

# MS-20

## HIGH PERFORMANCE URETHANE CLEARCOAT

### Technical Data Sheet

Technical Hotline 800.735.0303

### DESCRIPTION

MS-20 High Performance Urethane Clearcoat is easy to spray and provides a durable hard shine final finish. MS-20 High Performance Urethane Clearcoat is a productive and versatile choice for general collision refinishing.

### QUICK REFERENCE

What: A urethane clearcoat for refinishing of automobiles.

Mix: 2:1 with MH-Series urethane hardeners.

Application: 2-3 coats.

Time: 2-6 hours (air dry).

Recoat: Yes, when dry.

### REQUIRED COMPONENTS

<u>Product</u>	<u>Description</u>
MS-20	High Performance Urethane Clearcoat

<u>Hardener</u>	
MH-43	Premium Hardener Spot and Panel
MH-005	Normal Premium Hardener Small Jobs/Cool Temperatures
MH-006	Slow Premium Hardener Medium Jobs/Warmer Temperatures
MH-008	Very Slow Premium Hardener Large Jobs/High Temperatures

Reducer  
Not Recommended

### COMPATIBLE SUBSTRATES

MPB Matrix System Premium Basecoat  
MPB-LV Matrix System Premium Low VOC Basecoat  
MSB Matrix System Basecoat  
MSB-LV Matrix System Low VOC Basecoat  
Aqualution  
Existing OEM Finishes



## PREPARATION

1. Allow the final coat of basecoat to dry to touch prior to applying clearcoat.
2. Use a tack cloth to remove any surface contaminants that may have settled on the basecoat.
3. Apply MS-20 High Performance Urethane Clearcoat.

## EXISTING FINISH

Sand surface with P600-P800 wet or P500-P600 dry, and then clean with MX-8000 Paint Cleaner or MXW-9001 Low VOC Cleaner/Degreaser.

## BLEND AREAS BEYOND COLOR

Scuff sand with grey scuff pad (3M 7448 or equal), then clean with MX-8000 Paint Cleaner or MXW-9001 Low VOC Cleaner/Degreaser.



## MIXING RATIO

2 parts MS-20 to 1 part MH-43, MH-005, MH-006 or MH-008 hardeners.

## ADDITIVES

***Adding additional materials to a ready to spray product will increase the V.O.C as applied. Check mixture and local regulations to assure compliance.***



**Accelerator** MX-081 or MX-084 accelerator may be helpful to assure proper curing in colder weather when air dry is the only option. Although it can speed dry times, please use with caution. Excessive film build, shrinkage, loss of gloss, and incomplete curing, may result as a side effect when abused.

**\*Tech Tip:** Do not use accelerator when using **MH-43**.



**Retarder** Retarder MR-899 will retard, or slow, the initial flash dry allowing slightly more time for the overspray to melt in to the surface when spraying in high temperatures, high humidity, or large jobs.



**Fisheye** MX-01 is generally discouraged, however, when used as recommended, it may help minimize the surface reaction to contamination. The use of this additive is not a substitute for proper cleaning and preparation.



**Flattening** MX-85 or MX-85LV can be used to adjust the gloss level of Matrix System clearcoats to meet specific customer needs. For custom effects, safety, or anti glare requirements, a sprayout to determine exact gloss level, is strongly recommended.



**Flex Additive** MX-841 can be used to increase the flexibility of any Matrix System 2K urethane primer or clear. This can be helpful during installation and life of flexible parts.



## POT LIFE

4-6 hours @ 70° F/21° C. The use of MH-43 Premium Hardener Spot & Panel may shorten pot life as much as 50% depending on temperature.

**\*Tech Tip:** Pot life will shorten as temperatures increase. Matrix System products are not recommended for use in temperatures below 65° F.



## GUN SETUP

Gun Type	Fluid Tip	Air Cap	Inlet PSI	Approx. Distance	
Iwata LPH400	1.3 - 1.4	LVX	14 - 16	5" - 7"	
Tekna Prolite	1.3 - 1.4	TE10	16 - 20	5" - 7"	
SATA RP4000	1.3 - 1.4	N/A	22 - 26	5" - 7"	2 of 4



## **APPLICATION**

Apply 2-3 single coats. Where clearcoating can't be continued to edge of panel the clearcoat edge can be "melted" with MX-840 EZ Blend Edge Blender.



## **DRY/FLASH TIMES**

### ***DRY TIMES AT 70° F/21° C***

FLASH TIME (AFTER 1ST COAT)	10-15 minutes
FLASH TIME (AFTER 2ND COAT)	15-20 minutes
OUT OF BOOTH	30-60 minutes depending on temperature
DELIVER/POLISHING	12-24 hours

### ***FORCE DRYING AT 140° F/60° C***

PURGE TIME	15 minutes
BAKE TIME	40 minutes
DELIVER/POLISHING	After 1 hour cool down



## **RECOATING**

MS-20 may be repaired and recoated after 12-24 hours at 70° F/21° C. MS-20 may be repaired and recoated when force dried after 1 hour cool down.



## **POLISHING**

AIR DRY	12-24 hours
FORCE DRY	After 1 hour cool down

**\*Tech Tip:** Temperature, humidity and film thickness will affect buff times. If extreme color sanding and buffing is needed allow overnight dry time.



## **EQUIPMENT CLEANING**

Clean equipment immediately after use according to local regulations.

## TECHNICAL

Clear:	MS-20
Hardeners:	MH-43, MH-005, MH-006 or MH-008
Mixing Ratio:	2:1
Viscosity #2 Zahn (RTS):	20 - 25 seconds #2 Zahn
Weight Solids (RTS):	48.15 - 48.58%
Volume Solids (RTS):	44.01 - 44.03%
Film Build:	1.0 - 1.4 mils per full coat
Coverage:	706 sq. ft. per gallon @ 1 dry mil

V.O.C. as Delivered:	Regulatory V.O.C. lbs/gal	Regulatory V.O.C. g/l	Material V.O.C. lbs/gal	Material V.O.C. g/l
MS-20	4.5	539	4.5	539
MH-43	3.9	470	3.9	470
MH-005	3.9	470	3.9	470
MH-006	3.7	444	3.7	444
MH-008	3.7	444	3.7	444
V.O.C. (RTS):				
MS-20/MH-43	4.3	516	4.3	516
MS-20/MH-005	4.3	516	4.3	516
MS-20/MH-006	4.2	507	4.2	507
MS-20/MH-008	4.2	507	4.2	507

Disposal/Safety: see MSDS for this product

### FOR INDUSTRY USE ONLY

#### Read MSDS Before Use

The contents of the package must be blended with other components before the product can be used. Any mixture of components will have hazards of all components. Before opening the packages, read all warning labels. Follow all precautions.

The material is designed for application only by professionally trained personnel using proper equipment under controlled conditions, and is not intended for sale to the general public.

**SEE MSDS AND PRODUCT LABELS FOR ADDITIONAL SAFETY INFORMATION.**

**NOTE:** Matrix Systems products are not recommended for use in temperatures below 65°F. Use below these temperatures will effect dry times and performance.