



# MATERIAL SAFETY DATA SHEET

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## 1- COMMERCIAL NAME : APF 4 White

*Do not handle this material until the manufacturer's safety precautions have been read and understood! Regulations require that all employees be educated & trained on the Material Safety Data Sheets for all products with which they come in contact.*

## 2- COMPOSITION/INFORMATION ON INGREDIENTS :

CHEMICAL NAME	C.A.S	QTY%
1. Styrene	100-42-5	10-15
2. Unsaturated Polyester Resin	Proprietary	25-35
3. Titanium Dioxide	13463-67-7	1-5

## 3- HAZARDS IDENTIFICATION :

**Exposure Limits :** (Styrene, Titanium Dioxide) - 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 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. Seek immediate medical attention.

- **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 :** do not induce vomiting; seek immediate medical attention.

- **In case of inhalation :** remove the patient from the contaminated area. Consult physician if after-effects occur.

## 5- FIRE-FIGHTING MEASURES :

### 5-1 Fire-extinguisher types :

Use : chemical foam, CO<sub>2</sub>, 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 a possibility of violent rupture of the container. Product vapors may form explosive mixture in the air.

### 5-3 specific protective measures during firefighting :

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

**COMMERCIAL NAME : APF 4 White****6- ACCIDENTAL RELEASE MEASURES :****6-1 Individual protection :**

**Ventilation** : General ventilation is required during normal use. **Remove all sources of ignition.**

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

**Protective gloves** : Wear appropriate impervious gloves to prevent skin contact.

**Eye protection** : Wear protective safety glasses with side-shields or face shield.

**Other protection** : Wear appropriate clothing to prevent skin contact.

**6-2 Environmental protection** : Please see § 12

**6-3 Decontamination procedures :**

**- Remove all sources of ignition and ventilate area.**

- Contain spilled material in order to avoid its transfer to sewers or rivers and streams.

- Physically remove the material.

- Cover product with sand, earth, or any other similar absorbent substance in order to soak up material. The resulting mix may then be shoveled into containers and removed for proper disposal (see § 13).

**7- HANDLING AND STORAGE :****7-1 Handling :**

**- Remove all sources of ignition, open flame, and/or heat.**

**- Avoid inhalation of dusts created during machining.**

- 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.**

- Install showers and eye baths ("fountain" type).

- Ensure sufficient ventilation, including appropriate local air extraction, in order to comply with workplace exposure limits. Where vapors could escape into the air, local specific means of ventilation will be necessary.

- 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 any other skin condition.

**7-2 Storage :**

- Keep the material hermetically sealed in its original packaging, protected from humidity and at a temperature between 59 and 77°F / 15 and 25°C in a well-ventilated storage facility.

- Ensure that the floor of the storage area is impermeable and concave to provide effective containment.

- Keep the product away from food.

- 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 (see § 15)

- eye protection : YES, safety glasses with side shields or chemical splash goggles

- skin protection : YES, protective gloves, such as nitrile, latex or rubber

**Do not mix work clothing and normal clothing. Wash hands thoroughly at beginning of every work break and at the end of each workday.**

**COMMERCIAL NAME : APF 4 White****9- PHYSICAL AND CHEMICAL PROPERTIES :**

**Physical state :** paste

**Color :** white

**Odor :** strong, aromatic

**pH :** not established

**Flash point :** 89°F / 31°C

**VOC (g/l) :** 137.83

**VOC (%) :** 8.26

**Specific gravity :** 1.67

**Solubility :**

- in water : at 68°F / 20°C : insoluble
- in solvents : YES (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 acid fumes.

**10-2 Hazardous reactions with :**

- Exothermic (polymerization) reaction with strong acids and oxidizers.

**11- TOXICOLOGICAL INFORMATION :**

**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 cause systemic effects similar to those identified under acute inhalation exposure.

**Effects of inhalation :** may be irritating to the respiratory tract, may cause drowsiness, nausea, headache, fatigue, and dizziness.

**Effects on ingestion :** causes irritation to the mouth, stomach tissue, and digestive tract. Vomiting may cause aspiration of the solvent resulting in 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 established

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 all remaining material adhering to the internal walls have been removed. Empty containers should be disposed of in accordance with all applicable laws and regulations.

**COMMERCIAL NAME : APF 4 White****14- TRANSPORT INFORMATION :****DOT Regulations/Information :** *(check CFR 49 for exemption regulations)*Proper Shipping Name: **Resin Solution**Hazard Class: **3 (Flammable)**UN/NA Number: **UN1866**Packaging Group: **III**

Internal label: H0005023

**15- REGULATORY INFORMATION :****US Federal Regulations :****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 are no established PEL's for Polyester Resin in this product*

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

OSHA PEL Short Time Exposure Limit for a 15-minute period is 100ppm (no ceiling for brief exposure), however the average for a single STEL period must not exceed 100ppm. ACGIH STEL for Styrene is 40ppm.

OSHA TWA for Titanium Dioxide (13463-67-7) is 15 mg/m3 (respirable dust).

ACGIH TLV is 10 mg/m3 (respirable dust).

**EPA SARA Title III :****Section 302** - Extremely Hazardous Chemicals: none**Section 311/312** - Hazard Categories: immediate Health hazard, delayed health hazard, fire hazard**Section 313** - Toxic Chemicals: Styrene (CAS 100-42-5) 10-15% **CERCLA RQ:** 1,000 lbs.

*You may be required to submit this MSDS to state and local emergency response agencies (SERC & LEPC) and to your local fire department based on the chemical and quantity stored at your location. Call the EPA Hotline @ (800)535-0202 for more information or further assistance with chemical reporting requirements.*

**16- OTHER INFORMATION :****HMIS Ratings: Ratings Key: 4 = Highest hazard, 0 = Lowest hazard, \* = Chronic Health Hazard**

<b>Health</b>	<b>2*</b>
<b>Fire</b>	<b>2</b>
<b>Reactivity</b>	<b>1</b>

**REVEALING MODIFICATION : stytdpdf**

Revised : 11/12/2009 Supersedes sheet : 3/14/2006 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.

11/2009