

**MARTIN  
SENOUR  
PAINTS®**

Automotive Finishes

**MSA™ Acrylic System**

# MATERIAL SAFETY DATA SHEET

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DATE OF PREPARATION  
10 - Aug - 93

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**MSA/N4**

SECTION II					Standard Reducer & Hardener			VOC Reducers & Hardener				
CAS No.	HAZARDOUS INGREDIENT (percent by weight)	ACGIH TLV <STEL>	OSHA PEL <STEL>	Units	Vapor Pressure (mm Hg)	MSA-550 Fast Reducer	MSA-560 Standard Reducer	MSA-575 Hardener	MSA-570 Hot Weather Integrating Reducer	MSA-550V VOC Free Reducer	MSA-560V VOC Standard Reducer	MSA-575V VOC Hardener
64742-99-8	Li. Aliphatic HC Solvent	100	100	PPM	53.0	21				15	15	
64742-48-8	V. M. & P. Naphth	300	800 <400>	PPM	12.0		15		21			
108-98-3 §	Toluene	100 <150>	100 <150>	PPM	22.0	12	7		12	9	9	
100-41-4 §	Ethylbenzene	100 <125>	100 <125>	PPM	7.1			2				
1330-20-7 §	Xylene	100 <150>	100 <150>	PPM	5.9		1	9	4			
64742-95-5	Light Aromatic Hydrocarbons	Not Established			9.8		1	3				2
108-67-6	1,3,5-Trimethylbenzene	25	25	PPM	10.0		2	3				3
95-93-8 §	1,2,4-Trimethylbenzene	25	25	PPM	2.0		2	5				4
64742-94-5	Medium Aromatic Hydrocarbons	Not Established			0.1	1				1	1	
67-56-1 §	Methanol	200 <250>	200 <250>	PPM (Skin)	92.0				9			
67-64-1 §	Acetone	750 <1000>	750 <1000>	PPM	180.0	21	18		3	15	18	
107-87-0	Methyl n-Propyl Ketone	200 <250>	200 <250>	PPM	27.8	1	1		1	5	5	
123-86-4	n-Butyl Acetate	150 <200>	150 <200>	PPM	10.0	32	31	17	25	25	22	5
112-07-2 §	2-Butoxyethyl Acetate	50		PPM	1.0	2	17		15		3	
124-17-2 §	2-(2-Butoxyethoxy)ethyl Acetate	Not Established			6.5				8			
Proprietary	Hexamethylene Diisocyanate Polymer	0.5 <1.0>		Mg/M3 Supplier Limit				20				50
822-06-0	Hexamethylene Diisocyanate Monomer	0.005		PPM	0.025			0.04				0.80
Proprietary	Isophorone Diisocyanate Polymer	Not Established						40				35
4099-71-9	Isophorone Diisocyanate Monomer	0.005		PPM (skin)				0.40				0.35
Weight per Gallon (lb.)						6.50	7.13	6.55	7.17	7.34	7.34	8.22
VOC - Total Volatile Organic Compounds / Less Water and exempt Solvents (lbs./gal.)						6.59 / 6.50	6.75 / 6.75	6.41 / 6.41	6.81 / 6.81	5.42 / 5.42	5.43 / 5.43	1.39 / 1.38
Photochemically Reactive						No	No	Yes	No	No	No	Yes
Flash Point (°F) / OCL Storage Category						12 / 1B	12 / 1B	78 / 1C	31 / 1B	12 / 1B	12 / 1B	99 / 1C
HMSS (NFPA) Rating (health - flammability - reactivity) / PAINT-SAFER Code						2.3 0 / 2B	3.3 0 / 2B	3* 3 1 / K	3.3 0 / 2B	2.3 0 / 2B	2.3 0 / 2B	3* 3 1 / K

§ Ingredient subject to the reporting requirements of the Superfund Amendments and Reauthorization Act (SARA), Section 313, 40 CFR 972.45 C

## Section III — PHYSICAL DATA

PRODUCT WEIGHT - See TABLE	EVAPORATION RATE - Slower than Ether
SPECIFIC GRAVITY - 0.88-1.11	VAPOR DENSITY - Heavier than Air
BOILING RANGE - 132-482 °F	MELTING POINT - N.A.
VOLATILE VOLUME - 20-96 %	SOLUBILITY IN WATER - N.A.

## Section IV — FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION	FLASH POINT	See TABLE	LEL	0.5	UEL	36.5
RED LABEL - Flammable, Flash below 100 °F						

## EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam

## UNUSUAL FIRE AND EXPLOSION HAZARDS

Keep containers tightly closed. Isolate from heat, electrical equipment, sparks, and open flame. Closed containers may explode when exposed to extreme heat. Application to hot surfaces requires special precautions. During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

## SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used. Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

## Section V — HEALTH HAZARD DATA

## NOTES OF EXPOSURE

Exposure may be by INHALATION and/or SKIN or EYE contact, depending on conditions of use. Alcohols and acetates can be absorbed through the skin. To minimize exposure, follow recommendations for proper use, ventilation, and personal protective equipment.

## ACUTE Health Hazards

## EFFECTS OF OVEREXPOSURE

Irritation of eyes, skin and respiratory system. May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.

## SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

## MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

MSA™ Hardeners may cause allergic respiratory and/or skin reaction in susceptible persons or sensitization. This effect may be delayed several hours after exposure.

## EMERGENCY AND FIRST AID PROCEDURES

If INHALED: If any breathing problems occur during use, LEAVE THE AREA and get fresh air. If problems remain or occur later, IMMEDIATELY get medical attention.

If on SKIN: Wash affected area thoroughly with soap and water.

If in EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.

If SWALLOWED: Get medical attention.

## CHRONIC Health Hazards

No ingredient in these products is an IARC, NTP, or OSHA listed carcinogen.

Prolonged overexposure to solvent ingredients in Section II may cause adverse effects to the liver, urinary, blood forming, cardio-vascular, and reproductive systems.

Persons sensitive to isocyanates will experience increased allergic reaction on repeated exposure to isocyanates in MSA™ Hardeners.

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

## Section VI — REACTIVITY DATA

## STABILITY - Stable

## INCOMPATIBILITY

Contamination of MSA™ Hardeners with Water, Alcohols, Amines, and other compounds which react with isocyanates, may result in dangerous pressure in, and possible bursting of closed containers.

## HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION - Will Not Occur

## Section VII — SPILL OR LEAK PROCEDURES

## STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate and remove with inert absorbent.

If MSA™ Hardeners are spilled, all personnel in the area should be protected as in Section VIII. Cover spill with absorbent material. Deactivate spilled material with a 10% ammonium hydroxide solution (household ammonia). After 10 minutes, collect in open containers and add more ammonia. Cover loosely. Wash spill area with soap and water.

## WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 361. Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State, and Local regulations regarding pollution.

## Section VIII — PROTECTION INFORMATION

## PRECAUTIONS TO BE TAKEN IN USE

NO PERSON SHOULD USE THE MSA™ HARDENERS, OR BE IN THE AREA WHERE THE HARDENERS ARE BEING USED, IF THEY HAVE CHRONIC (LONG-TERM) LUNG OR BREATHING PROBLEMS OR IF THEY EVER HAD A REACTION TO ISOCYANATES.

Use all products only with adequate ventilation. Avoid breathing vapor and spray mist. Avoid contact with skin and eyes. Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section II) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section II, the applicable limits for nuisance dusts are ACGIH TLV 10 mg./m<sup>3</sup> (total dust), OSHA PEL 15 mg./m<sup>3</sup> (total dust), 5 mg./m<sup>3</sup> (respirable fraction).

## VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section II is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

## RESPIRATORY PROTECTION

IF MSA™ HARDENERS ARE USED -- Where overspray is present, a positive pressure air supplied respirator (71C19C NIOSH/MSHA approved) should be worn. If unavailable, a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section II may be effective. Follow respirator manufacturer's directions for use. Wear the respirator for the whole time of spraying and until all vapors and mists are gone. NO PERSONS SHOULD BE ALLOWED IN THE AREA WHERE THIS PRODUCT IS BEING USED UNLESS EQUIPPED WITH THE SAME RESPIRATOR PROTECTION RECOMMENDED FOR THE PAINTERS.

ALL OTHER PRODUCTS -- If personal exposure cannot be controlled below applicable limits by ventilation wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section II.

When sanding or abrading the dried film, wear a particulate respirator approved by NIOSH/MSHA for protection against non-volatile materials in Section II.

## PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section II.

## EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

## OTHER PROTECTIVE EQUIPMENT

Use barrier cream on exposed skin when using MSA™ HARDENER.

## Section IX — PRECAUTIONS

## DOL STORAGE CATEGORY - See TABLE

## PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Keep away from heat, sparks, and open flame.

During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

## OTHER PRECAUTIONS

These products may be mixed with other components before use. Before opening the packages, READ AND FOLLOW WARNING LABELS ON ALL COMPONENTS.

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.