



# Material Safety Data Sheet

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## FLARE™ 3.5 VOC System

## FLARE-3.5

— Section 2 —						<i>FC- Intermixes</i>		<i>Hardener</i>		
CAS No.	HAZARDOUS INGREDIENT (percent by weight)	ACGIH TLV <STEL>	OSHA PEL <STEL>	Units	Vapor Pressure (mm Hg)	(Pb) LEAD FREE	(Pb) CONTAINS LEAD	PPH-621V VOC HS Hardener	PPH-623V 3.5 HS Hardener	PFF-815 Fisheye Eliminator
64742-88-7	Mineral Spirits	100	100	PPM	2.0	1 - 2	1 - 2			
64742-95-6	Light Aromatic Hydrocarbons	Not Established			3.8			2		
108-67-8	1,3,5-Trimethylbenzene	25	25	PPM	10.0			3		
95-63-6 §	1,2,4-Trimethylbenzene	25	25	PPM	2.0			4		
108-88-3 §	Toluene	50	100 <150>	PPM (Skin)	22.0	0 - 4	0 - 4			
100-41-1 §	Ethylbenzene	100 <125>	100 <125>	PPM	7.1	2 - 4	2 - 4			
1330-20-7 §	Xylene	100 <150>	100 <150>	PPM	5.9	10 - 20	10 - 20			
67-64-1	Acetone	750 <1000>	1000	PPM	180.0	0 - 18	0 - 18			
111-76-2 §	2-Butoxyethanol	25	25	PPM (Skin)	0.6	0.8 - 2	0.8 - 2			
107-87-9	Methyl n-Propyl Ketone	200 <250>	200 <250>	PPM	27.8	4 - 12	4 - 12			
110-43-0	Methyl n-Amyl Ketone	50	100	PPM	2.1	0.5 - 4	0.5 - 4	21		
123-86-4	n-Butyl Acetate.	150 <200>	150 <200>	PPM	10.0	0 - 10	0 - 10	5	21	80
112-07-2 §	2-Butoxyethyl Acetate.	Not Established			1.0	1 - 4	1 - 4			
28182-81-2	Hexamethylene Diisocyanate Polymer	0.5 <1.0>		Mg/M3 Supplier Limit				33	79	
822-06-0	Hexamethylene Diisocyanate (maximum)	0.005		PPM	0.05			0.07	0.2	
Proprietary	Isophorone Diisocyanate Polymer	Not Established						33		
4098-71-9	Isophorone Diisocyanate (maximum)	0.005		PPM (Skin)				0.2		
13463-67-7	Titanium Dioxide.	10	10[5]	Mg/M3 [Resp. as Dust Fraction]		0 - 20	0 - 20			
1344-37-2 12656-85-8	Lead Chromate Molybdate Orange.	0.05	0.05	Mg/M3			<15			
§	Lead Compound [% Lead] - maximum						15 [9.0]			
§	Chromium Compound [% Chromium] - maximum						15 [2.3]			
	Weight per Gallon (lbs.)					8.0 - 10.0	8.0 - 10.0	8.53	9.01	7.44
	VOC (Volatile Organic Compounds) Total - lbs./gal.					2.5 - 3.3	2.5 - 3.3	2.94	1.89	5.94
	VOC Less Water & Federally Exempt Solvent (Acetone) ** - lbs./gal.					3.2 - 3.3	3.2 - 3.3	2.94	1.89	5.94
	Photochemically Reactive					Yes	Yes	Yes	No	No
	Flash Point (°F) / DOL Storage Category					60 - 70 / 1B	60 - 70 / 1B	95 / 1C	81 / 1C	72 / 1B
	HMIS Rating (Health - Flammability - Reactivity) / PAINT-SAFE® Personal Protection					3 - 3 - 0 / K	3 - 3 - 0 / K	3* - 3 - 1 / K	3* - 3 - 1 / K	2 - 3 - 0 / K

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

\*\* For colors with a maximum VOC of 3.3 lbs, the maximum volume percent of exempt solvent (acetone) is 25.1 %.

## Section 3 — Physical Data

<i>PRODUCT WEIGHT</i>	See TABLE	<i>EVAPORATION RATE</i>	Slower than Ether
<i>SPECIFIC GRAVITY</i>	0.9-1.2	<i>VAPOR DENSITY</i>	Heavier than Air
<i>BOILING RANGE</i>	132-395 °F	<i>MELTING POINT</i>	N.A.
<i>VOLATILE VOLUME</i>	40-81 %	<i>SOLUBILITY IN WATER</i>	N.A.

## Section 4 — Fire And Explosion Hazard Data

*FLAMMABILITY CLASSIFICATION*      *FLASH POINT*      See TABLE      *LEL* 0.7      *UEL* 10.6

### *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. 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.

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.

#### *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 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.

### **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-forming, nervous, 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 pains, headache and dizziness.

Chromates are listed by IARC and NTP. Although studies have associated exposure to Chromium VI compounds with an increased risk of respiratory cancer, available evidence indicates that Lead Chromate (Chrome Yellow, Molybdate Orange) DOES NOT present this hazard.

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

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

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* -- Contamination of Intermixes 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, Oxides of Metals in Section 2

**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.

### *WASTE DISPOSAL METHOD*

If Hardener is spilled, all personnel in the area should be protected as in Section V2I. 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 from these products may be hazardous. Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers. Waste from products containing Lead or Chromium must also be tested 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*

Certain colors contain Lead (see TABLE and PRODUCT LABEL). Before initial use of lead-containing products, consult OSHA's Standard for Occup. Exposure to Lead (29 CFR1910.1025).

**NO PERSONS SHOULD USE THE HARDENER, OR BE IN THE AREA WHERE THE HARDENER IS 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 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 (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 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 particulate respirator approved by NIOSH/MSHA for protection against non-volatile materials in Section 2.

**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 when using HARDENER.

## 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*

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 interior surface of dwelling units, such as window sills, porches, stairs, or railings to which children may be commonly exposed.

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 10 — Other Regulatory Information

*CALIFORNIA PROPOSITION 65*

**WARNING:** FLARE® HS 3.5 VOC Intermixes and PPH-621V contain chemicals 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.