MFI SYSTEMS™ **INDUSTRIAL COATINGS**

TECHNICAL DATA SHEET

5000 SERIES

PRODUCT DESCRIPTION MFI Systems™ 5000 Series 3.5 V.O.C. Polyurethane is a high quality, two-component urethane formulated to withstand long-term exposure to extreme environmental conditions. Its fast dry time and exceptional gloss level make 5000 Series the ideal coating for various industries. 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-5000 Series 3.5 V.O.C. Polyurethane
1 Part:	MFI-500 High Solids Activator
2 - 4 Parts:	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 4:1:2-4 can be used for extreme service conditions and dry times will be extended.

APPLICATION

Apply 2-3 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
- 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: 300°F. (As you approach 300°F depending on the pigmentation, the color may change, but the film integrity will be maintained up to 300°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

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TECHNICAL DATA SHEET

5000 SERIES

TECHNICAL DATA:

Property	Method	Result*
Color		Various Mixed Colors
Gloss @ 60° Angle	ASTM D523	20 - 90
Pencil Hardness	ASTM D3363	H – 2H
Conical Mandrel (1/8")	ASTM D522	Pass, 180°
Adhesion	ASTM D3359	5B, Excellent
Humidity Resistance - 1000 Hrs.	ASTM D2247	No effect
Salt Spray Resistance – 1000 Hrs.	ASTM B117	3-5mm creepage, no blistering or delamination
Chemical Resistance	24 hr. spot test	Excellent resistance to strong alkali, dilute acids, oils & solvents
Abrasion Resistance		Excellent
QVA, 60° Gloss Retention, 500 Hrs.	D4587, D523	100% (White); 100% (Black)
QVB, 60° Gloss Retention, 500 Hrs.	D4587, D523	85% (White); 94% (Black)
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	9.5 ± 1.0 lbs./gal.
Weight Solids (%)	70 ± 5
Volume Solids (%)	62 ± 2
Flash Points	
MFI-5000 Series Polyurethane Paint	85°F (29°C)
MFI-500 High Solids Activator	133°F (56°C)
VOC (less exempts)	3.0 lb./gal.
VOC (actual)	3.0 lb./gal.
Coverage (@1mil, no loss)	962 – 1026 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-5000 Series 3.5 VOC Polyurethane
1 Part: MFI-500 High Solids Activator
2 - 4 Parts: MFI-400 Series Zero VOC Reducer

Spray Viscosity: 20 – 35" #3 EZ Zahn
Wet Film Thickness: 3 – 4 mils per coat
Dry Film Thickness: 1.5 – 2 mils per coat
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: 2 hours @ 77°F (25°C)

Spray Application	Spray Equipment*	Fluid Pressure (psi)	Atomization Pressure (psi)	Fluid Nozzle	Air Nozzle
Conventional	Binks 2001	20 - 25	50	66SS (0.070" , 1.8mm)	67PB
Conventional	DeVilbiss MBC-510	20 - 25	50	E (0.070" , 1.8mm)	92
HVLP	DeVilbiss JGHV	20 - 25	50 - 55**	E (0.070" , 1.8mm)	83MP

*or equivalent **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.