Industrial Coatings

Imron® Industrial Strength Low VOC Polyurethane Primer

Product Data Sheet

Description:

DuPont Imron® Industrial Strength is the next generation of Imron® technology. Based upon unique DuPont formulations and resin technology, Imron® Industrial Strength is the fastest Imron® yet, with the lowest environmental impact. Imron® Industrial Strength Low VOC Polyurethane Primer is a durable, fast dry, high solids, two- package, VOC conforming, 0.8 lbs/ gal, for most conditions, low HAPS product based on DuPont polyurethane technology, producing an acrylic polyurethane primer which can be brushed, rolled or sprayed. The resulting product delivers high performance and provides a smooth surface for maximum topcoat appearance.

* See section on VOC (page 2).

Suggested Uses:

As a high performance, tough, industrial strength polyurethane primer over properly prepared aluminum, carbon steel, galvanized or fiberglass where:

- A smooth primer will provide maximum topcoat appearance
- Low VOC and HAPS will reduce the environmental footprint
- Application by brush, roll or spray is desired
- Outstanding flexibility is needed
- Faster dry times are desired
- Wet on wet applications
- Application down to 35℉

Not recommended for: Immersion service

Compatibility with Other Coatings

- Imron® Industrial Strength Primer can be top coated with other DuPont Industrial Coatings including, but not limited to: Imron® Industrial Strength Topcoats, High Gloss (GN), Semi Gloss (GO), Satin Gloss (GP) and Flat (GQ), Imron® 2.1 HG™, Imron® 2.1 SG™, Imron® 2.1 ST™, Imron® 2.1 FT™ and Imron® 3.5 HG™, Imron® 3.5 SG™, Imron® 3.5 ST™, Imron® 3.5 FT™.
- Imron® Industrial Strength Primer 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 Coatings representative for specific recommendations.

Maximum Service Temperature

250ºF (93ºC) in continuous service.
300ºF (148ºC) in intermittent heat.

Some yellowing of light colors may occur at elevated temperatures.

Performance Properties

(With appropriate topcoat)

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

VOC (Theoretical Less Water and Exempt Compounds)

This product contains TBAc.

	8 to 1 15% Reduction TBAc Exempt*			8 to 1 10% Reduction TBAc Non-Exempt		
	9M01™	9M02™	T-1022™	9M01™	9M02™	T-1022™
Without 2 oz VG-805™	0.61	1.05	0.60	2.09	2.30	2.09
With 2 oz VG-805™	0.81	1.23	0.80	2.21	2.48	2.21

*Where TBAc is considered an exempt solvent for contains requirements.

HAPS Information – Theoretical

Imron® Industrial Strength Primer – Mixed 8 to 1, 15 % reduction with Imron® 9M01™, 9M02™ or T-1022™ Thinner – 0.022 lbs/gal solids

Imron® Industrial Strength Primer – Mixed 8 to 1, 15 % reduction with Imron® 9M01™, 9M02™ or T-1022™ Thinner and 2 oz VG-805™ - 0.023 lbs/ gal solids

Color

Imron® Industrial Strength Primer is available in the following colors:

9P01™ White
9P02™ Red Oxide
9P03™ Black

Note: To reach a medium grey color, mix 9 parts white to one part black.

Gloss

85º angle - 30 – 35
60º angle - 4.5– 5.5

Weight Solids – Average varies with color

68% +/- 2%

Weight Per Gallon – Average varies with color

11.2 – 11.5 lbs/ gal

Volume Solids - Average varies with color

53 % +/- 2%

Flash Point

Between 20º to 73ºF (-6º to 22.77ºC)

Packaging

- Primer Base – 1 Gallon container 100% full (128 oz)
- Activator – 9T00-A™ – Pint container 100% full (16 oz.)

Shipping Weight – lbs – Approximate

1-Gallon container: 12-13 lbs depending upon color
Pint Activator: 1-2 lbs

Shelf Life & Storage Conditions

Store in a dry, well-ventilated area. Storage conditions should be between 35ºF (2ºC) and 120ºF (48ºC)

- Shelf Life: 1-year minimum.

Safety

Consult the Material Safety Data Sheet for this product prior to use. Imron® Industrial Strength products are intended for professional use only.

Theoretical Coverage Per Gallon

850 ft^2 (20.9 m^2/l) @ 1 mil dft
283 ft^2 (6.9 m^2/l) @ 3 mil dft
Material losses during mixing and application will vary and must be taken into consideration when estimating job requirements.

Suggested Film Builds

6-10 mils (150-250 µm) wet
3-5 mils (75 – 125 µm) dry
Application by brush and roller may require additional coats to achieve recommended films thickness.

Cure Time- hours @ 75^0 F, 50 % RH @ 3-5 mils suggested DFT*

	Hours without accelerator, 10 % reduction with T-1022	Hours with 2 oz VG-805™ accelerator, 10 % reduction with T-1022 ™
Dust free	15 min	15 min
Set to touch/ Dry to recoat	1 hr 15 min	45 min
Tack Free	2 hr 45 min	1 hr 15 min
Hard dry/ Dry to handle	3 hr 25 min	1 hr 15 min
Pack/ Ship	8- 10 hrs	3 hrs
Pot life	4 hr	2 hr

Cure Time- hours @ 90^0 F, 50 % RH @ 3-5 mils suggested DFT*

	Hours without accelerator, 10 % reduction with T-1022	Hours with 2 oz VG-805™ accelerator, 10 % reduction with T-1022 ™
Dust free	45 min	10 min
Set to touch/ Dry to recoat	1 hr 15 min	15 min
Tack Free	2 hr	20 min
Hard dry/ Dry to handle	2 hr 20 min	30 min
Pack/ Ship	3- 5hrs	2 hrs
Pot life	3 hr 30 min	1 hr 30 min

APPLICATION INFORMATION

Surface Preparation

For best results, all surfaces must be clean, dry and free of rust, oil, grease and all other contamination. All surfaces should be cleaned with solvent (SSPC-1) to remove oils and greases. SSPC-SP6 Commercial Blast Cleaning will provide very good results. Surface profile should be 2-2.5 mils. If blasting is not possible or practical, then Hand Tool Clean to an SSPC SP -2 or Power Tool Cleaned to an SSPC SP -3 with some sacrifice in performance. Newly primed surfaces should be clean and dry before application of topcoats. If contaminated, detergent/water wash, then blow dry. For optimum appearance of topcoat, Imron® Industrial Primer may be sanded with 320 grit sand paper.

Activation

Thoroughly mix all colored portions until uniform. To 8 parts 9PXX Primer base, add one part DuPont Imron® 9T00-A™ Activator. Measure out appropriate amounts, add activator and mix thoroughly. For most applications, add 10 – 15% Imron® 9M01™, 9M02™ or T-1022™ reducer depending upon application conditions and methods. Mix until uniform. (See reduction section below.) Mix thoroughly using a mechanically powered sheer “Jiffy” mixer with variable RPM settings; use medium speed RPM. Move mixer up and down through paint for uniform mixing. **DO NOT SHAKE. Note: Upon activation of 8:1 with 9T00-A™ Activator, the mix produces 1.125 gallons. 1 full gallon of 9PXX Primer Base to 1 pint (0.125 gal) of activator for a total of 1.125 gallons.**

Reduction

Normally 10-15% reduction with Imron® 9M01™, 9M02™ or T-1022™ Reducer is adequate for spray application, pressure pot and airless, depending upon conditions and equipment. To help maximize pot life, up to 20% may be added. For brush applications, add 5-10% 9M01™, 9M02™ or T-1022™ Thinner. For rolling applications, add 1 oz of Imron® 9M05™ (RT-002P) Rolling Additive per activated gallon and 5-10% 9M01™, 9M02™ or T-1022™. After addition of 9M05™ (RT002P) Rolling Additive, allow 5 minutes induction before application. If faster recoat and handling are required, add up to 2 oz. VG-805™ Accelerator. For cold weather application, use VHY-691™ at 2 oz. per gallon. Use only DuPont recommended thinners. If accelerators have been used, recoating must be done within 72 hours. If more time has elapsed, scuff sand to ensure adhesion.

Application Thinners

Spray, Brush and Roll – Below 80ºF Imron® 9M01™ or T-1022™. Rolling Additive - Imron® 9M05™
Spray, Brush and Roll – Above 80ºF Imron® 9M02™

Clean Up Thinners

Imron® 9M01™, T-1021™

Application Conditions

Do not apply if the application surface temperature is below 45ºF (7ºC) or above 110ºF (43ºC), or if the atmospheric temperature is within 5ºF of the dew point. For application temperatures below 45ºF, the use of 2 oz. Imron® VHY-691™ is recommended. Relative humidity should be below 90%.

Application Equipment

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

Roll

Manufacturer: Wooster® Pro/Doo-Z™ ¼" – ½" nap

Additions:
- Add 1 oz./gallon Imron® 9M05™ Rolling Additive to eliminate bubbles. Craters may develop if you exceed 2 oz./gallon.
- Add 5-10% Imron® 9M01™ , 9M02™ or T-1022™ reducer to maintain wet edge.
- May be cross-rolled.
- For best results, allow 5 minutes mix time after adding Imron® 9M05™.
- Do not use Imron® 9M05™ in spray applications.

Brush

Manufacturer: Wooster® China Bristle

Additions:
- Add 5-10% Imron® 9M01™, 9M02™ or T-1022™ reducer to maintain wet edge. Do not cross brush to reduce lap marks.

Conventional

Manufacturer	**Sata**	**DeVilbiss**	**Graco**	**Iwata**	**Binks**	**Kremlin**
Model	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 - 1.4 mm	1.0 - 1.5 mm	1.2 – 1.8 mm	1.2 – 1.8 mm	1.2 – 1.8 mm

*Fluid lines 3/8" ID or larger are required for proper fluid delivery.

HVLP Spray:

Manufacturer	**Sata**	**DeVilbiss**	**Graco**	**Iwata**	**Binks**	**Kremlin**
Model	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 - 1.8 mm	1.3 – 2.2 mm	0.8 – 1.2 mm	1.0 – 1.7 mm	1.5 – 1.8 mm

Airless Spray:

Manufacturer	**Graco**	**Iwata**	**Binks**	**Kremlin**
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

ASTM Test Results

Paint System	Imron® Industrial Strength Primer 9M01™ Imron® Industrial Strength Topcoat 9T11™
Type	Urethane / Urethane
Color	White / White
DFT	6.0 = Primer 4.0, Topcoat 2.0
Salt Fog (ASTM B117, D714, D1654) **1000 hours**	Blasted Steel (SSPC-SP6) Scribe rating – 10 Blister rating – 2 few around scribe only
Humidity (ASTM D2247) **1000 hours**	Bonderite Steel B 1000 Blister rating – 8 medium
Cleveland Condensation (ASTM D4585) **1000 hours**	Bonderite Steel B 1000 Blister rating – 8 few
Impact (ASTM D2794)	No failure at 80 inch lbs
Mandrel Bend (ASTM D522)	Passes 1/8” No failure
Chip Resistance (ASTM D3170)	8 (Scale rating 0 – 10. 10 best)
Pencil Hardness (ASTM D3363)	5 H

E-R5193 / K-20436

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