



# IMRON® 3.4 HG-C™

## HIGH GLOSS CLEAR POLYURETHANE – BRUSH, ROLL, SPRAY (formerly Imron® 610P™)

Imron® 3.4 HG-C™ high gloss clear aliphatic polyurethane enamel is a high-solids, two-package, VOC conforming product (3.4 lbs./gal.) based on unique DuPont resin technology, producing properties of both polyester and acrylic polyurethanes. The resulting highly durable finish delivers industry leading polyurethane performance.

### SUGGESTED USES

As a high performance clear topcoat over finishes in sound condition on steel, galvanized steel, stainless steel, aluminum, concrete, concrete block, fiberglass, plastics and wood where:

- ◆ Restoring gloss to dull, faded finishes avoids the cost of complete re-painting.
- ◆ Outstanding gloss and color retention are desired.
- ◆ Excellent resistance to chemical and/or marine environments is required.
- ◆ Coated surfaces must be easy to clean.
- ◆ Application by brush and roller, in addition to spraying, may be necessary.
- ◆ Application may be made at temperatures as low as 35° F.

### NOT RECOMMENDED FOR:

Immersion Service

### COMPATIBILITY WITH OTHER COATINGS

Imron® 3.4 HG-C™ can be applied over other DuPont Industrial Coatings including, but not limited to, Imron® solventborne polyurethanes, Imron® waterborne polyurethane copolymer coatings, Corlar® epoxies, Tufcote® acrylics and Tufcote® alkyd primers. See Additional Comments #3 & 4.

Imron® 3.4 HG-C™ 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)

Mixed VOC, no reduction

3.4 lbs./gal. (408 g/l)

Mixed VOC, 3% reduction w/DuPont 68083™ or 2 oz. VG-805™ Accelerator 3.6 lbs./gal. (432 g/l)

### COLOR

Clear

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## IMRON<sup>®</sup> 3.4 HG-C<sup>™</sup> High Gloss Clear Polyurethane (formerly Imron<sup>®</sup> 610P<sup>™</sup>)

### GLOSS (ASTM D523):

>90 measured @ 60° angle

### CURE TIME – HOURS @ 77°F (25°C), 50% R.H. @ 2.0-2.5 MILS SUGGESTED DFT

	Without Accelerator	Hours with 2 oz. VG-805 <sup>™</sup>
Dry to Touch	4 – 6 hours	1 hours
Dry to Recoat	10 – 12 hours	1.5 hours
Dry To Handle	10 – 12 hours	2.5 hours
Pack/Ship	24 hours	5-6 hours
Full Cure	7 days	5 Days
Pot Life	1.5 – 2 hours	3 hours

\*See Additional Comments #1 – 3

### THEORETICAL COVERAGE PER GALLON\*

834 ft<sup>2</sup> (20.5 m<sup>2</sup>/L) @ 1 mil

556 ft<sup>2</sup> (13.6 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

3 – 4 mils (75 – 100 µm) wet (WFT)

1.5 – 2 mils (37 – 50 µm) dry (DFT)

### VOLUME SOLIDS (MIXED):

52% ± 2%

### WEIGHT SOLIDS (MIXED):

58% ± 2%

### WEIGHT PER GALLON (MIXED):

8.3 lbs. (3.7 kg) ± 0.1

### FLASH POINT (TAG CLOSED CUP)

Between 70 to 100°F (23 to 38°C) Enamel

Between 20 to 73°F (-7 to 23°C) Activator

### PACKAGING

Enamel: 1's (75% full) 5's (60% full)

Activator: Quarts and gallons (full)

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

Enamel: 1 gallon container – 8  
5 gallon container – 27

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.



## IMRON® 3.4 HG-C™ High Gloss Clear Polyurethane (formerly Imron® 610P™)

### 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® 3.4 HG-C™ (610P™) Enamel, then add 1 part Imron® VG-610™ Activator while stirring. No induction period is necessary.

#### POT LIFE

1.5 – 2 hours @ 77°F and 50% RH. Higher temperatures and humidity will severely shorten pot life.

#### REDUCTION

Normally 0-3% (1-4 oz.) reduction is adequate for spray application depending upon conditions and equipment. Maximum reduction should not exceed 3%. Use DuPont 68083™ Thinner. If faster recoat and handling is required, add up to 2 oz./gal VG-805™ Accelerator.

#### APPLICATION THINNERS & ADDITIVES

Spray, Brush or Roll: DuPont 68083™ or DuPont Y32401™

#### CLEANUP THINNERS

DuPont Y-32035™ or MEK

#### APPLICATION CONDITIONS

This product is best applied by spray. 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 best results, application temperature should be between 65°F and 85°F. Relative Humidity should be below 90%. For application temperatures below 45°F, the use of VG-805™ Accelerator is required. Mix only amounts that can be applied within a 1.5 – 2 hour period. For airless spray application, tip size must not exceed .011”.

#### 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 application is preferred method for finest finish.

#### CONVENTIONAL SPRAY

Manufacturer Model	Sata	DeVilbiss	Graco	Iwata	Binks	Kremlin
	K3 or K3 RP	JGA or MBC	DeltaSpray XT	W-77, W-71, or W-200	2001 or 95	M22HPAP
Tip Size	1.0 – 1.3 mm	1.1–1.4mm	1.0-1.5 mm	1.2-1.8 mm	1.2-1.8 mm	1.2-1.8 mm

#### HVLP SPRAY

Manufacturer Model	Sata	DeVilbiss	Graco	Iwata	Binks	Kremlin
	3000RP HVLP	JGHV, EXL, or FLG	DeltaSpray XT - HVLP	LPH 200 LVLP	MACH 1 & 1SL	E3K HVLP
Tip Size	1.2 – 1.6 mm	1.3–1.8mm	1.3-2.2 mm	0.8-1.2 mm	1.0-1.7 mm	1.5-1.8 mm



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### AIRLESS SPRAY

Manufacturer	Graco	Iwata	Binks	Sata
Model	Silver or Plus	ALG or Airlesso	Airless 1	Airless 250 II
Tip Size	.011 - .015	.011 - .015	.011 - .017	.013 - .017
Pump	30:1 min	ALG 30:1 min	30:1 min	Orca 32:1 pump

### AIR ASSISTED AIRLESS SPRAY

Manufacturer	Graco		Sata	Iwata	Kremlin	Binks
Model	AA4000	Alpha or Alpha Plus	Shark 32:1 or Dolphin 14:1, K3 spray mix	MSG 2000 Gun MSU11 13:1 or MSU32 17:1	Airmix MVX	AA 1500
Tip Size	.021 - .027	.015 - .021	.011-.018	.011 - .018	.011 - .020	.013 - .019

### 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.  
 May be cross-rolled.  
 Add up to 3% DuPont Y-32401™ Thinner to maintain wet edge.  
 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 up to 3% 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.  
 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 VG-805™ Accelerator up to 2 oz./activated gallon.
2. May be recoated by spray when tack-free.
3. For best results when applying Imron® 3.4 HG-C™ over itself or over other Imron® product, the clear should be applied within 72 hours @ 70°F. If more than 72 hours has elapsed, the surface should be scuffed with very fine (400-600 grit) sand paper before applying the Imron® 3.4 HG-C™.
4. If Accelerators have been used, recoating must be done within 48 hours. If more time has elapsed, scuff sand to ensure adhesion.



## **IMRON® 3.4 HG-C™** High Gloss Clear Polyurethane (formerly Imron® 610P™)

### **ASTM INFORMATION**

Test results are for a system of Corlar® 2.1 ST™ (formerly Corlar® 25P™)/Imron® 2.8 HG™ (formerly Imron® 333™)/Imron® 3.4 HG-C™ (formerly Imron® 610P™) with total dry film thickness 10 mils DFT.

◆ Taber Abrasion (ASTM D-4060) weight loss in grams		0.04
◆ Salt fog (ASTM B-117)	1000 hours	No rusting, no blistering
	2000 hours	No rusting, no blistering
	3000 hours	No rusting, no blistering, no undercutting 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 D4541)	1490 psi	Cohesive failure within the primer
◆ Dry Heat (ASTM D2485)	250° F for 24 hours	No cracking, no loss of adhesion, no discoloration
◆ Electrical Resistance (ASTM D2457)		$1.0 \times 10^{13}$
◆ Cle Cond (ASTM D4585)	1000 hours	No rusting, no blistering
◆ UVA 340 Con (ASTM D4587)*	3000 hours	Gloss before exposure: 93
		Gloss after exposure: 83.4
	Evaluation	No rusting, no blistering, no delamination
◆ Impact (ASTM D2794)	4 inch pounds	
◆ Mandrel Bend (ASTM D522)	% elongation	2.5%

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