# AUE-380 Series

## 2K High Solids Polyurethane

Product data sheet

AUE-380 Series High Solids Exterior Polyurethanes are high performing, two component, exterior durable, polyester polyurethane enamels. These products are designed to provide excellent surface protection and exterior color and gloss retention.

AUE-380 Series unique polyester urethane formulation provides excellent flexibility and chip resistance compared to traditional polyurethane topcoats. AUE-380 Series have an extended recoat window compared to traditional urethane enamels.

### Product highlights

- Excellent color and gloss retention
- Excellent chemical, mar, impact, and corrosion resistance
- Available in a wide range of colors and gloss
- Direct-to-metal capable
- Extended recoat window
- No reportable HAPS

### Associated product codes

- AUE-380: Polyester Urethane High Solid Enamel
- AUE-380LG: Polyester Urethane High Solid Enamel - Low Gloss
- AUE-380WHT: White Polyester Urethane High Solid Enamel
- AUE-380YL: Yellow Polyester Urethane High Solid Enamel
- AU38-FP908: DTM Polyester Urethane - Black
- AUE-3501, GXH1080, GXH1086: Urethane Hardener

| Physical constants[1] | AUE-380 Series w/GXH1086 or GXH1080 | AUE-380 Series w/AUE-3501 |
|---|---|---|
| Solids % by weight | 67.0 ± 4.0 | 70.0 ± 4.0 |
| Solids % by volume | 53.0 ± 5.0 | 57.0 ± 5.0 |
| HAPs | <0.1 lbs./gal. (<12 g/L) | <0.1 lbs./gal. (<12 g/L) |
| Photo-chemically reactive | No | No |
| Weight/Gallon | 8.0 - 12.0 lbs. /gal. (960 – 1440 g/L) | 8.0 - 12.0 lbs. /gal. (960 – 1440 g/L) |
| VOC Max (less exempts) | 3.5 lbs./gal. (420 g/L) | 3.5 lbs./gal. (420 g/L) |
| VOC Max (actual) | 3.5 lbs./gal. (420 g/L) | 3.5 lbs./gal. (420 g/L) |

## 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 | Application Recommendations: Direct to Properly Prepared Substrate |
|---|---|
| Cold Rolled Steel | Excellent |
| Hot Rolled Steel | Excellent |
| Galvaneal | Good |
| Galvanized | No direct to metal application. Refer to CPCTB01 for approved primers |
| Aluminum | Very Good |
| Plastic/Fiberglass | Good - Due to variability in composite substrates, testing adhesion is recommended |

1 All values are theoretical, depend on color and are ready to spray. Actual values could vary slightly due to manufacturing variability. Constants vary from color to color.



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## Directions for use (continued)

### Mix directions

| | | |
|---|---|---|
| Mix Directions | Stir thoroughly before and occasionally during use | |
| Thinning | Up to 50% Q30 in VOC compliant areas<br>Up to 50% Q50, Q160, Q70, TFS Blends in non-VOC complaint areas | |
| Line/Flush Clean Up | TFS309, Q30 or Q60 | |
| | AUE-380 Series w/GXH1080 or GXH1086 | AUE-380 Series w/AUE-3501 |
| Blend Ratio High Gloss | 4:1 | 5:1 |
| Blend Ratio < 70 Gloss | 5:1 | 6:1 |

### Application equipment*

| | Application | Application Viscosity |
|---|---|---|
| Conventional Cup Gun | 1.4 – 1.8 mm needle/nozzle w/40 – 50 psi at the gun | 25 - 40" #2 EZ Zahn |
| Conventional Pressure Pot | 1.4 – 1.8 mm needle/nozzle w/40 – 50 psi at the gun<br>20 - 25 psi fluid pressure | 30 - 45" #2 EZ Zahn |
| HVLP (with or without pressure pot) | 1.4 – 1.8 mm needle/nozzle with 10 psi at the cap | 40 - 50" #2 EZ Zahn |
| Airless | 0.011" – 0.014" tip at 1500 – 2200 psi fluid pressure | 15 - 24" #3 EZ Zahn |
| Air-Assisted Airless | 0.011" – 0.014" tip at 900 – 1300 psi fluid pressure | 14 - 19" #3 EZ Zahn |
| Brush or Roll | Not Recommended | |
| Electrostatic | 1.4 - 1.8 mm needle/nozzle w/40 – 50 psi at the gun | 25 - 40" #2 EZ Zahn |

*For additional application information, refer to product application guide

### Application

| | AUE-380 Series w/GXH1080, GXH1086, or AUE-3501 |
|---|---|
| Apply | 1-2 Coats with 10 min flash |
| Recommended Wet Film Build | 2.0 - 5.0 mils (51 - 127 microns) |
| Recommended Dry Film Build | 1.5 - 2.5 mils (38 - 64 microns) |
| Coverage (at 1 mil no loss) | 770 - 995 sq. ft/gal (72 - 92 meters sq./3.785L) |

### Dry times

| | AUE-380 Series w/GXH1080, GXH1086, or AUE-3501 |
|---|---|
| Air Dry @77°F (25°C) 50% RH* | |
| To Touch | 1 hours |
| To Handle | 4 hours* |
| To Recoat | After 1 hour[2] |
| Force Dry | 10 minutes air dry, bake 20 @ 180°F (82°C) |

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

2 Excess film thickness will retard dry times and affect recoat window.



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## Technical data[3]

### Performance properties

| Test | ASTM Method | AUE-380 Series w/GXH1080, GXH1086, or AUE-3501 |
|---|---|---|
| Pencil Hardness | D3363 | F |
| Gravelometer | D3170 | > 7 |
| Gloss @ 60° | D523 | 10 - 95 |
| Adhesion | D3359 | 5B |
| Conical Mandrel | D522 | Pass |
| In Service Temperature Limit[4] | – | 250°F (121°C) |

### Chemical Resistance

| Test | ASTM Method | AUE-380 Series w/GXH1080, GXH1086, or AUE-3501 |
|---|---|---|
| Toluene | D1308 | Pass, Slight Stain |
| 10% NaOH (Sodium Hydroxide) | D1308 | Pass |
| 10% HCl (Hydrochloric acid) | D1308 | Pass |
| 10% H2SO4 | D1308 | Pass |
| Gasoline | D1308 | Pass |
| Isopropyl Alcohol | D1308 | Pass |
| Water[5] | D1308 | Pass |

### Weather resistance

| Test | ASTM Method | AUE-380 Series w/GXH1080, GXH1086, or AUE-3501 |
|---|---|---|
| **Salt Spray With HSP-385 Primer** | **B117** | 1,000 hours |
| Corrosion Creep | D1654 | 5A - 6A |
| Scribe Blisters | D714 | 4F, 2F |
| Face Blisters | D714 | 8F |
| **Humidity With HSP-385 Primer** | **D2247** | 1,000 hours |
| 5 Minute Adhesion Recovery | D3359 | 3B |
| 1 Hour Adhesion Recovery | D3359 | 4B |
| 24 Hour Adhesion Recovery | D3359 | 5B |
| **QUV-B: 60° angle** | **D4587** | |
| 200 hour gloss retention | D523 | >90% |
| 500 hour gloss retention | D523 | >90% |

3 The application and performance property data above is 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 may cause unsatisfactory results. All test results assume proper cure and preparation of test substrates. Unless otherwise stated, all results were obtained spraying product direct to metal on BONDERITE® 1000.

4 As you approach 150° F depending on the pigmentation, the color may change, but the film integrity will be maintained up to 250°F.

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



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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 operations 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 coating 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 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: US (412) 434-4515; Canada (514) 645-1320; and Mexico 01-800-00-21-400. Please have label information available.

Safety Data Sheets (SDS) for the PPG products mentioned in this publication are available through versolon.com (Safety, SDS Search) or through your PPG store or distributor. For additional information regarding this product, see the SDS and label information.