

# Imron® 1.5 ST-D

## Satin Waterborne Polyurethane DTM (WF Quality)



### GENERAL

#### DESCRIPTION

A satin gloss, isocyanate-free, single component, VOC conforming (1.5 lbs/gal), zero HAPs coating based on unique Axalta waterborne polyurethane copolymer technology. This coating is formulated to be highly durable and to establish a new standard of performance for waterborne coatings to deliver very good chemical and corrosion resistance.

#### PERFORMANCE PROPERTIES

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

#### SUGGESTED USES:

As a coating on properly prepared carbon steel (blasted, phosphate-treated, mill scale bearing), galvanized steel, stainless steel, treated aluminum, e-coat, concrete, concrete block, fiberglass, wood and many plastics where:

- Low VOC and/or zero HAPs coating is required
- Minimizing environmental impact and reducing cost for permitting, abatement and waste disposal are important
- 30 minute recoat, 2 hour air cure or 20 minute bake will improve productivity
- One component, no induction time and unlimited pot life minimize work and speed preparation time
- Application by brush and roller, in addition to spraying, may be necessary
- Single coat direct-to-metal applications of 3-5 mils dry film thickness (DFT) are required

#### NOT RECOMMENDED FOR:

- Immersion service or floors
- Direct applications to rusted surfaces

#### COMPATIBILITY WITH OTHER COATINGS

- Imron 1.5 ST-D can be topcoated with Imron 1.2 HG and/or Imron 1.2 HG-C for a complete waterborne system.
- Imron 1.5 ST-D can also be topcoated with Corlar® epoxies and/or Imron polyurethanes where additional gloss and chemical resistance are required. On rusted surfaces, Imron 1.5 ST-D can be applied over Corlar epoxies.
- Imron 1.5 ST-D is highly compatible with most coating types. It 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 Axalta Coating Systems for specific recommendations.

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

#### COLOR

Specific colors can be matched in Imron 1.5 ST-D Satin DTM quality with custom mix formulas. These custom mix formulas use specially blended mixing clears/bases to achieve

the final color position. When asking for color developments with Imron 1.5 ST-D, please ask for quality code "WF." When making color mixes always use lined metal or plastic cans



## MIXING

### COMPONENTS

Imron 1.5 ST-D Factory packaged colors

1 gallon container (100% fill, 128 oz.)

5 gallon container (100% fill, 640 oz.)

### MIX RATIO

Ready to use

### ACTIVATION

None Required

### MIXING AND REDUCTION

When thinning, use clean near neutral, (pH 6-8) water. If you do not know the quality or pH of the local water supply, thin with distilled or de-mineralized water. **Do not** thin with hard water.

#### Thinning recommendations

Airless

Conventional Pressure Pot

HVLP

Brush & Roll

#### Reduction Amount

No reduction recommended

0-10% by volume

0-10% by volume

0-10% by volume

Note: Reduction with water will slow dry time and reduce film build.

- Do not mix on a paint shaker.
- Mechanically power mix Imron 1.5 ST-D with low (100-200) rpm's until smooth and uniform.
- Filter paint using nylon or cotton filters before filing spray equipment. Do not use polyester filters.

### APPLICATION THINNERS

Water

### INDUCTION TIME

None

### POT LIFE

N/A. See Additional Comments in Cleanup Thinners.



## APPLICATION

### APPLICATION CONDITIONS

Do not apply if the application surface or ambient temperature is below 50°F (10°C) or above 95°F (35°C), or if the atmospheric temperature is within 5°F of the dew point. Relative Humidity should be above 30% and below 90%.

### SURFACE PREPARATION

For best results, all surfaces must be clean, dry and free of loose rust, oil, grease, and all other contamination. Can be applied over SSPC-SP-6 Commercial blast cleaned steel and other properly prepared substrates (see Compatibility Section). Can be applied to SSPC-SP 2 Hand Tool Cleaned or SSPC-SP 3 Power Tool Cleaned steel surfaces with some sacrifice in performance. Can be applied over previously painted surfaces in good condition after checking for adhesion.

When using Imron Waterborne Polyurethane Copolymer over rusted surfaces that cannot be blast cleaned:

- Prepare surface in accordance with SSPC SP-2 Hand Tool Clean or SSPC SP-3 Power Tool Clean.
- Prime with Corlar 2.1 ST or Corlar LV-SG.
- Apply Imron 1.5 ST-D and/or Imron 1.2 HG

### APPLICATION EQUIPMENT

Apply by spray for best results. Imron 1.5 ST-D may also be applied by brush or roller with some sacrifice in appearance.

- Do not apply using a suction or gravity feed gun.
- For best results, use dedicated spray lines, guns and stainless steel equipment.

Manufacturers listed below are a guide. Others may be used. Changes in pressure and tip size may be required to achieve proper application.

#### Roller

Wooster® Pro/Doo-Z®, ¼" – ½" nap

#### Brush

Wooster Nylon Bristle

#### Airspray

Manufacturer	DeVilbiss	Sata
Spray Gun	JGA	K3 RP
Fluid Tip	1.4 FF	1.1
Air Cap	777	
Fluid Line	3/8"	3/8"
Pressure Pot	15-25 psi	40 psi
Atomizing Air	50-60 psi	36 psi

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

#### Airless Spray

Manufacturer	Graco
Pump Xtreme	33:1
Fluid Hose	3/8" X 100' Max.
Spray Gun	208663
Tip Size	.413-.515
PSI:	2400 psi min

#### Tips for Success

- Application by brush or roll may require multiple coats to achieve the recommended DFT.
- For best appearance, filter material prior to spray application.
- May be recoated by spray when tack-free.

### CLEAN UP THINNERS

Water

Imron 1.5 ST-D dries very fast when exposed to air. Spray equipment should be cleaned as soon as possible after use. If not cleaned after 20-30 minutes, material could harden, plugging spray tips and equipment. If you plan to leave spray gun for more than 20-30 minutes, place in it a bucket of fresh water. Dried paint film, spray equipment, and mixing equipment can be cleaned by soaking and scrubbing with TY-3826 Thinner.



### DRY TIMES

CURE TIME – HOURS @ 77°F (25°C), 50% R.H. @ SUGGESTED DFT\*

Tack free	20-30 minutes
Dry to Recoat	30 minutes with itself, 1 hour w/ solvent borne
Dry To Handle	1 hour
Hard Dry	2 hours or bake 120°-160°F for 15-20 minutes

\*Higher temperatures and air flow will reduce dry times.



## PHYSICAL PROPERTIES

Maximum Service Temperature:	250°F (121°C)
Gloss (ASTM D 523)	Satin gloss 30-35 @ 60° angle
Weight Solids (Avg. varies by color):	46% ± 1%
Weight per gallon-(Avg. varies by color):	9.60 lbs. (4.35 kg) average
Flash Point-Tag Closed Cup:	>200°F (93°C)
Volume Solids (Avg. varies by color):	38% ± 1%
Shipping Weight (varies by color):	1 gallon container – 11 lbs 5 gallon container – 52 lbs
Shelf Life:	1 year minimum
Theoretical Coverage Per Gallon*:	610 ft <sup>2</sup> (14.95 m <sup>2</sup> /L) @ 1 mil DFT 203 ft <sup>2</sup> (4.97 m <sup>2</sup> /L) @ 3 mils DFT 122 ft <sup>2</sup> (2.99 m <sup>2</sup> /L) @ 5 mils DFT
Suggested Film Builds**:	8 – 12 mils (400-600 µm) wet (WFT) 3 – 5 mils (75 – 225 µm) dry (DFT) Film builds below 3-5 mils DFT will not provide maximum film properties

\*Material losses during mixing and application will vary and must be taken into consideration when estimating job requirements.

\*\*Application by brush and roller may require additional coats to achieve recommended films thickness.

## STORAGE CONDITIONS

Store in a dry, well-ventilated area. Storage conditions should be between 35°F (2°C) and 120° F (48° C). Do not allow product to freeze. When storing partially used open containers, float ¼" of distilled or de-mineralized water over product and reseal container

## THEORETICAL VOC (LESS WATER AND EXEMPT COMPOUNDS)

VOC Less Exempt, varies with color. 1.5 lbs./gal. (179.7 g/l) average

## ASTM INFORMATION

Performance properties are for Imron 1.5 ST-D only. Properties may be enhanced by use of appropriate primers. For other system recommendations, please contact Axalta.

Paint System: Imron 1.5 ST-D  
DFT: 3-5 mils

TEST	RESULTS
Humidity: (ASTM D-2447)	>2000 hours
Salt Fog: (ASTM B117)	2000 hours (Bondrite 1000 panel) few small blisters 500 hours (blasted hot rolled steel) no blisters
Flexibility: (ASTM D-1737)	@70°F 160 in/lbs @-50°F 100 in/lbs
Pencil Hardness: (ASTM 3363)	B to HB
Adhesion: (ASTM D-3359)	Adheres to e-coat, steel, steel castings, treated aluminum, many plastic surfaces, previously painted surfaces, concrete, concrete block, fiberglass, (always test coatings for compatibility and prepare surfaces properly)

### SELECT CHEMICAL RESISTANCE

The following are chemical resistance ratings (1=poor, 10= excellent), after exposure to listed chemicals and 24 hour watch glass exposure.

<b>Chemical</b>	<b>Rating</b>	<b>Chemical</b>	<b>Rating</b>
Coke	10	1% HCL Acid	8+
Bleach	9+	1% H2SO4	8+
Fantastic	6+	10% H2SO4	8+
Unleaded Gas	8+	1% Phosphoric	9
Cutting Oil	9+	1% NaOH	7
Hydraulic Oil	10	Mineral Spirits	8+
Motor oil	10	1% Ammonia	8
MEK	9	5% Ammonia	8
Ethyl Acetate	8	Toluene	9
Aromatic HC	8	1,1,1 TCE	9

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### 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.

All technical advice, recommendations and services are rendered by the Seller gratis. They are based on technical data which the Seller believes to be reliable, and are intended for professional use by persons having skill and know-how at their own discretion and risk. Seller assumes no responsibility for results obtained or damages incurred from their use by Buyer in whole or in part. Such recommendations, technical advice or services are not to be taken as a license to operate under or intended to suggest infringement of any existing patent.

**Revised: January 2015**

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