



# IMRON<sup>®</sup> 2.8 HG<sup>®</sup>

## HIGH GLOSS POLYURETHANE

(formerly Imron<sup>®</sup> 333<sup>®</sup>)

Imron<sup>®</sup> 2.8 HG<sup>™</sup> High Gloss Aliphatic Polyurethane Enamel is a high-solids, two-package, VOC conforming product (2.8 lbs./gal.) based on patented DuPont resin technology, producing properties of both polyester and acrylic polyurethane. The resulting highly durable finish delivers industry leading polyurethane performance.

### SUGGESTED USES

As a high performance topcoat over suitable primers or tie coats on steel, galvanized steel, stainless steel, aluminum, concrete, concrete block, fiberglass, plastics and wood where:

- ◆ Outstanding gloss and color retention are desired
- ◆ Excellent resistance to chemical and/or marine environments is required.
- ◆ Outstanding abrasion resistance and flexibility are required.
- ◆ Application by brush and roller, in addition to spraying, may be necessary.
- ◆ Application must be made at temperatures as low as 35° F.
- ◆ Mechanical surface preparation will be prohibited or impractical later when recoating.

### NOT RECOMMENDED FOR:

Immersion Service

### COMPATIBILITY WITH OTHER COATINGS

Aged Imron<sup>®</sup> 2.8 HG<sup>™</sup> may be re-coated with itself following washing with clean, fresh water – no mechanical surface preparation is required. See Additional Comments #4.

Imron<sup>®</sup> 2.8 HG<sup>™</sup> can be applied over other DuPont Industrial Coatings including, but not limited to, Imron<sup>®</sup> waterborne polyurethane copolymer coatings, Corlar<sup>®</sup> epoxies, Tufcote<sup>®</sup> acrylics, Tufcote<sup>®</sup> alkyd primers, and DuPont WP<sup>™</sup> wash primer. Imron<sup>®</sup> 2.8 HG<sup>™</sup> may also be used over Ganicin<sup>®</sup> zinc rich coatings if a tie coat is used.

Imron<sup>®</sup> 2.8 HG<sup>™</sup> may be used over most aged and hard-cured coatings in good condition. Testing for lifting, bubbling and adhesion is recommended to assure compatibility with unknown coatings. Contact your DuPont Performance Coating representative for specific recommendations.

### MAXIMUM SERVICE TEMPERATURE

250°F (93°C) in continuous service.

300°F (148°C) in intermittent heat.

Some yellowing of light colors may occur at elevated temperatures.

### PERFORMANCE PROPERTIES\*

Abrasion & Mechanical Abuse	Excellent	Acids	Excellent
Alkalis	Excellent	Color & Gloss Retention	Excellent
Humidity	Excellent	Salts	Excellent
Solvents	Very Good	Weather	Excellent

\* For more information please see ASTM Information section.

### VOC (THEORETICAL) VARIES WITH COLOR

Mixed VOC, no reduction	2.8 lbs./gal. (336 g/l)
Mixed VOC, @ maximum recommended 10% reduction w/DuPont Y32401 <sup>™</sup> or DuPont 68083 <sup>™</sup> Thinner & 2 oz. MasterTint <sup>®</sup> 389S <sup>™</sup> or 2 oz. Imron <sup>®</sup> VHY-691 <sup>™</sup> Accelerator	3.3 lbs./gal. (396 g/l)

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### COLOR

Selected high-volume colors available in factory package. Over 5000 custom colors can be mixed.

### GLOSS (ASTM D523):

>90 measured @ 60° angle.

### CURE TIME – HOURS @ 77°F (25°C), 50% R.H. @ 1.5-2.0 MILS SUGGESTED DFT

	Without Accelerator	Hours w/2 oz. MasterTint <sup>®</sup> 389S <sup>™</sup>	Hours w/2 oz. Imron <sup>®</sup> VHY-691 <sup>™</sup>
Dry to Touch	5	1.5	1
Dry to Recoat	10	3	1
Dry To Handle	11	8	1.5
Pack/Ship	24	16	12
Full Cure	7 days	6 days	6 days
Pot Life	3-4	4	1

\*See Additional Comments #1 & 2

### THEORETICAL COVERAGE PER GALLON\*

1011 FT<sup>2</sup> (24.7 m<sup>2</sup>/L) @ 1 mil

673 FT<sup>2</sup> (16.5 m<sup>2</sup>/L) @ suggested DFT of 1.5 mils

\*Material losses during mixing and application will vary and must be taken into consideration when estimating job requirements.

### SUGGESTED FILM BUILD

2.5 – 3.5 mils (63 – 88 µm) wet (WFT)

1.5 – 2 mils (37 – 50 µm) dry (DFT)

### VOLUME SOLIDS (MIXED):

63% ± 2% Varies by Color

### WEIGHT SOLIDS (MIXED):

72% ± 4% Varies by Color

### WEIGHT PER GALLON (MIXED):

9.0-11.0 lbs. (3.4-4.1 kg) Varies by Color

### FLASH POINT (TAG CLOSED CUP)

Between 20 to 73° F (-6 to 23° C)

### PACKAGING

Enamel: 1's (75% full)  
5's (containing 3 gallons)  
Activator: Quarts and gallons

### SHIPPING WEIGHT (LBS) APPROXIMATE/AVG.

Enamel: 1 gallon container – 8      5 gallon container – 32  
Activator: 1 quart container – 3      1 gallon container – 9

### SHELF LIFE & STORAGE CONDITIONS

- ◆ Store in a dry, well-ventilated area. Storage temperatures should be between -30° F (-34° C) and 120° F (48° C).
- ◆ Shelf life – 1 year minimum

### SAFETY INSTRUCTIONS

Consult the Material Safety Data Sheet for this product prior to use.



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### **APPLICATION INFORMATION**

#### **SURFACE PREPARATION**

Newly primed surfaces should be clean and dry. If contaminated, detergent/water wash, then blow dry. Previously painted surfaces should have all loose paint removed and the edges feathered. Prime bare spots with appropriate primer.

#### **ACTIVATION**

Thoroughly mix 3 parts Imron<sup>®</sup> 2.8 HG<sup>™</sup> Enamel or Imron<sup>®</sup> 40P<sup>™</sup> Custom Color, then add 1 part of Imron<sup>®</sup> VG-6005<sup>™</sup> Activator while stirring. No induction period is necessary.

#### **POT LIFE**

3-4 hours @ 77°F and 50% RH without catalyst.

#### **REDUCTION**

Normally 0-2% reduction is adequate for spray application depending upon conditions and equipment. Add 5-8% DuPont Y-32401<sup>™</sup> Thinner for brush and roll application. If bubbles develop during roller application, add 1 oz. DuPont RT002P<sup>™</sup> per activated gallon. After addition, allow 5 minutes induction before application. If VOC is not an issue, Imron<sup>®</sup> 2.8 HG<sup>™</sup> may be thinned up to 10% max by volume. Use DuPont 68083<sup>™</sup> Thinner for normal conditions below 80° F and DuPont Y32401<sup>™</sup> Thinner for hot and windy conditions above 80° F. If faster recoat and handling required add up to 2 oz. MasterTint<sup>®</sup> 389S<sup>™</sup> or up to 2 oz. DuPont VHY691<sup>™</sup>.

#### **APPLICATION THINNERS & ADDITIVES**

Spray: DuPont 68083<sup>™</sup> – Below 80°F  
DuPont Y32401<sup>™</sup> – Above 80°F  
Brush: DuPont Y32401<sup>™</sup>  
Roll: DuPont RT002P<sup>™</sup>

#### **CLEANUP THINNERS**

DuPont Y-32035<sup>™</sup> or MEK

#### **APPLICATION CONDITIONS**

Do not apply if the application surface temperature is below 45°F (7°C) or above 110°F (43°C), or if the atmospheric temperature is within 5°F of the dew point. For application temperatures below 45°F, the use of Imron<sup>®</sup> VHY-691<sup>™</sup> is recommended. Relative Humidity should be below 90%.  
See Additional Comments #1

#### **APPLICATION EQUIPMENT**

- ♦ Apply by spray, brush or roll
- ♦ Manufacturers listed below are a guide. Others may be used. Changes in pressure and tip size may be required to achieve proper application.

#### **AIR SPRAY**

Manufacturer	DeVilbiss
Spray Gun	JGA
Fluid Tip	1.4 mm
Fluid Needle	402-FF
Air Cap	777



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### AIRLESS SPRAY

Manufacturer	Graco
Pump	Xtreme 33:1
Filter	60 Mesh
Fluid Hose	3/8" X 100' Max.
Spray Gun	238591
Tip Size	.411-.611

### AIR ASSISTED AIRLESS

Manufacturer	Graco
Pump	Senator 12:1
Spray Gun	217292
Tip Size	.023 - .029
Fluid Hose	3/8" X 50' Max.

### HVLP

Manufacturer	DeVilbiss
Spray Gun	GTI
Tip Size	1.4 mm
Air Pressure	10 psi @ air cap
Fluid Hose	3/8" X 60' Max.
Fluid Delivery	10 – 12 oz

### ROLL

Manufacturer:	Wooster <sup>®</sup> Pro/Doo-Z <sup>™</sup> ¼" - ½" nap.
Additions:	Add 1 oz./gallon DuPont RT002P <sup>™</sup> Rolling Thinner to eliminate bubbles. Craters may develop if you exceed 2 oz./gallon. Add 5-8% DuPont Y-32401 <sup>™</sup> Thinner to maintain wet edge. May be cross-rolled. For best results, allow 5 minutes mix time after adding DuPont RT002P <sup>™</sup> Do not use DuPont RT002P <sup>™</sup> in spray applications.

### BRUSH

Manufacturer:	Wooster <sup>®</sup> China Bristle
Additions:	Add 5-8% DuPont Y-32401 <sup>™</sup> Thinner to maintain wet edge. Do not cross brush to reduce lap marks. Add up to 1 oz./gallon DuPont RT002P <sup>™</sup> Rolling Thinner to eliminate bubbles. May be cross-rolled. For best results, allow 5 minutes mix time after adding DuPont RT002P <sup>™</sup> Do not use DuPont RT002P <sup>™</sup> in spray applications.

### ADDITIONAL COMMENTS

1. Dry times can be improved by adding up to 2 oz. MasterTint<sup>®</sup> 389S<sup>™</sup> or DuPont VHY691<sup>™</sup> Accelerator per activated gallon.
2. May be recoated by spray when tack-free.
3. Add 1 oz./gallon DuPont RT002P<sup>™</sup> to eliminate bubbles that form during rolling. DuPont RT002P<sup>™</sup> is not recommended for spray application. Do not exceed 2 oz./gallon DuPont RT002P<sup>™</sup> as craters may develop.
4. If accelerators have been used, recoating must be done within 48 hours. If more time has elapsed, scuff sand to ensure adhesion.
5. Imron<sup>®</sup> 2.8 HG<sup>™</sup> includes Custom mix quality 40P<sup>™</sup>. Custom mix formulas will continue to use quality code 40P<sup>™</sup>.



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### ASTM INFORMATION

Test results are for a system of Corlar<sup>®</sup> 2.1 ST<sup>™</sup> (formerly Corlar<sup>®</sup> 25P<sup>™</sup>)/Imron<sup>®</sup> 2.8 HG<sup>™</sup> (formerly Imron<sup>®</sup> 333<sup>™</sup>). Total DFT 8 mils.

◆ Taber Abrasion (ASTM D-4060) weight loss in grams	0.08	
◆ Salt fog (ASTM B-117)	1000 hours 2000 hours 3000 hours	No rusting, no blistering No rusting, no blistering No rusting, few #2 blisters at the scribe, no undercoating at the scribe.
◆ Humidity Resistance (ASTM D2247)	1000 hours 2000 hours 3000 hours	No rusting, no blistering No rusting, no blistering No rusting, no blistering
◆ Adhesion (ASTM D4521 A2)	2283 psi	Cohesive failure within the primer
◆ Dry Heat (ASTM D2485)	250°F for 24 hours	No cracking, no blistering, no loss of adhesion, no discoloration
◆ Electrical Resistance (ASTM D2457)	5.8 X 10 <sup>16</sup>	
◆ Cle Cond (ASTM D4585)	1000 hours	No rusting, no blistering, no delamination
◆ UVA 340 Con (ASTM D-4587)*	3000 hours	Gloss before exposure: 91.4 Gloss after exposure: 83.1
◆ Impact (ASTM D2794)	10 inch pounds	
◆ Mandrel Bend (ASTM D522)	% elongation	5%

\*8 hrs. UV at 50° C, 4 hrs. condensation at 40° C, gloss readings at 60°.

### CHEMICAL RESISTANCE - The following chemicals had no effect (24 hours watch glass)

Sulfuric Acid	10 & 50%
Hydrochloric Acid	10 & 20%
Nitric Acid	10 & 20%
Acetic Acid	10% (50% failed)
Sodium Hydroxide	10 & 50%
Ammonium Hydroxide	10% , concentrated
Methylpentamethyl Diamine	10%, 50%, concentrated
Distilled Water	
MEK	
Toluene	
Cyclohexane	
Methanol	
Isopropanol	
Gasoline	
5% Gasahol	