

# MATERIAL SAFETY DATA SHEET



Automotive Finishes

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**MSA™ Acrylic System**

**MSA/N1**

SECTION II CAS No. HAZARDOUS INGREDIENT (percent by weight)		ACGIH TLV <STEL>	OSHA PEL <STEL>	Units	Vapor Pressure (mm Hg)	MSA Intermixes 58- Intermixed Colors	MSA-575 Hardener	MSA-575V VOC Hardener	MSA-576 GLOSS PLUS Hardener	MSA-590 Urethane Clearcoat
64742-88-7	Mineral Spirits	100	100	PPM	2.0	0-2				
108-88-3	§ Toluene.	50	100 <150>	PPM	22.0	5-17				24
100-41-4	§ Ethylbenzene.	100 <125>	100 <125>	PPM	7.1	5-7	2			3
1330-20-7	§ Xylene.	100 <150>	100 <150>	PPM	5.9	27-33	9			16
64742-95-6	Light Aromatic Hydrocarbons.	Not Established			3.8		3	2		3
108-67-8	1,3,5-Trimethylbenzene	25	25	PPM	10.0		3	3		4
95-63-6	§ 1,2,4-Trimethylbenzene	25	25	PPM	2.0		5	4		5
64742-94-5	Medium Aromatic Hydrocarbons.	Not Established			0.1					4
123-86-4	n-Butyl Acetate.	150 <200>	150 <200>	PPM	10.0		17	5	15	14
112-07-2	§ 2-Butoxyethyl Acetate.	50		PPM	1.0	4-5				
97-85-8	Isobutyl Isobutyrate	Not Established			3.2	3-4				
Proprietary	Hexamethylene Diisocyanate Polymer.	0.5 C 1		Mg/M3 Supplier Limit			20	50	71	
822-06-0	Hexamethylene Diisocyanate (max.)	0.005		PPM	0.05		0.04	0.1	0.14	
Proprietary	Isophorone Diisocyanate Polymer	Not Established					40	35		
4098-71-9	Isophorone Diisocyanate (max.)	0.005		PPM (Skin)			0.40	0.2		
Proprietary	Tetramethylxylene Diisocyanate Polymer	Not Established							13	
2778-42-9	Tetramethylxylene Diisocyanate (max.)	0.05		PPM Supplier Limit					0.15	
Unknown	Coated Mlca	3	3	Mg/M3 as Dust		0-12				
13463-67-7	Titanium Dioxide	10	10[5]	Mg/M3 [Resp. Fraction]		0-10				
Weight per Gallon (lbs.)						8.0-9.0	8.55	9.22	9.12	7.73
VOC - Total Volatile Organic Compounds (lbs./gal.)						4.8-5.1	3.42	1.38	1.49	5.76
VOC - Less Water and exempt Solvents (lbs./gal.)						4.8-5.1	3.42	1.38	1.49	5.76
Photochemically Reactive						Yes	Yes	Yes	No	Yes
Flash Point (°F) / DOL Storage Category						45 / 1B	78 / 1C	98 / 1C	90 / 1B	60 / 1B
HMIS® (NFPA) Rating (health - flammability - reactivity) / PAINT-SAFE® Code						2 3 0 / J3	3* 3 1 / K	3* 3 1 / K	3* 3 1 / K	3 3 0 / K

§ Ingredient subject to the reporting requirements of the Superfund Amendments and Reauthorization Act (SARA) Section 313, 40 CFR 372.65 C

## Section III — PHYSICAL DATA

PRODUCT WEIGHT -- See TABLE	EVAPORATION RATE -- Slower than Ether
SPECIFIC GRAVITY -- 0.93-1.2	VAPOR DENSITY -- Heavier than Air
BOILING RANGE -- 174-395 °F	MELTING POINT -- N.A.
VOLATILE VOLUME -- 20-80 %	SOLUBILITY IN WATER -- N.A.

## Section IV — FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION	FLASH POINT	See TABLE	LEL	0.5	UEL	12.8
RED LABEL - Flammable, Flash below 100 °F						
<b>EXTINGUISHING MEDIA</b>						
Carbon Dioxide, Dry Chemical, Foam						
<b>UNUSUAL FIRE AND EXPLOSION HAZARDS</b>						
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.						
<b>SPECIAL FIRE FIGHTING PROCEDURES</b>						
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

<b>ROUTES OF EXPOSURE</b>	
Exposure may be by INHALATION and/or SKIN or EYE contact, depending on conditions of use. To minimize exposure, follow recommendations for proper use, ventilation, and personal protective equipment.	
<b>ACUTE Health Hazards</b>	
<b>EFFECTS OF OVEREXPOSURE</b>	
Irritation of eyes, skin and respiratory system. May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.	
<b>SIGNS AND SYMPTOMS OF OVEREXPOSURE</b>	
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.	
<b>MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE</b>	
MSA™ Hardeners may cause allergic respiratory and/or skin reaction in susceptible persons or sensitization. This effect may be delayed several hours after exposure.	
<b>EMERGENCY AND FIRST AID PROCEDURES</b>	
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. Remove contaminated clothing and laundry before re-use.
If in EYES:	Flush eyes with large amounts of water for 15 minutes. Get medical attention.
If SWALLOWED:	Get medical attention.
<b>CHRONIC Health Hazards</b>	
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, cardiovascular, 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

<b>STABILITY</b> -- Stable
<b>CONDITIONS TO AVOID</b> -- None know.
<b>INCOMPATIBILITY</b>
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.
<b>CONDITIONS TO AVOID</b> -- None
<b>HAZARDOUS DECOMPOSITION PRODUCTS</b> -- By fire: Carbon Dioxide, Carbon Monoxide
<b>HAZARDOUS POLYMERIZATION</b> -- Will Not Occur

## Section VII — SPILL OR LEAK PROCEDURES

<b>STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED</b>
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 these products may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. 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

<b>PRECAUTIONS TO BE TAKEN IN USE</b>
NO PERSONS 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.
These coatings 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), 3 mg./m <sup>3</sup> (respirable fraction), OSHA PEL 15 mg./m <sup>3</sup> (total dust), 5 mg./m <sup>3</sup> (respirable fraction).
<b>VENTILATION</b>
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.
<b>RESPIRATORY PROTECTION</b>
<b>IF MSA™ HARDENERS ARE USED</b> -- Where overspray is present, a positive pressure air supplied respirator (T1C19C 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 THESE PRODUCTS ARE BEING USED UNLESS EQUIPPED WITH THE SAME RESPIRATORY PROTECTION RECOMMENDED FOR THE PAINTERS.
<b>ALL OTHER PRODUCTS</b> -- 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.
<b>PROTECTIVE GLOVES</b>
Wear gloves which are recommended by glove supplier for protection against materials in Section II.
<b>EYE PROTECTION</b>
Wear safety spectacles with unperforated sideshields.
<b>OTHER PROTECTIVE EQUIPMENT</b>
Use barrier cream on exposed skin when using MSA™ HARDENER.

## Section IX — PRECAUTIONS

<b>DOL STORAGE CATEGORY</b> -- See TABLE
<b>PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING</b>
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.
<b>OTHER PRECAUTIONS</b>
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.

## Section X — OTHER REGULATORY INFORMATION

<b>CALIFORNIA PROPOSITION 65</b>
MSA-575V contains a chemical(s) known to the State of California to cause cancer. MSA™ intermixes, MSA-575 Hardener, and MSA-590 Clearcoat contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

The above information pertains to these products as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this products may substantially alter the composition and hazards of the products. 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.