbs/gal)	64 (g/L) 0.53 (lbs/gal)	42-52 (g/L) 0.35-0.43 (lbs/gal)
VOC Regulatory (less water less exempt)	106-118 (g/L) 0.88-0.98 (lbs/gal)	84-87 (g/L) 0.70-0.73 (lbs/gal)	109-120 (g/L) 0.91-1.00 (lbs/gal)	87-95 (g/L) 0.73-0.79 (lbs/gal)
Density	1186-1423 (g/L) 9.90-11.87 (lbs/gal)	1209-1381 (g/L) 10.09-11.52 (lbs/gal)	1200-1436 (g/L) 10.01-11.98 (lbs/gal)	1206-1395 (g/L) 10.06-11.64 (lbs/gal)
Volatiles wt. %	43.3-57.0	48.6-62.8	42.0-55.2	42.5-61.6
Water wt. %	0.0	0.0	0.0	0.0
Exempt wt. %	39.2-52.1	45.5-59.6	37.5-49.9	38.9-58.2
Water vol. %	0.0	0.0	0.0	0.0
Exempt vol. %	44.1-49.9	48.7-56.8	41.2-47.0	41.2-54.9

**Constants vary from color to color*

AUE-080

Directions for Use

Substrate Preparation: The surface to be coated must be abraded or sandblasted and free of all contamination (including dust, dirt, oil, grease and oxidation). A chemical treatment (or conversion coating) on non-sandblasted substrates 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.

It is recommended that the substrate be cleaned with SSPC-SP15 Commercial Grade Power Tool cleaning achieving a minimum of 1 mil anchor profile. For best performance, a minimum blast of SSPC-SP6 (NACE#3) Commercial Blast Cleaning is recommended, achieving a minimum of 1 – 2 mil blast profile.

Metal (Direct to Substrate)	Application Recommendation
Cold Rolled Steel	Excellent over properly prepared substrate
Hot Rolled Steel	Excellent over properly prepared substrates
Galvaneal	No – Do not use
Galvanized	Very Good over properly prepared substrates
Aluminum	Very Good 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).	

Mix Directions:



Mix Directions:

Stir thoroughly before and occasionally during use.



Thinning:

AUE-080 can be thinned up to 25% with exempt solvent and will **not** raise the VOC above .8 lbs/gal.



Blend Ratio:

AUE-080 (fast)			AUE-080 (slow)			
AUE-081	AUE-080H	OXSOL	AUE-083	AUE-080H	OXSOL	
4	:	1	:	1	:	0-1
7 – 8 hours			8 + hours			

Pot Life @ 77°F (25°C):



Spray Viscosity Range:

#3 Zahn: 10 – 15 seconds

#2 Zahn: 30 – 40 seconds

Shelf Life Unopened:

AUE-081 (gallons) = 4 years unopened
AUE-080H (quarts) = 2 years unopened

AUE-083 (gallons) = 4 years unopened

Application Equipment:



Conventional / Compliant:

1.3 – 1.8 mm needle/nozzle on pressure pot
1.6 – 2.0 mm needle/nozzle without pot; 50 – 65 psi at the gun.



HVLP:

1.3 – 1.8 mm needle/nozzle on pressure pot, 12-20 ounces per minute fluid
1.4 – 1.8 mm needle/nozzle without pot; 10 psi output at the tip.



Airless:

1400 – 2000 psi fluid pressure with a .013" - .018" tip

Air-Assisted Airless:

1400 psi fluid pressure with a .013" - .017" tip

Brush or Roll:

Not recommended

Electrostatic:

.011-.017 nozzle, depending on specific customer and appearance requirements; or as recommended by gun manufacture. The addition of Q30 (Acetone) May be necessary for optimal electrostatic application.

Application:

*Apply:

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



Recommended
Wet Film Build:

Using AUE-081

6 – 10 mils

Using AUE-083

5.5 – 10 mils

Recommended
Dry Film Build:

2.5 – 4.5 mils

2.5 – 5.0 mils

Square foot Coverage
@ 1 mil no loss:

616-845 sq. ft. dependent on color and mix ratio

* Best appearance is obtained when product is applied in a manner that reflects desired final appearance

Directions for Use (continued)

Dry Times:



Air Dry @ 77°F (25°C) 50% RH:

Using AUE-081

Using AUE-083

Touch:

½-1 hour

3-4 hours

Handle:

2-3 hours

5-6 hours

Recoat:

After 1 hour to 10 days

Force Dry:

30 minutes @ 140°F after 10 minute air dry

** 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.*

** Intermediate dry times can be achieved. See 'Miscellaneous' section for details.*

Performance Properties:

Test	ASTM Method	Result	
		Using AUE-081	Using AUE-083
Gloss @ 60° Angle	D523	89 – 95	89 – 95
Pencil Hardness	D3363	F-H	HB – F
Impact (Direct)	D2794	130 in-lbs	150 in-lbs
Mandrel	D522	1/8" No Cracks	1/8" No Cracks
Chip Resistance	D3170	7 – 8	7 - 8
Adhesion	D3359 Method B	5B	5B
In Service Dry Temperature Limit*		250°F (121°C)	250°F (121°C)

**As you approach 250°F (121°C), depending on the pigmentation, the color may change, but the film integrity will be maintained until 250°F.*

Chemical Resistance:

Chemical	ASTM D1308	Using AUE-081	Using AUE-083
Xylene		Slight Swell	Slight Swell
10% NaOH (Sodium Hydroxide)		No Effect	No Effect
10% HCl (Hydrochloric acid)		No Effect	No Effect
10% H2SO4 (Sulfuric acid)		No Effect	No Effect
10% HNO3 (Nitric acid)		Slight Stain	Slight Stain
Hydraulic Oil		No Effect	No Effect
Gasoline		Slight Swell	Slight Swell
Diesel Fuel		No Effect	No Effect
Water		No Effect	No Effect

Weather Resistance:

	ASTM Method	Using AUE-081	Using AUE-083
Salt Spray – 1000 hours	B117		
Corrosion Creep	D1654	7A-8A	7A-8A
Face Blisters	D714	2F	2F
Adhesion	D714	None	None
Humidity – 100 hours	D2247		
5 Minute Recovery Adhesion	D3359	5B	5B
1 Hour Recovery Adhesion	D3359	5B	5B
24 Hour Recovery Adhesion	D3359	5B	5B
QUV-UVA: 60° angle			
500 hour retention	D523	95 - 100%	95 - 100%
1000 hour retention	D523	90 - 100%	95 - 100%
QUV-UVB: 60° angle			
500 hour retention	D523	90 - 95%	95 - 100%
1000 hour retention	D523	85 - 90%	95 - 100%

All tests results assume proper cure and preparation of test substrates. Unless otherwise stated, all results were obtained spraying product direct to metal on HRS with Commercial Blast Cleaning (SSPC SP6), and product color is black. QUV tests were performed over Bonderite 1000 steel.

*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:**

	AUE-081 (parts by vol.)	AUE-083 (parts by vol.)	Touch	Handle
<i>Intermediate Dry times</i>	4	0	½ - 1 hour	2-3 hours
	3	1	1 hour	3-3½ hours
	2	2	2 hours	3½-4 hours
	1	3	2½ - 3 hours	4-5 hours
	0	4	3-4 hours	5-6 hours

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 (Safety, SDS Search) or your PPG Distributor.

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



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