



Material Safety Data Sheet

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SUNFIRE® 451 Basecoat System

URE-451

— Section 2 —		451-series					Hardener	
CAS No.	Hazardous Ingredients (percent by weight)	ACGIH TLV <STEL>	OSHA PEL <STEL>	Units	Vapor Pressure (mm Hg)	451- LF Lead Free Colors (Pb)	451- LL Contains Lead Colors (Pb)	V6V769 Hardener
100-41-4	§ Ethylbenzene	100 <125>	100 <125>	PPM	7.1	0 - 4	0 - 4	
1330-20-7	§ Xylene.	100 <150>	100 <150>	PPM	5.9	8 - 21	8 - 21	
78-93-3	§ Methyl Ethyl Ketone	200 <300>	200 <300>	PPM	70.0	0 - 2	0 - 2	
108-10-1	§ Methyl Isobutyl Ketone.	50 <75>	50 <75>	PPM	16.0	1 - 2	1 - 2	
110-43-0	Methyl n-Amyl Ketone.	50	100	PPM	2.1	2	2	
123-86-4	n-Butyl Acetate.	150 <200>	150 <200>	PPM	10.0	25 - 45	25 - 45	25
112-07-2	§ 2-Butoxyethyl Acetate	Not Established			1.0	0.5 - 1	0.5 - 1	
108-65-6	1-Methoxy-2-Propanol Acetate	Not Established			1.8	2 - 6	2 - 6	
28182-81-2	Hexamethylene Diisocyanate Polymer	Not Established						75
822-06-0	§ Hexamethylene Diisocyanate	0.005		PPM	0.05			1
Unknown	Coated Mica.	3	3	Mg/M3	as Dust	0 - 4	0 - 4	
13463-67-7	Titanium Dioxide.	10	10[5]	Mg/M3	as Dust [Resp. Fraction]	0 - 35	0 - 35	
1333-86-4	Carbon Black.	3.5	3.5	Mg/M3		0 - 1	0 - 1	
1344-37-2 12656-85-8	Lead Chromate Molybdate Orange.	0.05	0.05	Mg/M3			<35	
	§ Chromium Compound. [% Chromium] - maximum						35 [4]	
	§ Lead Compound. [% Lead] - maximum						35 [20]	
	Weight per Gallon (lbs.)					8.0 - 11.3	8.0 - 11.3	8.85
	VOC (Volatile Organic Compounds) Total - lbs./gal.					4.9 - 5.6	4.9 - 5.6	2.21
	VOC Less Water & Federally Exempt Solvents - lbs./gal.					4.9 - 5.6	4.9 - 5.6	2.21
	Photochemically Reactive					Yes	Yes	No
	Flash Point (°F) / DOL Storage Category					72 / 1B	72 / 1B	81 / 1C
	HMIS (NFPA) Rating (health - flammability - reactivity)					2* 3 0	2* 3 0	2* 3 1
	PAINT-SAFE® Personal Protection					K	K	K

percent by weight

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

Section 3 — Physical Data

PRODUCT WEIGHT	See TABLE	EVAPORATION RATE	Slower than Ether
SPECIFIC GRAVITY	0.96-1.36	VAPOR DENSITY	Heavier than Air
BOILING RANGE	174-384 °F	MELTING POINT	N.A.
VOLATILE VOLUME	60-75 %	SOLUBILITY IN WATER	N.A.

Section 4 — Fire And Explosion Hazard Data

FLAMMABILITY CLASSIFICATION	FLASH POINT	See TABLE	LEL	1.0	UEL	13.1
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 5 — Health Hazard Data

ROUTES 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

Hardener 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.

Remove contaminated clothing and launder before re-use.

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

If SWALLOWED: Get medical attention.

CHRONIC Health Hazards

Carbon Black is classified by IARC as possibly carcinogenic to humans (group 2B) based on experimental animal data, however, there is insufficient evidence in humans for its carcinogenicity.

Prolonged overexposure to solvent ingredients in Section 2 may cause adverse effects to the liver, urinary, blood forming, and reproductive systems.

Persons sensitive to isocyanates will experience increased allergic reaction on repeated exposure.

Methyl Ethyl Ketone may increase the nervous system effects of other solvents.

Rats exposed to titanium dioxide dust at 250 mg./m3 developed lung cancer, however, such exposure levels are not attainable in the workplace.

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

Section 6 — 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 hardener 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 7 — 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 8. 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. Waste from products containing Methyl Ethyl Ketone may also require testing for extractability.

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

Section 8 — Protection Information

PRECAUTIONS TO BE TAKEN IN USE

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

Use 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 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg./m3 (total dust), 3 mg./m3 (respirable fraction), OSHA PEL 15 mg./m3 (total dust), 5 mg./m3, (respirable fraction).

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

Where overspray is present, a positive pressure air supplied respirator (TC19C 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 2 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 RESPIRATOR PROTECTION RECOMMENDED FOR THE PAINTERS.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PROTECTIVE EQUIPMENT

Use barrier cream on exposed skin.

Section 9 — Precautions

DOL STORAGE CATEGORY - See TABLE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Contents are FLAMMABLE. 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 must 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 10 — Other Regulatory Information

CALIFORNIA PROPOSITION 65

WARNING: These products, except V6V769, contains chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in these products are listed, or are exempt from listing, on the TSCA Inventory.

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 these 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.