

MSV-21

2.1 VOC URETHANE CLEARCOAT

Technical Data Sheet

Technical Hotline 800.735.0303

PRODUCT NUMBER

MSV-21

DESCRIPTION

2.1 VOC URETHANE CLEARCOAT

HARDENERS

MHV-21F

MHV-21N

MHV-21S

DESCRIPTION

2.1 VOC FAST URETHANE HARDENER

2.1 VOC NORMAL URETHANE HARDENER

2.1 VOC SLOW URETHANE HARDENER

REDUCERS

NOT RECOMMENDED

DESCRIPTION

NOT RECOMMENDED

DESCRIPTION

MSV-21 is a acrylic urethane clearcoat with a sprayable VOC of 2.1 lbs/gal (using EPA test method 24). MSV-21 can be used over all solvent based and water based basecoats.

**Tech Tip:* The use of urethane grade solvents will increase the VOC of MSV-21 above the 2.1 lbs/gal compliance regulation, and may contribute to solvent pop, delamination or other related problems.

COMPATIBLE BASECOATS/TOPCOATS

- MPB
- MSB
- MAU*
- MCU*
- AWB
- DBU®
- DBC®
- DAU®*
- Omni®*
- CHROMAPREMIER®
- CHROMABASE®
- Nason®
- Dimension®
- Ultra 7000®
- GLASURIT 55®
- LIMCO SUPREME®
- Autobase®

**Tech Tip:* For clearcoat integration technique refer to specific manufacturers single stage finish technical data sheet.

SURFACE PREPARATION



1. Allow the final coat of basecoat to dry 30 minutes prior to applying clearcoat.
2. Use a tack cloth to remove any surface contaminates that may have settled on the basecoat.
3. Apply MSV-21 Clearcoat.

**Tech Tip:* Extend basecoat dry time to 30 minutes when applying several base color coats, tri coat colors, multiple graphic overlays, or in cooler shop conditions.

MIXING RATIO



MSV-21 : MHV-21F/N/S
4 Parts : 1 Part

FLATTENING ADDITIVE MIXING RATIO

Clearcoat	Gloss	Ounces of MX-85	MR-0800 Series Reducer	Ounces of Hardener
MSV-21 32 Oz. (1 Qt.)	Flat	18	0	8
	Eggshell	15	0	8
	Semi-Gloss	11	0	8

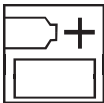
POT LIFE



Hardener : Time : Temp
MHV-21F/N/S : 3-5 Hours : 77°F

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

ADDITIVES



ACCELERATOR

Use up to 1/2 fluid ounce of MX-081 Accelerator per sprayable quart. The addition of MX-081 will reduce cure times and pot life by 50%. The use of MX-081 will not increase VOC in area where acetone is exempt.



FISH EYE

The use of fish eye eliminator is strongly discouraged. If a fish eye additive is needed, use MX-01 urethane fish eye eliminator, mix 1/2 ounce per sprayable quart. Use no more than necessary as it will directly affect the flow out of MSV-21.

APPLICATION

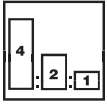


Apply 2-3 flowing **coats** at 40-50 psi or (6-10 psi when using HVLP at the aircap), allowing a 10-15 minute flash time between coats. Keep spray gun 6-10 inches from substrate to avoid problems associated with air entrapment.



<u>GUN TYPE</u>	<u>HVLP</u>	<u>Conventional</u>
<u>SIZE</u>	1.3 - 1.7 mm	1.3 - 1.7 mm
<u>PSI</u>	6 - 10 at Aircap	40 - 50 at Gun

APPLICATION CONT'D



PAINTING FLEXIBLE PARTS

A flexible additive may be needed when painting certain flexible parts.

MSV-21 : MHV-21F/N/S : MX-841
4 Parts : 2 Parts : 1 Part

***Tech Tip:** Full panel only when part is off the vehicle, it is not necessary to add MX-841 when the part is mounted on the vehicle. Reference the MX-841 Technical data Sheet for additional information.



BLENDING

Dry edges can be blended in by reducing RTS clearcoat 100%-150% and lightly misting the area to be blended out.

***Tech Tip:** When blending clearcoat, use MR-Reducer one temperature range slower than was used during application (i.e. MR-0870 used during application, switch to MR-0885 to blend clearcoat edge in).

DRY & FLASH TIME INFORMATION



DRY TIMES AT 77° F

FLASH TIME	10-15 MINUTES
TO SAND	6-8 HOURS
TO DELIVER	6-8 HOURS



FORCE DRYING AT 140° F

PURGE TIME	10-15 MINUTES
BAKE TIME AT 140°F	40 MINUTES

REPAIRING & RECOATING



MSV-21 may be recoated after a 6-8 hour dry at 77° F, or after a minimum 1 hour cool down after force drying at 140° F for 40 minutes.

BUFFING



Allow 2 hours before sanding or buffing MSV-21. Temperature, humidity and film thickness will affect buff times. When force drying, allow 1 hour cool down before buffing or polishing MSV-21.

EQUIPMENT CLEANUP



Clean equipment immediately after use with MX-110 Gun Wash or a high quality lacquer thinner.

TECHNICAL DATA

Clear: 4 parts MSV-21
Hardeners: 1 part MHV-21F, MHV-21N or MHV-21S
Viscosity (RTS): 17 - 19 seconds #2 Zahn
Weight Solids (RTS): 35%
Film Build: 1.0 mils per full wet coat
Coverage: 549 sq. ft. per gallon @ 1 dry mil

V.O.C. as Delivered:	Regulatory VOC in LBS./GAL.	Regulatory VOC in G./L.	Material VOC in LBS./GAL.	Material VOC in G./L.
MSV-21	2.6	309	1.1	137
MHV-21F	0.9	106	0.6	68
MHV-21N	0.9	106	0.6	68
MHV-21S	0.9	106	0.6	68
V.O.C. (RTS):				
MSV-21/MHV-21F	2.1	255	1.0	123
MSV-21/MHV-21N	2.1	255	1.0	123
MSV-21/MHV-21S	2.1	255	1.0	123

Disposal/Safety: see MSDS for this product
Humidity Resistance: Excellent
Salt Spray Resistance: Excellent
MSDS Reference #: MX-SD2

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.

Put it to the test!
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