



04302013

MP-Series

NORTHSTAR™ **Aircraft and Marine Polyurethane Topcoat** **Description:**



Northstar's MP-series is the next generation of High Solids technology. MP offers outstanding gloss retention, chemical resistance, and long lasting durability. MP is a single stage paint system utilizing the Northstar SHS toner system. The MP provides outstanding coverage and film build when desired.

Suggested Uses:

As a high performance polyurethane topcoat is needed over properly prepared and primed aluminum, carbon steel, galvanized, concrete or dry wall; or DTM over properly prepared carbon steel where:

- Long term color retention is desired
- Long term gloss retention is required
- Low VOC coatings are mandated
- Excellent chemical resistance is required
- Very good Skydrol® resistance is needed
- Outstanding flexibility is required
- Application by HVLP, Air assisted airless, Airless, brush, or roller is desired

Not recommended for: Immersion service

Field Applications:

MP-series can be used in a multitude of end use applications including but not limited to:

- Heavy Industrial Refinishing
- Oil Rig Equipment
- Construction Equipment
- Airport Ground Support Equipment
- Truck and Trailer OEM and Refinish

Components:

- | | |
|-------------------------|----------------------------|
| • MP-series Color | Base Component |
| • H5 | 3.5 VOC Activator |
| • H05 | 2.8 VOC Activator |
| • MPS20 | Preferred standard reducer |
| • S021 Fast/Medium/Slow | Low VOC Reducers |
| • S065/075/085 | Zero VOC Reducers |
| • A566 | Accelerator |
| • A544 | Pot Life Extender |

Mixing Ratios:

Mix 1 **Parts MP** series Color to 1 **Part H5**

- For Brush or Roller, reduce 10% with S021 Slow or S085.
- For Airless application, no reduction is necessary.
- For Air Assisted Airless, reduce 5-15% with selected reducer.
- For HVLP reduce 25% with selected reducer.

Note: Additional reduction may be required for HVLP. Select appropriate reducer based on air temperature and size of item to be painted.

VOC:

When mixed 1 Parts MP series color to 1 Part H5, VOC is 2.66 pounds per gallon.

When reduced with S021 Fast/Medium/Slow or S065/075/085, VOC is 2.66 pounds per gallon.

When mixed with 2 fluid ounces of A566 or A544, VOC is 2.72 pounds per gallon.

When mixed with 2 fluid ounces of A566 and A544, VOC is 2.79 pounds per gallon.

Color:

MP series is a full line Northstar intermix system with unlimited color availability. MP is available in solids and metallic formulations.

Physical Data:

- | | |
|---------------------|---------------|
| • Solids by Weight | 65% (Average) |
| • Solids by Volume | 56% (Average) |
| • Gloss (60° Angle) | 90+ |
| • Pot Life (@77° F) | 2 hours |

Cure Times (Hours @77° F):

<u>Description</u>	<u>Brush / Roll</u>	<u>Airless</u>	<u>Air-Assist Airless</u>	<u>HVLP</u>
DFT	2-2.5	4-6	3-5	2-3
To Touch	0.5	1	1	0.5
Tack Free	2	2.5	2.5	2
To Handle	4	4	4	4
To Recoat	1	2	2	1
Hard Dry	8	12	12	8
Full Cure	7 days	7 days	7 days	7 days

Use of A566 Accelerator will increase rate of dry by as much as 50%. Do not use accelerator with slow reducers.

Theoretical Coverage:

899 ft² @ 1 mil DFT (100% transfer efficiency)

449 ft² @ 2 mils DFT (100% transfer efficiency)

Material losses during mixing and application (transfer efficiency) should be taken into consideration when estimating job requirements. For example, HVLP has a transfer efficiency rating of 65%. So, theoretical coverage at 1 mil DFT would be 584 ft² utilizing HVLP. Transfer efficiency will vary depending upon object painted and application method.

Application Information**Compatibility with Other Coatings:**

MP may be applied over the following Lusid Northstar Primers and or Sealers:

- EP210-series
- Fuzion-series
- TNEK
- GTP270

- SP210
- QS210
- QP210
- GTP310

Activation:

See Mix Ratio section for proper activation.

Reduction:

See Mix Ratio section for proper reduction.

Maximum Service Temperature:

250-275° F for continuous service depending on color (121-135° C)
 300° F in intermittent heat (148° C)

Shelf Life:

2 years from date of manufacture. Store in a well-ventilated area. Storage conditions should be between 35° F (2° C) and 120° F (48° C).

Application Conditions:

Do not apply if the surface temperature of the object to be painted is below 45° F (7° C) or above 110° F (43° C).

Application Equipment:

Contact your Lusid Representative for specific application equipment recommendations.

Performance Properties:

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

(*) Contact Lusid for specific solvent testing properties

ASTM Information:

Test	Results	Test Methods
Abrasion Resistance	Excellent	ASTM D 4060
Adhesion	Excellent	ASTM D 4541 (1850 psi) Excellent ASTM D3359 A/B (5/5) Excellent
Salt Spray Resistance	Excellent	ASTM B 117 (Pass 1500 hours)
Direct Impact Resistance	Very Good	ASTM D 2794 (140 in-lb)
Reverse Impact	Very Good	ASTM D 2794 (50 in-lb)
Humidity Resistance	Excellent	ASTM D 2247 (Pass 1000 hours)
Film Hardness	3H	ASTM D 3363
Chemical Resistance (Rating Scale 1-10 with 10 best)	Excellent 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10	ASTM D 1308 1% Sodium Hydroxide 5% Sodium Hydroxide 10% Sodium Hydroxide 10% Ammonia Diesel Fuel 1% Hydrochloric Acid 1% Sulfuric Acid 10% Sulfuric Acid 100% Ethanol 1% Phosphoric Acid 10% Phosphoric Acid MEK (Methyl Ethyl Ketone) Gasoline Skydrol DOT 3 Brake Fluid
QUV A	Excellent	ASTM D 4587 (1500 hours-97%)
Initial Gloss @ 60°	93 min	ASTM D 523
Solvent Resistance	Surpassed	ASTM D4752 (1000 MHR)
Flexibility	Excellent	ASTM D 522 Mandral