MFI SYSTEMS™ **INDUSTRIAL COATINGS**

TECHNICAL DATA SHEET

5100 SERIES

PRODUCT DESCRIPTION MFI Systems™ 5100 Series 3.5 V.O.C. Hi-Hide Polyurethane is a high quality, two-component urethane formulated for improved hiding capability of transparent colors. It is only available in various shades of yellow. 5100 Series provides brilliant colors with excellent gloss retention, while providing a long-lasting durability in the harshest environments. Use with MFI-500 High Solids Activator and MFI 400 Series Zero V.O.C. Reducers.

COMPATIBLE SUBSTRATES

MFI 500 Series DTM Enamel Primers	MFI-580 1K DTM Primers	MFI Epoxy Max Epoxy Primers
MFI-590 Epoxy Sealers	2K Urethane Primers	Self-Etch Primers

SURFACE PREPARATIONS

The surface must be clean and free of all surface contamination. A chemical pretreatment or pretreatment primer will improve the performance properties of the coating system. See your MFI Systems™ Representative for recommendations.

MIXING

5 Parts: MFI-5100 Series Hi-Hide Polyurethane Paint

1 Part: MFI-500 High Solids Activator

10%: MFI-400 Series Zero VOC Reducer

NOTE: Mix by volume and stir thoroughly. Make sure product is at room temperature (72°F/22°C) before mixing. Optional mix ratio of 4:1:10% can be used for extreme service conditions and dry time will be extended.

APPLICATION

Apply 1-2 wet coats or until adequate coverage is achieved. Cross coating is recommended to achieve a uniform finish. Allow 15 minutes flash time between coats. See spray equipment setup and recommendations on page 2.

- Do not apply at temperatures below 50°F
- No minimum or critical recoat time
- Paint film is not fully cured for 7 days - Drying time listed may vary, depending upon film build, color selection, temperature, humidity and degree of air movement
- Excess film thickness will retard dry times and affect the recoat window
- In-Service Temperature: 200°F
- Avoid moisture contamination with the Activator – moisture can gel the material and affect the performance properties

CURE TIMES

Air-dry (assumes 77°F & 50% Relative Humidity)
To Touch: 1 – 2 hrs.
To Handle: 4 hrs.
To Recoat: 2 hrs. (After 24 hours, sand with 320 grit)

Bake / Force Cure
Purge Time: 10 min. (ambient)
Substrate Temp: 140°F (60°C)
Bake Time: 20 min.

See Safety Data Sheet and labels for additional safety information and handling instructions.

- The contents of this package may have to be blended with other components before the product can be used. Before opening the packages, be sure you understand the warning messages on the labels and SDSs of all component, since the mixture will have the hazards of all its parts.
- Improper handling and use, for example, poor spray technique, inadequate engineering controls, and or lack of Personal Protective Equipment (PPE), may result in hazardous conditions or injury.
- Follow spray equipment manufacturer's instructions to prevent personal injury or fire.
- Provide adequate ventilation for health and fire hazard control.
- Follow company, product SDS and respirator manufacturer's recommendations for selection and proper use of respiratory protection. Be sure employees are adequately trained on the safe use of respirators per company and regulatory requirements.
- Wear appropriate PPE such as eye and skin protection. In the event of injury, see first aid procedures on SDS.
- Always observe all applicable precautions and follow good safety and hygiene practice.
- For additional health and safety information refer to the SDS which can be found at www.mfisystems.com

INDUSTRIAL COATINGS

TECHNICAL DATA SHEET

5100 SERIES

TECHNICAL DATA:

Property	Method	Result*
Color		Various Mixed Colors
Gloss @ 60° Angle	ASTM D523	85 – 95
Pencil Hardness	ASTM D3363	F
Conical Mandrel (1/8")	ASTM D522	Pass, 180°
Adhesion	ASTM D3359	5B, Excellent
Humidity Resistance – 400 Hrs. (DTM, No Primer, B-1000 panels)	ASTM D2247	No effect
Humidity Resistance - 1000 Hrs. (w/Primer)	ASTM D2247	No rust, blistering or delamination
Salt Spray Resistance – 300 Hrs. (DTM, No Primer, B-1000 panels)	ASTM B117	<3-5mm creepage
Salt Spray Resistance – 1000 Hrs. (w/Primer)	ASTM B117	3 – 5mm creepage, No blisters or delamination
12-Month Florida Exposure	ASTM D1014	>80% Retention
Substrates		CRS, HRS, Galvanized, Pretreated aluminum, Plastics**,Fiberglass**

*These results were obtained over iron phosphated CRS panels with appropriate primer.
**Because of the variability of plastic/fiberglass substrates, coating performance should be confirmed on the actual plastic or fiberglass substrate being used.

PHYSICAL PROPERTIES:

Property	Blended Value* (5:1 with MFI-500)
Weight per gallon	10.0 ± 1.0 lbs./gal.
Weight Solids (%)	69 ± 4
Volume Solids (%)	57 ± 3
Flash Points	
MFI-5000 Series Polyurethane Paint	110°F (43°C)
MFI-500 High Solids Activator	133°F (56°C)
VOC (less exempts)	3.5 lb./gal.
VOC (actual)	3.5 lb./gal.
Coverage (@1mil, no loss)	770 – 834 sq. ft./gal.
Shelf Life	12 months

*Blended values listed will be color dependent.

APPLICATION:

Mixing Instructions: Mix by volume. Stir thoroughly.

5 Parts: MFI-5100 Series Hi – Hide Polyurethane
1 Part: MFI-500 High Solids Activator
10%: MFI-400 Series Zero VOC Reducer

Spray Viscosity: 30 – 35" #3 EZ Zahn
Wet Film Thickness: 3 – 4 mils per coat
Dry Film Thickness: 1.5 – 2.5 mils per coat
Meg Ohm Resistance: Ransburg Meter = 8Ω Graco Meter = 1.0 MΩ / cm. sq.
Reducers: Fast – MFI-465 Reducer, Medium – MFI-475 Reducer, Slow – MFI-485 Reducer
(Use of the following reducers will increase V.O.C.s above 3.5 lb./gal.: MFI-365, MFI-375, MFI-385)
Pot Life: 1.5 hours @ 77°F (25°C)

Spray Application	Spray Equipment*	Fluid Pressure (psi)	Atomization Pressure (psi)	Fluid Nozzle	Air Nozzle
Conventional	Binks 2001 or 95	8 - 10	45 - 55	63C	63PE
Conventional	DeVilbiss MBC-510	8 - 10	45 - 55	FF	797
HVLP	DeVilbiss JGHV	8 - 10	55 - 60***	FF	#46 MP
Airless	Graco G-40	1800 - 2400	n/a	0.011 – 0.015"**	n/a
Air Assisted Airless	Graco G-40	900 - 1300	20 - 40	0.011 – 0.015"**	Alpha

*or equivalent ** Graco Fine Finish Tips have proven to produce a better finish for both airless & air-assisted airless ***atomization pressure should read <10 psi @ the cap

The technical data presented is information believed by MFI Systems™ to be currently accurate; however, no guarantee of accuracy, comprehensiveness or performance is given or implied. Continuous improvements in coating technology may cause future technical data to vary from what is in this document. Product is intended for application by trained personnel in a factory or shop application. Do not attempt to use product without the current Safety Data Sheet. The performance of a product can fluctuate due to surface preparation technique, method of application, operating conditions, the material it is applied to or with, and use. It is strongly recommended that products be tested with respect to these factors prior to full scale use.