IMRON® 3.5 HG-C™

HIGH GLOSS CLEAR POLYURETHANE - SPRAY

(formerly Imron® 611P™)

Imron® 3.5 HG-C™ high gloss clear aliphatic polyurethane enamel is a high-solids, two-package, VOC conforming product (3.5 lbs./gal.) based on patented 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:

- Only the cleanest, "wet" appearance is acceptable.
- 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 may be made at temperatures as low as 35° F.

NOT RECOMMENDED FOR:

Immersion Service

COMPATIBILITY WITH OTHER COATINGS

Imron® 3.5 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® 3.5 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	3.5 lbs./gal. (420 g/l)
Mixed VOC, 3% reduction w/DuPont 68083™ or 2 oz. MasterTint® 389S™ Accelerator	3.6 lbs./gal. (432 g/l)

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COLOR

Clear

GLOSS (ASTM D523):

>90 measured @ 60° angle
Note: Imron® 3.5 HG-C™ may be combined with Imron® 3.4 FT-C™ to achieve lower gloss levels. Please see data sheet for Imron® 2.8 FT-C™.

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

	Without Accelerator	Hours w/2 oz. MasterTint® 389S™
Dry to Touch	4 – 6	1 – 2
Dry to Recoat	10 – 12	2 – 4
Dry To Handle	10 – 12	8
Pack/Ship	24	16
Full Cure	7 days	6 days
Pot Life	1.5 – 2	1.5 – 2

THEORETICAL COVERAGE PER GALLON*

834 ft² (20.5 m²/L) @ 1 mil
417 ft² (10.2 m²/L) @ suggested DFT of 2 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):

59% ± 2%

WEIGHT PER GALLON (MIXED):

8.3 lbs. (3.7 kg) ± .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.

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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, then restore color before applying clear.

ACTIVATION

Thoroughly mix 3 parts Imron® 3.5 HG-C™ (611P™) Enamel, then add 1 part Imron® VGY-611™ Activator while stirring. No induction period is necessary.
Note: Enamel is short-filled to allow for addition of activator. Do not shake. If air bubbles are excessive as a result of stirring, agitating or boxing the base material, allow the bubbles to dissipate prior to activation.

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 MasterTint® 389S™ Accelerator.

APPLICATION THINNERS & ADDITIVES

Spray: DuPont 68083™

CLEANUP THINNERS

DuPont 68083™ 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 MasterTint® 389S™ 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 only.
- 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

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

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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

ADDITIONAL COMMENTS

1. Dry times can be improved by adding MasterTint® 389S™ Accelerator up to 2 oz./activated gallon.
2. May be recoated by spray when tack-free.
3. For best results when applying Imron® 3.5 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® 3.5 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.

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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™)/Imron® 3.5 HG-C™ (formerly Imron® 611P™) 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)	1850 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)		4.2×10^{14}
♦	Cle Cond (ASTM D4585)	1000 hours	No rusting, no blistering
♦	UVA 340 Con (ASTM D4587)*	3000 hours	Gloss before exposure: 92.4
			Gloss after exposure: 90.2
		Evaluation	No rusting, no blistering, no delamination
♦	Impact (ASTM D2794)	4 inch pounds	
♦	Mandrel Bend (ASTM D522)	% elongation	3%

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