Imron® Industrial Strength Ultra Low VOC Polyurethane Clear 9C01™

GENERAL

DESCRIPTION

A high gloss, 0.3 lbs/gal VOC conforming, low HAPS, polyurethane clear coat. The resulting finish product is designed to provide a brush, roll or sprayable topcoat suitable for use in any environment where additional long-term color and gloss retention are desired.

SUGGESTED USES

As a high performance, tough, industrial strength polyurethane clear coat over properly prepared, primed and top-coated aluminum, carbon steel, galvanized, concrete or dry wall where:

- The extra protection of a clear is desired
- Restoring gloss to “dull” faded finishes avoids the cost of complete re-painting
- Additional long-term color retention is desired
- Additional long-term gloss retention is desired
- Low environmental footprint is desired
- Application by brush, roll or spray is desired
- Excellent chemical resistance
- Very good Skydrol® resistance is needed
- Outstanding flexibility is needed
- Faster dry times are desired

COMPATIBILITY WITH OTHER COATINGS

- Aged Imron Industrial Strength High Gloss Clear may be re-coated with itself following washing with clean, fresh water – no mechanical surface preparation is required.
- Imron Industrial Strength High Gloss Clear can be applied over other Axalta coatings including, but not limited to Imron Waterborne Polyurethane Copolymer coatings, Imron Industrial Strength topcoats, and other Imron solvent-borne topcoats.
- Imron Industrial Strength High Gloss Clear 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 Axalta representative for specific recommendations.

NOT RECOMMENDED FOR

Immersion Service

PERFORMANCE PROPERTIES

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

The products referenced herein may not be sold in your market. Please consult your distributor for product availability.

MIXING

COMPONENTS

9C01 Clear	1 gallon container 80% Full (102.4 oz.)
9T00-A™ Activator	1 quart container 80% full (25.6 oz.)

MIX RATIO

Component	Part by Vol.
Imron 9C01Clear	4
Imron 9T00-A Activator	1

ACTIVATION

To 4 parts Imron Industrial Strength Clear, 9C01, add 1 part Imron 9T00-A Activator. Measure out appropriate amounts, add activator and mix thoroughly.

MIXING AND REDUCTION

For most applications, add 10-20% Imron 9M01 or 9M02 Thinner reducer depending upon application conditions and methods. Mix until uniform. 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**.

Normally 10-20% reduction with Imron 9M01 or 9M02 Reducer is adequate for spray application, pressure pot and airless, depending upon conditions and equipment. To help maximize pot life, up to 25% may be added. For maximum appearance, up to 25% Imron 9M01 or 9M02 may be added. For brush applications, add 10-15% 9M01 or 9M02 Thinner. For rolling applications, add 1 oz of Imron 9M05 Rolling Additive per activated gallon and 10-15% 9M01 or 9M02 Reducer. After addition of 9M05 Rolling Additive, allow 5 minutes induction before application. If faster recoat and handling are required, add up to 1 oz. VG-805 Accelerator. Use of 9M02 Pot Life Extender / Reducer will affect VOC. Please see VOC section. For cold weather application, add 1 oz. of VGY-691™. Use only recommended reduction solvents.

APPLICATION THINNERS

Spray, Brush and Roll – Below 80°F	Imron 9M01	Rolling Additive - Imron 9M05
Spray, Brush and Roll – Above 80°F	Imron 9M02	

INDUCTION TIME

None unless 9M05 Rolling Additive is used, then 5 minute induction before applying.

POT LIFE

1.5 hours @ 77°F and 50% RH. Higher temperatures or the addition of Imron VG-805 Accelerator may shorten pot life.

APPLICATION

SURFACE PREPARATION

Newly primed and top-coated 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.

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 1 oz. Imron VHY-691 is recommended. Relative humidity should be below 90%.

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.

ROLL

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

- Add 1 oz./gallon Imron 9M05 Rolling Additive to eliminate bubbles. Craters may develop if you exceed 2 oz./gallon.
- Add 10-15% Imron 9M01 or 9M02 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
- Add 10-15% Imron 9M01 or 9M02 reducer to maintain wet edge.
- Do not cross brush to reduce lap marks.

CONVENTIONAL

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

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

HVLP SPRAY

Manufacturer	Model	Tip Size
Sata	3000RP HVLP	1.2-1.6mm
Devilbiss	JGVH, EXL, or FLG	1.3-1.8mm
Graco	DeltaSpray XT - HVLP	1.3-2.2mm
Iwata	LPH 200 L VLP	0.8-1.2mm
Binks	Mach 1 & 1SL	1.0-1.7mm
Kremlin	E3K HVLP	1.5-1.8mm

AIRLESS SPRAY

Graco	Silver or Plus	Airless tip size .011 - .015	Pump 30:1 min
Iwata	ALG or Airlessco Guns	Airless Tip Size .011 - .015	Pump ALG 30:1 min
Binks	Airless 1	Airless Tip Size .011 - .017	Pump 30:1 min
Kremlin	Airless 250 II	Airless Tip Size .013 - .017	Pump Orca 32:1

CLEAN UP THINNERS
Imron 9M01, T-1021

DRY TIMES

Cure Time in hours at recommended thickness 1.5 to 2 mils DTF

	77°F (25°C) and 50% RH		90°F (32°C) and <25% RH	
	20% 9M01 Reducer Without VG-805	20% 9M01 Reducer With 2 oz. VG-805	20% 9M02 Reducer Without VG-805	20% 9M02 Reducer With 2 oz. VG-805
Dry to Touch	3	1	2	1
Tack Free	3	2	2	1
To Handle	4.5	2	3.5	2
To Recoat	4	2	3	2
Hard Dry	18	12	16	10
Pot Life	1.5	2	3	2
Full Cure	7 days	6 days	7 days	6 days

Dry times can be improved by adding up to 2 oz. of Axalta VG-805 Accelerator per activated gallon. If accelerators have been used, recoating must be done within 48 hours. If more time has elapsed, scuff sand to ensure adhesion. May be recoated by spray when tack-free.

PHYSICAL PROPERTIES

Maximum Service Temperature	250ºF (93ºC) in continuous service 300ºF (148ºC) in intermittent heat
Volume Solids	56%
Weight Solids	57%
Theoretical Coverage Per Gallon	881 ft² (21.5 m²/l) @ 1 mil dft 441 ft² (10.8 m²/l) @ 2 mil dft
	Material losses during mixing and application will vary and must be taken into consideration when estimating job requirements
Weight Per Gallon	9.2 lbs/gal - average varies with color
Shipping Weight (approximate)	
1 gallon container:	10 lbs
quart activator:	2-3 lbs
Suggested Film Thickness	3-5 mils (75-125 µm) wet 2-3 mils (50 – 75 µm) dry
	Application by brush and roller may require additional coats to achieve recommended films thickness.
Flash Point	Between 73º to 100ºF (23º to 38ºC)
Gloss	90+ 60º angle
Shelf Life	12 months minimum

STORAGE CONDITIONS

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

Please consult MSDS for both products for proper protective equipment and safety and health information.

VOC REGULATIONS

VOC (Theoretical less water and exempt compounds).

This product contains TBAc.

	4 to 1 25% Reduction TBAc Exempt*			4 to 1 25% Reduction TBAc Non-Exempt		
	No Reduction	9M01	9M02	No Reduction	9M01	9M02
Without 1 oz VG-805	0.3	--	--	2.3	--	--
With 1 oz VG-805	--	0.4	1.0	--	2.4	2.9

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

HAPS INFORMATION – THEORETICAL

Imron Industrial Strength Clear – Mixed 4 to 1 no reduction – 0.01 lbs/gal solids
Imron Industrial Strength Clear – Mixed 4 to 1 with 25% Imron 9M01 or 9M02 Thinner and 1 oz. VG-805 Accelerator – 0.01 lbs/gal solids

These directions refer to the use of products which may be restricted or require special mixing instructions in VOC regulated areas. Follow mixing usage and recommendations in the VOC Compliant Products Chart for your area.

ASTM INFORMATION

Physical properties are averages. Properties listed are for a system of Corlar® LV SG™ and Imron Industrial Strength Topcoat and Imron Industrial Strength Clear. Total DFT 9 mils. For other system recommendations, please contact Axalta Coating Systems.

Salt Fog (ASTM B-117)	500 hours	10 - No rusting
	1000 hours	10 - No rusting
	1500 hours	No rust, few #8 blisters at the scribe 10 - No undercutting
Humidity Resistance (ASTM D2247)	500 hours	10 - No blisters
	1000 hours	10 - No blisters
	1500 hours	10 - No blisters
Adhesion (ASTM D3359-02 A/B)	5/5	Excellent
QUV A (ASTM D4587)	1500 hours	Gloss Before 91% Gloss after 89% % Retention 98%
Cleveland Condensing (ASTM D4585)	1000 hours	No rusting, no blistering, no delamination
Impact (ASTM D2794)	20 in pounds with primer 80 in pounds without primer	
Mandrel Bend (ASTM D522)	> 28% Passes	
Pencil Hardness (ASTM D3363)	H – 2H	
Persoz Hardness (ANS/ISO 1522)	80 sec	

SELECT CHEMICAL REISITANCE – THE FOLLOWING ARE CHEMICAL RESISTANCE RATINGS FOR 24 HOUR WATCH GLASS TESTING. RATING SCALE USED WAS A SCALE 1-10, 10 BEING THE BEST.

	RATING		RATING
1% HCL (HYDROCHLORIC ACID)	10	(ISOPROPYL ALCOHOL)	9
1% H2SO4 (SULFURIC ACID)	10	(ETHYLENE GLYCOL MONOBUTYL ETHER)	9
10% H2SO4 (SULFURIC ACID)	9	(ETHYL ACETATE)	10
1% HNO3 (NITRIC ACID)	3	(TOLUENE)	9
5% DMEA (N-DIMETHYLETHALNOLAMINE)	9	MEK (METHYL ETHYL KETONE)	9
1% H3PO4 (PHOSPHORIC ACID)	10	28% (AMMONIUM HYDROXIDE)	9
10% H3PO4 (PHOSPHORIC ACID)	10	(AROMATIC MINERAL SPIRITS)	10
MEK (METHYL ETHYL KETONE)	9	(AROMATIC HYDROCARBON)	9
1% NH4OH (AMMONIUM HYDROXIDE)	10	10% NAOH (SODIUM HYDROXIDE)	10
5% NH4OH (AMMONIUM HYDROXIDE)	10	MOTOR OIL (MOBIL 10W-30)	10
10% NH4OH (AMMONIUM HYDROXIDE)	10	HYDRAULIC OIL (PENNZOIL)	10
1% NAOH (SODIUM HYDROXIDE)	10	CUTTING OIL (RIGID)	10
5% NAOH (SODIUM HYDROXIDE)	10	UNLEADED GAS	10
ETHANOL	10	SKYDROL (500 B4L)	7
DIETHYLENE GLYCOL MONOBUTYL ETHER	9	TIDE SOAP 10%	10
DBE (DIBASIC ESTERS)	9	FANTASTIC	10
(AROMTIC CONTROLLED VM&P NAPHTHA)	9	BLEACH	10
(AROMATIC HYDROCARBON)	9	BRAKE FLUID (DOT 3 WAGNER PREMIUM)	9
		COLA	10

SAFETY AND HANDLING

For industrial use only by professional, trained painters. Not for sale to or use by the general public. Before using, read and follow all label and MSDS precautions. If mixed with other components, mixture will have hazards of all components.

Ready to use paint materials containing isocyanates can cause irritation of the respiratory organs and hypersensitive reactions. Asthma sufferers, those with allergies and anyone with a history of respiratory complaints must not be asked to work with products containing isocyanates.

Do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves.

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