

# Imron® MS1™ Polyurethane Clearcoat

## Type

Imron® MS1™ is a high-performance polyurethane clearcoat.

## Description

Imron® MS1™ is a clear polyurethane coating designed to deliver excellent appearance, durability, and robust application. Imron® MS1™ is formulated to provide balanced performance including smooth appearance, resistance to sag, and productive dry times. This high-solids clearcoat has a ready-to-spray VOC of less than 3.5 lbs/gal.

## Recommended Uses

- Imron® MS1™ is part of the Imron® MS100™ Basecoat/Clearcoat system. Refer to the Imron® MS100™ Product Data Sheet.
- Imron® MS1™ is recommended for use with Imron® MS600™ topcoats to improve the appearance of dark colors or metallics.
- It is also recommended for topcoating properly prepared exterior wood surfaces to enhance appearance and durability.
- It can also be used in place of DuPont™ 18321S™ for finishing interior wood systems when a slower clear is desired.

## General Information for Use



### Components

Imron® MS1™ Polyurethane Clearcoat  
DuPont™ 18100S™ Urethane Activator  
Imron® 187X5S™ Reducers

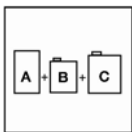
Imron® 18765S™ Low Temperature Reducer (<70° F)

Imron® 18775S™ Medium Temperature Reducer (70°-85°F)

Imron® 18785S™ High Temperature Reducer (>85° F)

*See DuPont™ Imron® MS600™ product data sheet for topcoat information.*

*See Imron® MS100™ product data sheet for basecoat information*



### Mix Ratio

Thoroughly mix Imron® MS1™ prior to activation. Filter activated material prior to spray application.

*Three Component System*

*Parts by Volume*

Imron® MS1™ Polyurethane Clearcoat

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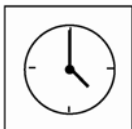
DuPont™ 18100S™ Urethane Activator

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Imron® 187X5S Reducer

1 (Optional)

Viscosity will be 10 - 13 seconds in a Zahn #3 cup unreduced.

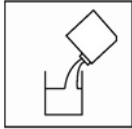


### Pot Life and Induction Time

Pot life is 2 hours at 70°F (21°C) unreduced

Pot life is 4 hrs with 2:1:1 activation / reduction at 70°F (21°C)

No induction time is required prior to application.



### Additives

- Accelerator DuPont™ 189S™ for improved pot life/dry (up to 2 oz per ready-to-spray gallon)  
 DuPont™ 18820S™ for improved dry time (up to 2 oz per ready-to-spray gallon)
- Anti-Crater DuPont™ 18801S™ (up to 1 oz per ready-to-spray gallon)  
 DuPont™ 18802S™ (up to 1 oz per ready-to-spray gallon)  
 Do not use FEE

### Guidelines for Use



#### Substrates and Surface Preparation

Surface preparation is critical to topcoat appearance. Follow topcoat recoat-window guidelines to ensure proper adhesion. Substrate should always be thoroughly wiped/tacked immediately prior to clearcoat application except for wet on wet application.



#### Gun Setup

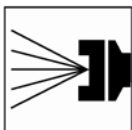
Imron® MS1™ can be applied with conventional, HVLP, air-assisted airless, and electrostatic spray equipment using pressure, siphon, or gravity fluid delivery.

##### *Conventional Fluid Tip*

Pressure Pot	1.0 mm – 1.4 mm (.039" - .055")
Siphon Feed	1.0 mm – 1.4 mm (.039" - .055")
Gravity Feed	1.2 mm – 1.6 mm (.047" - .063")

##### *HVLP*

Pressure Pot	1.0 mm – 1.4 mm (.039" - .055")
Siphon Feed	1.0 mm – 1.4 mm (.039" - .055")
Gravity Feed	1.2 mm – 1.6 mm (.047" - .063")

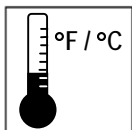


#### Fluid Delivery

Conventional	8 - 10 ozs/min
HVLP	8 - 10 ozs/min

#### Air Pressure

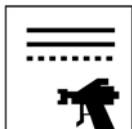
Conventional	50 – 60 psi atomizing air
HVLP	25 – 30 psi atomizing air



#### Environmental Conditions

Substrate and ambient temperature must be between 50°F (10°C) and 110°F (43°C).  
 The substrate must be at least 5°F (3°C) above the dew point. Relative humidity should be below 90%.

For optimum appearance, spray Imron® MS1™ at 75°F (24°C) or warmer.  
 Heating activated paint above 110°F (43°C) may cause gelation.



## Application

### For DuPont™ Imron® MS600™ Topcoat:

DuPont™ Imron® MS1™ Clearcoat may be applied over Imron® MS600™ Topcoat after a one to two hour flash for solid colors, 2-3 hrs for metallics. For optimum appearance, allow topcoat to air dry 16 hours, sand with 400 grit paper finishing with 800 grit or smaller, clean and tack the surface. Sanding of the topcoat may affect color, test prior to finishing. Apply Imron® MS1™ using a cross-coat technique. Spray a wet first coat using a top-to-bottom motion. Spray a medium-wet second coat using a side-to-side motion to achieve 1.5 – 2.0 mils dry film build. Allow 30 minute flash times between coats. Allow clearcoat to cure a minimum of 72 hours prior to placing boat into limited service. Full cure is obtained in 2 weeks.

### For Imron® MS100™ Basecoat:

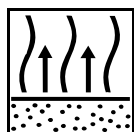
Imron® MS1™ Clearcoat may be applied wet on wet over Imron® MS100 Basecoat after a 10 to 40 minute flash. Spray 2 coats with a 30 minute flash between coats to achieve 1.8 to 2.2 mils dry film thickness (4 mils wet). Cure recommendations are the same as above. Refer to the Imron® MS100™ product data sheets.

### Brushing:

Imron® MS1™ Clearcoat may be brushed when activated/reduced 4:1:1 with DuPont™ 18101S™ Brush & Roll Activator and DuPont™ 18701S™ Brush & Roll Reducer. Allow 30 -45 minutes between coats.

### Exterior Wood:

Spray 2-3 coats over properly prepared exterior wood, allowing 30 to 45 minutes between coats.



### Dry Times

*Force Dry at 130°F (54°C)*

*Air Dry at 70°F (21°C)*

Flash Before Force Dry

none required

Dry to Touch

2 hours

4 hours

Dry to Tape

4 hours

8 hours



### Recoat

When recoating Imron® MS1™ with itself, scuff sanding is required if the clearcoat has air dried for more than 16 hours or has been forced dried.



### Cleanup Solvents

DuPont™ 105™ Thinner or DuPont™ 106™ Thinner

## Physical Properties

### VOC

Imron® MS1™

*Less Exempts (LE)*

3.8 lbs/gal

*As Packaged (AP)*

3.6 lbs/gal

Imron® MS1™ Mixed 2:1 (Unreduced)

3.3 lbs/gal

3.2 lbs/gal

Ready-to-Spray Imron® MS1™ 2:1:1

3.6 lbs/gal

2.8 lbs/gal

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### Factory-Packaged Clearcoat

Color Clear  
Closed Cup Flash Point 20°F – 73°F

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<b>Ready-to-Spray</b>	<b>Unreduced</b>	<b>Reduced 2:1:1</b>
Theoretical Coverage (at 1 mil dry film thickness)	839 ft <sup>2</sup> /gal	630 ft <sup>2</sup> /gal
Weight Solids	59 %	44 %
Volume Solids	52 %	39 %
Gallon Weight	8.35 lbs/gal	8.39 lbs/gal

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### Dry Film

Gloss ≥ 90 measured at 60°  
Recommended Film Thickness 1.5 – 2.0 mils

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### Coating Performance

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Chemical and Solvent Resistance	Excellent
Red diesel staining Resistance	Very Good
Weatherability	Excellent
Humidity Resistance	Excellent
Acid and Alkali Resistance	Excellent
Abrasion Resistance	Excellent
Flexibility	Excellent.

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### Safety and Handling

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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 approved ventilation, and gloves.

Do not allow material or overspray to enter drains or waterways.

Revised 8/2010