

# MATERIAL SAFETY DATA SHEET

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CHEMTREC (800) 424-9300

Manufacturer's  
Name: Universal Woods Inc.

Emergency  
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Person Responsible for  
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Date Prepared: July 1999

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SECTION 1 - IDENTITY

Common Name: FRP Unisub

CAS No: NA

Trade name & Synonyms: FRP Unisub

Chemical Family: Polyester polymer

Chemical Name: Fiberglass Reinforced Polyester

Formula: NA

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SECTION 2 - HAZARDOUS INGREDIENTS

Principal Hazardous Component (s): **This material is a solid plastic polymer fiberglass reinforced polyester(FRP). As such it is essentially inert (non-toxic) during handling and storage. This MSDS also discusses potential hazards created by using this product in the sublimation process. However only information specific to the FRP is included as required. PLEASE NOTE: Other components used in the sublimation process such as inks are separate materials and are not covered in this MSDS.**

| Chemical & common names:        | 1999 Threshold Limit<br>ACGIH Value: (mg/M <sup>3</sup> ): | OSHA<br>PEL(mg/M <sup>3</sup> ) |
|---------------------------------|--|---------------------------------|
| Fiberglass Reinforced Polyester | None*  | None*                           |
| Nuisance dust                   | 10   | 15                              |

Fiberglass- The fiberglass is bound in a matrix of plastic. Free fibers are not present

**NOTE : The following materials were detected in parts per billion (ppb, 1 ppm = 1,000 ppb) quantities in a test of 8 hour Time Weighted Average exposure during the sublimation process in a small unvented room ( to simulate worst case conditions). An odor was noted in this controlled situation but an extensive analysis showed that health risk criteria (TLV's and PELs) were not approached:**

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| <u>Chemical name:</u>  | <u>1999 Threshold Limit Value ACGIH (ppm) :</u> | <u>OSHA PEL (ppm):</u> |
|------------------------|---|------------------------|
| 1,3 Dichloropropane    | 1   | none                   |
| Acetone                | 500   | 1000                   |
| Chlorobenzene          | 10  | 75                     |
| Ethyl Methacrylate     | none  | none                   |
| Hexachlorobutadiene    | 0.02  | none                   |
| Isopropyl Benzene      | none  | none                   |
| n-Propylbenzene        | none  | none                   |
| Butylbenzene           | none  | none                   |
| Toluene                | 50  | 200                    |
| Trichlorofluoromethane | none  | 1000                   |
| Xylene                 | 100   | 100                    |

SECTION 3 - PHYSICAL & CHEMICAL CHARACTERISTICS

|                                       |                                   |
|---------------------------------------|-----------------------------------|
| Boiling Point: NA                     | Specific Gravity: 1.2 – 1.8       |
| Vapor Pressure (mm Hg): NA            | Percent Volatile by Volume (%): 0 |
| Evaporation Rate (butyl acet = 1): NA | Vapor Density (Air = 1): NA       |
| Solubility in Water: NA               | Reactivity in Water: None         |

Appearance and Odor: FRP Unisub is shaped as a flat panel. It has a plastic odor. The sublimation or engraving process can also create an odor.

FIRE AND EXPLOSION DATA –

|   |  |
|---|--|
| Flash Point: NA   | Flammable Limits in Air % by Volume: <u>Lower</u> NA <u>Upper</u> NA |
| Extinguisher Media: Dry Chemical<br>Water, carbon dioxide | Auto-Ignition Temperature: 800 Degrees F ASTM D1929                  |

Special Fire

Fighting Procedures: This material is a fiberglass reinforced polyester polymer. Combustion products are expected to be primarily aldehydes, carbon monoxide, and smoke.

Unusual Fire and Explosion Hazards: None known. This is a fiberglass reinforced polyester polymer. Combustion products are expected to be primarily aldehydes, carbon monoxide, and smoke.

SECTION 4 - PHYSICAL HAZARDS

Stability: Stable Conditions to Avoid: None known - Research polyester if unusual materials/processes are required

Incompatibility (Materials to Avoid): None known

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Hazardous Decomposition Products: Combustion products are expected to be primarily aldehydes, carbon monoxide and smoke.`

The actual sublimation process emits extremely small amounts of  
1,3 Dichloropropane, Acetone, Chlorobenzene Ethyl Methacrylate, Hexachlorobutadiene,  
Isopropyl Benzene, n-Butylbenzene, n-Propylbenzene, Butylbenzene, Toluene, Trichlorofluoromethane,  
Xylene

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Hazardous Polymerization: Will not occur

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#### SECTION 5 - HEALTH HAZARDS

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Product is a solid sheet of fiberglass reinforced polyester plastic. No hazards anticipated during handling and storage. The following information was developed for the products produced **during the sublimation process**

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Primary Routes of Exposure: Inhalation

Signs and Symptoms of Overexposure:

Inhalation: Irritation, coughing, burning, tightness of chest and/or shortness of breath

Eye Contact: Irritation

Skin Contact: None known

Ingestion: None known

Effects of Overexposure: None known, Respiratory irritation possible

Medical Conditions Generally Aggravated by Exposure: None known, possibly asthma like lung problems

Chemical Listed as Carcinogen of Potential Carcinogen: No, free fiberglass fibers not present-bound in plastic resin

#### Emergency and First Aid Procedures:

1. Inhalation: Hazard is unlikely. Remove from further exposure. Keep warm and at rest. If not breathing, give artificial respiration. If breathing is difficult, trained personnel should administer oxygen. Seek immediate medical attention.
2. Eyes: Hazard is unlikely. Immediately flush eyes with plenty of water for two to three minutes. Remove any contact lenses and continue flushing for 15 minutes. Get immediate medical attention.
3. Skin: Hazard is unlikely. If irritation occurs, wash affected areas with soap and water. Seek immediate medical attention.
4. Ingestion: Hazard is unlikely. If irritation occurs wash out mouth with water, keep at rest. Seek immediate medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.

Primary Routes of Exposure: Hazard is unlikely. Inhalation of decomposition products.

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SECTION 6 - SPECIAL PROTECTION INFORMATION :

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Respiratory Protection (Specific Type) : Usually not necessary to reduce exposures to TLV during anticipated normal use. If requested, due to odor or if TLV is exceeded; use organic vapor filtration system with a respirator type appropriate for the exposure level.

Ventilation: Usually not necessary to reduce exposures to TLV during normal use  
General or local exhaust may be necessary to minimize odors in small rooms. **All confined space work should be done in accordance with OSHA 1910.146.**

Protective Gloves: Possible material handling hazard (cuts, abrasion) Use cloth or leather if necessary or requested.

Eye Protection: Safety glasses required.

Other Protective Clothing or Equipment: None known.

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SECTION 7 - SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

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Precautions to be Taken in Handling and Storage: None known. Product is fiberglass reinforced polyester.

Other Precautions: Use sufficient local or general ventilation to reduce any odors.

Steps to be Taken in Case Material is Released or Spilled: Currently none for product. It is a fiberglass reinforced polyester.

Waste Disposal Methods:. Currently none for product. It is fiberglass reinforced polyester.