



MATERIAL SAFETY DATA SHEET

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12/8/04

1- COMMERCIAL NAME : APF 2

2- HAZARDOUS INGREDIENTS :

CHEMICAL NAME	CAS NUMBER	QUANTITY in %
1. Styrene Monomer	100-42-5	20-25
2. Unsaturated Polyester Resin	Proprietary	45-50
3. Titanium Dioxide	13463-67-7	10-15
4. N/A	N/A	N/A

3- HAZARDS IDENTIFICATION /DATA:

Exposure Limits : (styrene) - see section 15.

Health Hazard : Irritant (styrene) - *Target Organs - eyes, skin, and respiratory tract.*

Fire Hazard : flammable (styrene) - class 1c.

Explosion Hazard : hazardous (styrene) - at elevated temperatures, such as in fire.

4- FIRST AID MEASURES :

- Change any soiled clothing immediately.
- **In case of eye contact :** open eyelids as far as possible and flush with large quantities of water for at least fifteen minutes. Call a physician, preferably an eye specialist.
- **In case of skin contact :** physically remove the product and wash skin thoroughly with soap and water. Consult a physician if skin irritation occurs.
- **In case of swallowing :** don't attempt to make him/her vomit. Call a physician and (or) hospitalize the patient immediately.
- **In case of inhalation :** remove the patient from the contaminated area. Call a physician if after-effects occur.

5- FIRE-FIGHTING MEASURES :

5-1 Fire-extinguisher types :

- Use : chemical foam, CO2 powder or any Class B extinguishing agent. Where the fire is of major proportions, water spray may also be used.

5-2 Specific fire and explosion risks :

Heat or contamination may cause hazardous polymerization. If polymerization takes place in closed container, there is the possibility of violent rupture of the container. Product vapors may form an explosive mixture in air.

5-3 Specific protective measures during firefighting :

Firefighting personnel should be equipped with insulated, autonomous respiratory protection equipment.

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6- ACCIDENTAL RELEASE MEASURES :

6-1 Individual protection :

Ventilation - General ventilation is required during normal use.

Respiratory protection - If TLV or PEL listed in this data sheet is exceeded, then suitable respiratory protection must be worn to prevent overexposure.

Protective Gloves - Wear appropriate impervious gloves to prevent skin contact.

Eye Protection - Wear face shield or protective safety goggles.

Other protective Equipment - Wear protective clothing to prevent skin contact.

6-2 Environmental protection : Please see § 12

6-3 Decontamination procedures :

- Remove all sources of ignition, ventilate area.
- Contain spilt material in order to avoid its transfer to sewers or rivers and streams.
- Physically remove the material.
- Cover material with sand, earth or any other similar absorbent material in order to soak product up. The resulting mix may then be shoveled into cans and removed for disposal (Please see § 13).

7- HANDLING AND STORAGE :

7-1 Handling :

- Inform personnel of risks associated with the product, the precautions to be taken and procedures to follow where an accident occurs.
- Observe personal hygiene rules to avoid contact with eyes and skin.
- Avoid inhaling vapors produced by the material, especially when heated and/or sprayed.
- General ventilation in the area should be sufficient (fan-driven). Where vapors could possibly escape into the air in the workplace, local specific means of ventilation will be necessary.
- Install showers and eye baths ("fountain" type).
- Wash hands thoroughly at beginning of every work break and at the end of the working day.
- Work stations and the general working area must be kept perfectly clean.
- Avoid exposure to the material of persons having suffered from eczema or still suffering from any skin condition, wound, cut or irritation.

7-2 Storage :

- Keep the material hermetically sealed in its original packaging, protected from humidity and at a temperature below 100°F / 38°C in a well-ventilated storage facility.
- Ensure that the floor of the storage area is impermeable and concave in profile in order to provide effective containment.
- Reproduce labeling on all new packs where original packaging is divided.

8- EXPOSURE CONTROLS/PERSONAL PROTECTION :

8-1 Exposure controls : Always maintain airborne contaminants in the workplace at the lowest possible levels.

8-2 Personal protection :

- respiratory protection : NIOSH approved respirator, if needed (look at §6)
- gloves : YES (rubber, latex, nitrile)
- eye protection : YES, safety glasses with side shields or goggles

Do not mix work clothing and normal clothing. Wash hands thoroughly at beginning of every work break and at the end of the working day.

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9- PHYSICAL AND CHEMICAL PROPERTIES :

Physical state : Paste**Color :** Lt. Yellow**Odor :** Strong, aromatic**pH :** not established**Flash point :** 89°F / 31°C**Specific gravity :** 0.53**VOC (grams per liter) :** 254.16**Percentage VOC's by weight :** 49**Solubility :**

- in water : at 68°F / 20°C : insoluble
- in solvents : soluble in many organic solvents : benzene hydrocarbons and chlorinated hydrocarbons, acetone, phthalates, methanol ,ethanol, etc.

10- STABILITY AND REACTIVITY

10-1 Dangerous decomposition by-products :

- These are non-existent if storage and handling rules are followed (please see also § 5-2).
- Excessive heating over long periods causes product degradation and emission of irritating acrid fumes..

10-2 Hazardous reactions with : Exothermic (polymerization) reaction with strong acids and oxidizers.

11- HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE:

Primary Route of entry: Inhalation and skin absorption.**Effects on eyes :** may be moderately irritating, causing pain, tearing, reddening, swelling and itching.**Effects on skin :** repeated or prolonged single exposure may cause irritation to the skin. May cause a cutaneous allergic reaction in predisposed individuals. Styrene can penetrate the skin and may cause systemic effects similar to those identified under acute inhalation exposure.**Effects of inhalation :** May cause respiratory tract irritation, may cause drowsiness, nausea, headache, fatigue and dizziness.**Effects on ingestion :** Causes irritation in the mouth, stomach tissue and digestive tract. Vomiting may cause aspiration of the solvent resulting chemical pneumonia.**Toxicological information :** Possible carcinogen: Styrene - class 2B; Titanium Dioxide - IARC rating: 3

12- ECOLOGICAL INFORMATION :

Based on data for one or more similar products :

- **Ecotoxicity :** not known
- **Biodegradability :** yes

13- DISPOSAL CONSIDERATIONS

Waste Disposal :

If discarded, this material should be treated as hazardous waste based on the characteristic of ignitability(D001)

Container Disposal :

Empty containers may not be disposed of unless any remaining material adhering to the internal walls has been removed. Empty containers should be disposed of in accordance with all applicable laws and regulations.

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14- TRANSPORT INFORMATION :

DOT Regulation :

Proper Shipping Name: Resin Solution
Hazard Class: 3 (Flammable)
UN Number: 1866
Packing Group: III
Internal label: H0005023

15- REGULATORY INFORMATION :

US Federal Regulation :Toxic Substances Control Act (TSCA):

All components are included in the EPA Toxic Substances Control Act Chemical Substance Inventory.

OSHA Hazard Communication Standards (CFR29)

Health (§1910.1200): Irritant

Fire: (§1910.1200): Flammable-class 1c

Exposure Limits (§1910.1000): There is no OSHA PEL or ACGIH TLV established for polyester resin in this product.

OSHA PEL for Styrene (100-42-5) is 50 ppm for an 8-hour TLV. ACGIH TLV for Styrene is 20ppm.

OSHA PEL *Short Time Exposure Limit* for a 15 minute period is are 100ppm (no ceiling for brief exposure),

however the average for a single STEL period must not exceed 100 ppm. ACGIH STEL for Styrene is 40ppm.

OSHA TWA for Titanium Dioxide (CAS 13463-67-7) is 15 mg/m³; ACGIH TLV is 10 mg/m³.

EPA SARA Title III

Section 302 : Extremely Hazardous Chemicals: none

EPA SARA Title III

Section 311/312 : *Hazard Categories* : Immediate Health Hazard, Delayed Health Hazard, Fire Hazard.

EPA SARA Title III

Section 313 : Toxic Chemicals: Styrene - C.A.S. 100-42-5 20-25%

Please refer to any other national measures or regulations that may be relevant to the product.

16- OTHER INFORMATION :

HMIS Ratings:

Resin

- Health:	2
- Flammability:	3
- Reactivity:	2

Ratings Key: 4 = Highest hazard, 0 = Lowest hazard, * = Chronic Health Hazard

REVEALING MODIFICATION : stytd

Revised : 12/8/04

Supersedes sheet : 11/15/2004 This sheet

provides a complement to the product use instructions but does not replace them. The information it contains is based on our current knowledge of the product concerned at the date of drafting. That information is given in good faith and does not in any circumstances remove from the user his duty to be aware of and to follow all legal regulations and statutes covering his activities. The user takes sole responsibility for application of safety measures covering the use of the product he is aware of. We also draw the user's attention to the risks attached to any use of the product for applications for which it was not designed.

02/99