

MATERIAL SAFETY DATA SHEET

THE MARTIN-SENOUR CO.
101 PROSPECT AVE. N.W.
CLEVELAND, OH 44115

EMERGENCY TELEPHONE NO. (216) 566-2917
INFORMATION TELEPHONE NO. (216) 566-2902
DATE OF PREPARATION 2-JAN-96

MARTIN
SENOUR
PAINTS
Automotive Finishes

©1996, The Martin-Senour Co.

MSU™ 3.5 Urethane System

MSU-VN

SECTION II CAS NO. HAZARDOUS INGREDIENT (Percent by weight)	ACGM TLV <STEL>	OSHA PEL <STEL>	Units	Vapor Pressure (mm Hg)	45 series		Reducers							
					LEAD FREE	CONTAINS LEAD	MSU-450 Standard	MSU-460 Hot Weather	MSU-476V 3.5 Hardener	MSU-480V 3.5 Low VOC Accelerator				
64742-88-7 Mineral Spirits	100	100	PPM	2.0										
64742-85-6 Light Aromatic Hydrocarbons	Not Established			3.8										
108-67-8 1,3,5-Trimethylbenzene	25	25	PPM	10.0										
95-63-6 1,2,4-Trimethylbenzene	25	25	PPM	2.0										
123-54-6 2,4-Pentanedione	Not Established													94
108-10-1 Methyl Isobutyl Ketone	50	50	PPM	16.0	6-9	6-9								
110-43-0 Methyl n-Amyl Ketone	50	100	PPM	2.1	5-8	5-8								
123-68-4 n-Butyl Acetate	150	150	PPM	10.0	15-25	15-25								
112-07-2 2-Butoxyethyl Acetate	50		PPM	1.0	1	1								
108-65-6 1-Methoxy-2-Propanol Acetate	Not Established			1.8	3-5	3-5								
Proprietary Hexamethylene Diisocyanate Polymer	0.5		Mg/M3											68
822-08-0 Hexamethylene Diisocyanate (Max.)	0.005		Supp. Limit PPM	0.05										0.1
Proprietary Isophorone Diisocyanate Polymer	Not Established													17
4098-71-9 Isophorone Diisocyanate Monomer	0.005		PPM (Skin)											0.1
13463-67-7 Titanium Dioxide	10	10(S)	Mg/M3 as Dust (Keep Fraction)		0-25	0-25								
1344-37-2 Lead Chromate	0.05	0.05	Mg/M3		<30	30(18.3)								
12656-85-8 Molybdate Orange						30(18.3)								
§ Chromium compound - maximum [% Chromium]														
Weight per Gallon (lbs.)														
VOC - Total Volatile Organic Compound (lbs./gal)														
VOC - Less Water and exempt Solvents (lbs./gal)														
Productively Residue														
Flash Point (°F)														
Flammability Classification (Flammable - Combustible) / DOT Storage Category														
HMIS® (H/P/A) Rating (Health - Irritability - Reactivity) / PAINI SAFE® Code														

MSDS Text Page Follows

§ Ingredient subject to the reporting requirements of the Superfund Amendments and Reauthorization Act (SARA) Section 313.40 CFR 372.85 C

MSU™ 3.5 Urethane System

Section III — PHYSICAL DATA

SPACIFIC WEIGHT	See TABLE	EVAPORATION RATE	Slower than Fiber
SPECIFIC GRAVITY	0.9	VAPOR DENSITY	Heavier than air
BOILING RANGE	255-49 °F	MELTING POINT	-1.5
VOLATILE VOLU%ME	47-100 %	SOLUBILITY IN WATER	Y. A.

Section IV — FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION	FLASH POINT	See TABLE	LSL	U. T.	TEL	13.1
See TABLE						
EXTINGUISHING MEDIA						
Carbon Dioxide, Dry Chemical, Foam						
HAZARDOUS 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 may cause fire. In case of fire, use dry chemical, carbon dioxide, or foam extinguishers. Deposition products may cause a health hazard. Symptoms may not be immediately apparent.						
SPECIAL FIRE FIGHTING PROCEDURES						
Full protective equipment including self-contained breathing apparatus should be used. Water may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure buildup and possible detonation or explosion when exposed to extreme heat.						

Section V — HEALTH HAZARD DATA

ROUTES OF EXPOSURE
Exposure may be by INHALEATION and/or SKIN or EYE CONTACT, depending on conditions of use. Alcohol 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.

CHRONIC HEALTH HAZARDS
Certain colors contain lead. See TABLE and PRODUCT LABEL. Acute occupational exposure to lead is uncommon, but results in symptoms similar to chronic overexposure described below.

STRAIN AND SYMPTOMS OF OVEREXPOSURE
Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors and fumes of butyric anhydride. Symptoms may not be immediately apparent.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
May cause allergic respiratory and/or skin reaction in susceptible persons or sensitization. This effect may be delayed several hours after exposure.

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 launder before reuse.

IF IN EYES: Flush eyes with large amounts of water for 5 minutes. Get medical attention. If SWALLOWED: Get medical attention.

CHRONIC HEALTH HAZARDS
Certain colors contain lead and/or Chromate (See TABLE and PRODUCT LABEL). Chronic overexposure to lead may result in damage to the blood, brain, nervous system, urinary, and reproductive systems (including embryotoxic effects). Symptoms include abdominal discomfort or pain, constipation, loss of appetite, metallic taste, nausea, insomnia, nervous irritability, weakness, muscle and joint pain, headache and dizziness. Chromates are listed by EPA and MSD. Although studies have associated exposure to Chromium VI compounds with an increased risk of respiratory cancer, available evidence indicates that lead chromate (Chromate Yellow, Molybdate Orange) DOES NOT present this hazard.

EXPOSURE TO SOLVENT
Prolonged overexposure to solvent ingredients in section II may cause adverse effects to the liver, urinary, and blood forming systems.

SENSITIZATION
Persons sensitive to isocyanates will experience increased allergic reaction on repeated exposure to titanium dioxide dust at 250 mg/m³ developed lung cancer, however, such persons have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Section VI — REACTIVITY DATA

STABILITY — Stable
CONDITIONS TO AVOID
None known.

INCOMPATIBILITY
Metallics Contain Aluminum. Contamination with water, acids, or alkalis can cause evolution of hydrogen, which may result in dangerously increased pressures in closed containers. Contamination of hardware with water, aluminum, 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, Oxides of Metals in section II.

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 hardener is spilled, all personnel in the area should be protected as in Section VIII. Cover spill with absorbent material. Particulate spilled material with a 10% ammonium hydroxide solution (household ammonia). After 10 minutes, collect in open container 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). Waste must be tested for ignitability to determine the applicable EPA hazardous waste number. Waste from products containing lead or Chromium must also be tested for extractability.

Incinerate in approved facility. Do not incinerate closed containers. In case of an accident with Federal, State, and local regulations regarding pollution.

Section VIII — PROTECTION INFORMATION

PRECAUTIONS TO BE TAKEN IN USE
DO NOT USE THESE PRODUCTS OR BE IN THE AREA WHERE THEY ARE BEING USED, IF THEY HAVE CHANGED OR BEING BREATHING SOMEBODY ELSE'S BREATHING TO (SPOKEMAN).
Wear eye protection (goggles or safety glasses) and a respirator if they are used in enclosed areas. Do not breathe vapors or dusts. Do not get on skin or clothing. Do not get in eyes. Do not get on face. Do not get on hands. Do not get on shoes. Do not get on clothing. Do not get on furniture. Do not get on children's toys. Do not get on food. Do not get on pets. Do not get on anything that will be eaten or drunk. Do not get on anything that will be used for food or drink. Do not get on anything that will be used for medicine. Do not get on anything that will be used for cosmetics. Do not get on anything that will be used for anything else.

RESPIRATORY PROTECTION
Where overexposure is present, a qualitative pressure air supplied respirator (TC-9C 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. Do not use respirator for the same type of spraying and until all vapors and dusts are gone. DO NOT REMOVE SHOULD BE ALLOWED IN THE AREA WHERE THESE PRODUCTS ARE BEING USED WITH THE SAME RESPIRATOR.

PROTECTIVE RECOMMENDATIONS FOR THE WORKERS
When handling, when mixing, spraying, painting, or wetting the dried film, wear a particulate respirator approved by NIOSH/MSHA for protection against non-volatile materials in Section II. Do not use gloves in Section I. Do not use gloves which are recommended by glove supplier for protection against eye protection. Wear safety goggles associated with unadorned sideshield.

OTHER PROTECTIVE EQUIPMENT — See barrier cream or exposed skin.

Section IX — PRECAUTIONS

DO NOT STORE CATEGORY — See TABLE
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE
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 gases, electric tools and appliances, and any other sources of ignition.
Consult with MSDS. See approved bonding and grounding procedures.
Keep containers 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
Certain colors contain lead (See TABLE and PRODUCT LABEL). Do not apply lead containing colors on toys or other children's articles, furniture, or any interior surface of a dwelling or facility which may be occupied or used by children. Do not apply on any exterior surface of dwelling units, such as window sills, porches, stairs, or railings to which children may be commonly exposed.

These products must be mixed with other components before use. Before opening the cans, check and follow mixing instructions on all components.
READ AND FOLLOW MIXING INSTRUCTIONS ON ALL COMPONENTS before use.
READ AND FOLLOW MIXING INSTRUCTIONS ON ALL COMPONENTS before use.
Do not use in confined spaces. Do not use in poorly ventilated areas. Do not use in areas where the concentration of vapors and dusts may be harmful or fatal.

Section X — OTHER REGULATORY INFORMATION

CALIFORNIA PROPOSITION 65
HARMFUL: MSU™ 3.5 Lead-containing isocyanates contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
MSU™ 3.5 Lead-Free Isocyanates and MSU™ 470V Hardener contain a chemical known to the State of California to cause cancer.

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 product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranty, express or implied, and assume no liability in connection with any use of this information.