Material Safety Data Sheet

Product name: Titebond II Premium Wood Glue

1. Product and company identification

<table>
<thead>
<tr>
<th>CAS #</th>
<th>mixture</th>
</tr>
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<tbody>
<tr>
<td>Address</td>
<td>Franklin International</td>
</tr>
<tr>
<td></td>
<td>2020 Bruck Street</td>
</tr>
<tr>
<td></td>
<td>Columbus OH 43207</td>
</tr>
<tr>
<td>Contact person</td>
<td>Franklin Technical Services</td>
</tr>
<tr>
<td>Telephone</td>
<td>(800) 877-4583</td>
</tr>
<tr>
<td>Emergency phone</td>
<td>Franklin Security</td>
</tr>
<tr>
<td></td>
<td>(614) 445-1300</td>
</tr>
<tr>
<td>Reference number</td>
<td>5000</td>
</tr>
<tr>
<td>Product code</td>
<td>5004</td>
</tr>
<tr>
<td>Date of revision</td>
<td>5/5/2009</td>
</tr>
<tr>
<td>Print date</td>
<td>1/27/2010</td>
</tr>
<tr>
<td>Chemtrec (24 Hour)</td>
<td>(800) 424 - 9300</td>
</tr>
<tr>
<td>Chemtrec International</td>
<td>(703) 527 - 3887</td>
</tr>
<tr>
<td>Product use</td>
<td>Wood Glue</td>
</tr>
<tr>
<td>Product type</td>
<td>Crosslink Polyvinyl Acetate</td>
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</table>

2. Hazards identification

Physical state: Liquid.
Odor: Faint odor.
OSHA/HCS status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Emergency overview: MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY CAUSE TARGET ORGAN DAMAGE.
Slightly irritating to the eyes, skin and respiratory system. Avoid breathing vapor or mist. Avoid contact with eyes. Avoid prolonged or repeated contact with skin. May cause target organ damage. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Routes of entry: Eye contact. Inhalation. Ingestion.

Potential acute health effects
Inhalation: Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation. Slightly irritating to the respiratory system.
Ingestion: No known significant effects or critical hazards.
Skin: Slightly irritating to the skin.
Eyes: Slightly irritating to the eyes.

Potential chronic health effects
Chronic effects: May cause target organ damage.
Carcinogenicity: No known significant effects or critical hazards.
Mutagenicity: No known significant effects or critical hazards.
Teratogenicity: No known significant effects or critical hazards.
Developmental effects: No known significant effects or critical hazards.
2. Hazards identification

**Fertility effects**

No known significant effects or critical hazards.

**Target organs**

May cause damage to the following organs: skin, eyes. Contains material which may cause damage to the following organs: upper respiratory tract.

**Over-exposure signs/symptoms**

- **Inhalation**: Adverse symptoms may include the following:
  - respiratory tract irritation
  - coughing

- **Ingestion**: No specific data.

- **Skin**: Adverse symptoms may include the following:
  - irritation
  - redness

- **Eyes**: Adverse symptoms may include the following:
  - irritation
  - watering
  - redness

**Medical conditions aggravated by over-exposure**

Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

See toxicological information (section 11)

3. Composition/information on ingredients

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

- **Eye contact**: Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

- **Skin contact**: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

- **Inhalation**: Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

- **Ingestion**: Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

**Protection of first-aiders**

No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

**Notes to physician**

No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. Fire-fighting measures

- **Flammability of the product**: In a fire or if heated, a pressure increase will occur and the container may burst.

**Extinguishing media**

- **Suitable**: Use an extinguishing agent suitable for the surrounding fire.

- **Not suitable**: None known.

**Special exposure hazards**

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
5. **Fire-fighting measures**

**Special protective equipment for fire-fighters**: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. **Accidental release measures**

**Personal precautions**: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

**Environmental precautions**: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**Small spill**: Stop leak if without risk. Move containers from spill area. Dispose of via a licensed waste disposal contractor. Absorb with an inert material.

**Large spill**: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7. **Handling and storage**

**Handling**: Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Storage**: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. **Exposure controls/personal protection**

**Canada**

<table>
<thead>
<tr>
<th>Occupational exposure limits</th>
<th>TWA (8 hours)</th>
<th>STEL (15 mins)</th>
<th>Ceiling</th>
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<tr>
<td>Ingredient</td>
<td>List name</td>
<td>ppm</td>
<td>mg/m³</td>
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<tr>
<td>No exposure limit value known.</td>
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</table>

Consult local authorities for acceptable exposure limits.

**Recommended monitoring procedures**: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

**Engineering measures**: Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
8. Exposure controls/personal protection

Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Respiratory: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Eyes: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

Skin: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

9. Physical and chemical properties

Physical state: Liquid.
Flash point: Closed cup: 98.889°C (210°F) [Setaflash.]
Color: Yellow.
Odor: Faint odor.
pH: 3
Boiling/condensation point: 98.889°C (210°F)
Relative density: 1.09
Volatile: 52% (w/w)
VOC (less water, less exempt solvents): 5.5 g/l
Dispersibility properties: Dispersible in the following materials: cold water and hot water.

10. Stability and reactivity

Chemical stability: The product is stable.
Possibility of hazardous reactions: Hazardous reactions or instability may occur under certain conditions of storage or use.
Hazardous polymerization: Hazardous polymerization may occur under certain conditions of storage or use.
Conditions to avoid: No specific data.
Materials to avoid: No specific data.
Incompatibility: Reactive or incompatible with the following materials: acids and alkalis.
Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
11. Toxicological information

**United States**

**Acute toxicity**
No known significant effects or critical hazards.

**Chronic toxicity**
No known significant effects or critical hazards.

**Irritation/Corrosion**

**Conclusion/Summary**

| Skin | Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. |
| Eyes | This product may irritate eyes upon contact. |
| Respiratory | Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation. |

**Sensitizer**
No known significant effects or critical hazards.

**Carcinogenicity**
No known significant effects or critical hazards.

**Mutagenicity**
No known significant effects or critical hazards.

**Teratogenicity**
No known significant effects or critical hazards.

**Reproductive toxicity**
No known significant effects or critical hazards.

**Canada**

**Acute toxicity**
No known significant effects or critical hazards.

**Chronic toxicity**
No known significant effects or critical hazards.

**Irritation/Corrosion**

**Conclusion/Summary**

| Skin | Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. |
| Eyes | This product may irritate eyes upon contact. |
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**Sensitizer**
No known significant effects or critical hazards.

**Carcinogenicity**
No known significant effects or critical hazards.

**Mutagenicity**
No known significant effects or critical hazards.

**Teratogenicity**
No known significant effects or critical hazards.

**Reproductive toxicity**
No known significant effects or critical hazards.

**Mexico**

**Acute toxicity**
11. Toxicological information

No known significant effects or critical hazards.

**Chronic toxicity**
No known significant effects or critical hazards.

**Irritation/Corrosion**

**Conclusion/Summary**

- **Skin**: Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
- **Eyes**: This product may irritate eyes upon contact.
- **Respiratory**: Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation.

**Sensitizer**
No known significant effects or critical hazards.

**Carcinogenicity**
No known significant effects or critical hazards.

**Mutagenicity**
No known significant effects or critical hazards.

**Teratogenicity**
No known significant effects or critical hazards.

**Reproductive toxicity**
No known significant effects or critical hazards.

12. Ecological information

**Environmental effects**: No known significant effects or critical hazards.

**United States**

- **Aquatic ecotoxicity**: No known significant effects or critical hazards.
- **Biodegradability**: No known significant effects or critical hazards.

**Canada**

- **Aquatic ecotoxicity**: No known significant effects or critical hazards.
- **Biodegradability**: No known significant effects or critical hazards.

**Mexico**

- **Aquatic ecotoxicity**: No known significant effects or critical hazards.
- **Biodegradability**: No known significant effects or critical hazards.

**Other adverse effects**: No known significant effects or critical hazards.
13. Disposal considerations

Waste disposal: The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

<table>
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<tr>
<th>Regulatory information</th>
<th>UN number</th>
<th>Proper shipping name</th>
<th>Classes</th>
<th>PG*</th>
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</table>

PG*: Packing group

15. Regulatory information

**United States**

**HCS Classification**: Target organ effects

**U.S. Federal regulations**: Target organ effects

**DEA List I Chemicals (Precursor Chemicals)**: Not listed

**DEA List II Chemicals (Essential Chemicals)**: Not listed

**State regulations**: Massachusetts Spill: None of the components are listed. Massachusetts Substances: None of the components are listed. New Jersey Hazardous Substances: None of the components are listed. New Jersey Spill: None of the components are listed. New Jersey Toxic Catastrophe Prevention Act: None of the components are listed. Pennsylvania RTK Hazardous Substances: None of the components are listed.

**Canada**

**WHMIS (Canada)**: Not controlled under WHMIS (Canada).

15. Regulatory information

Canadian lists:
- CEPA Toxic substances: None of the components are listed.
- Canadian ARET: None of the components are listed.
- Canadian NPRI: None of the components are listed.
- Alberta Designated Substances: None of the components are listed.
- Ontario Designated Substances: None of the components are listed.
- Quebec Designated Substances: None of the components are listed.

Canada inventory: Not determined.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Mexico
Classification:

International regulations
International lists:
- Australia inventory (AICS): Not determined.
- China inventory (IECSC): Not determined.
- Japan inventory (ENCS): Not determined.
- Japan inventory (ISHL): Not determined.
- Korea inventory (KECI): Not determined.
- New Zealand Inventory of Chemicals (NZIoC): Not determined.
- Philippines inventory (PICCS): Not determined.

Chemical Weapons Convention List Schedule I Chemicals: Not listed
Chemical Weapons Convention List Schedule II Chemicals: Not listed
Chemical Weapons Convention List Schedule III Chemicals: Not listed

16. Other information

Label requirements:
MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY CAUSE TARGET ORGAN DAMAGE.

Hazardous Material Information System (U.S.A.)

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

Date of printing: 1/27/2010.
Date of issue: 5/5/2009.

1/27/2010. 5004
16. Other information

Version: 1

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.