



IMRON[®] 2.8 HG[®] HIGH GLOSS POLYURETHANE (formerly Imron[®] 333[®])

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

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

Imron[®] 2.8 HG[™] 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 [™] or DuPont 68083 [™] Thinner & 2 oz. MasterTint [®] 389S [™] or 2 oz. Imron [®] VHY-691 [™] 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 [®] 389S [™]	Hours w/2 oz. Imron [®] VHY-691 [™]
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 FT² (24.7 m²/L) @ 1 mil

673 FT² (16.5 m²/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[®] 2.8 HG[™] Enamel or Imron[®] 40P[™] Custom Color, then add 1 part of Imron[®] VG-6005[™] 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[™] Thinner for brush and roll application. If bubbles develop during roller application, add 1 oz. DuPont RT002P[™] per activated gallon. After addition, allow 5 minutes induction before application. If VOC is not an issue, Imron[®] 2.8 HG[™] may be thinned up to 10% max by volume. Use DuPont 68083[™] Thinner for normal conditions below 80° F and DuPont Y32401[™] Thinner for hot and windy conditions above 80° F. If faster recoat and handling required add up to 2 oz. MasterTint[®] 389S[™] or up to 2 oz. DuPont VHY691[™].

APPLICATION THINNERS & ADDITIVES

Spray: DuPont 68083[™] – Below 80°F
DuPont Y32401[™] – Above 80°F
Brush: DuPont Y32401[™]
Roll: DuPont RT002P[™]

CLEANUP THINNERS

DuPont Y-32035[™] 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[®] VHY-691[™] 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[®] Pro/Doo-Z[™] ¼: - ½" nap.
Additions: Add 1 oz./gallon DuPont RT002P[™] Rolling Thinner to eliminate bubbles. Craters may develop if you exceed 2 oz./gallon.
Add 5-8% DuPont Y-32401[™] Thinner to maintain wet edge.
May be cross-rolled.
For best results, allow 5 minutes mix time after adding DuPont RT002P[™]
Do not use DuPont RT002P[™] in spray applications.

BRUSH

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

ADDITIONAL COMMENTS

1. Dry times can be improved by adding up to 2 oz. MasterTint[®] 389S[™] or DuPont VHY691[™] Accelerator per activated gallon.
2. May be recoated by spray when tack-free.
3. Add 1 oz./gallon DuPont RT002P[™] to eliminate bubbles that form during rolling. DuPont RT002P[™] is not recommended for spray application. Do not exceed 2 oz./gallon DuPont RT002P[™] 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[®] 2.8 HG[™] includes Custom mix quality 40P[™]. Custom mix formulas will continue to use quality code 40P[™].



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ASTM INFORMATION

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

◆ Taber Abrasion (ASTM D-4060) weight loss in grams	0.08	
◆ Salt fog (ASTM B-117)	1000 hours	No rusting, no blistering
	2000 hours	No rusting, no blistering
	3000 hours	No rusting, few #2 blisters at the scribe, no undercoating at the scribe.
◆ Humidity Resistance (ASTM D2247)	1000 hours	No rusting, no blistering
	2000 hours	No rusting, no blistering
	3000 hours	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 ¹⁶	
◆ 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	