1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

SUPPLIER
Company: H. B. Fuller Company
Address: 16-20 Red Gum Drive Dandenong South VIC 3175
Telephone: (03) 9797 6222
Emergency Telephone No: Australia – 1800 033 111

PRODUCT
Product Name: Rakoll® Express HP/2
Other Names: Waterborne PVA adhesive, polymer emulsion.
Manufacturer’s Code: None

USE

2. HAZARDS IDENTIFICATION

HAZARD CLASSIFICATION
NOHSC Classification: Non-Hazardous Substance
ADG Classification: Non-Dangerous Goods
SUSDP Classification: Not a Scheduled poison

RISK PHRASES
None

SAFETY PHRASES
None

3. COMPOSITION/INFORMATION ON INGREDIENTS

MIXTURECHEMICAL ENTITYCAS NoPROPORTION
Water7732-18-530 - < 60%
Polyvinyl acetate homopolymer9003-20-730 - < 60%
Ingredients determined not to be hazardousNot applicable< 10%

4. FIRST AID MEASURES

FIRST AID
Swallowed: Do NOT induce vomiting. Wash out mouth with water. If symptoms develop seek medical advice.

Eyes: If contact with the eye(s) occur, wash with running water holding eyelid(s) open. Take care not to rinse contaminated water into the non-affected eye. In all cases of eye contamination it is a sensible precaution to seek medical advice.

Skin: Wash affected areas with copious quantities of soap and water. Remove contaminated clothing and footwear. Decontaminate footwear and wash clothing before reuse. Seek medical advice if skin irritation develops.
Inhaled: Remove victim from exposure - avoid becoming a casualty. If breathing is laboured or has stopped apply artificial respiration at once. Seek medical advice immediately.

First Aid Facilities: Have eyewashes, safety showers and normal washroom facilities are available in the vicinity where exposure may occur.

ADVICE TO DOCTOR
Treat symptomatically.

5. FIRE FIGHTING MEASURES

<table>
<thead>
<tr>
<th>EXTINGUISHING MEDIA</th>
<th>This product is not combustible, but will burn once all the water in the mixture has evaporated. In a general fire use an extinguishing medium that is appropriate to the surrounding fire.</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAZARDOUS COMBUSTION PRODUCTS</td>
<td>Oxides of carbon, dense smoke and other noxious vapours and gases of unknown composition.</td>
</tr>
<tr>
<td>PRECAUTIONS FOR FIRE FIGHTERS</td>
<td>In a general fire keep containers cool with water spray to prevent rupture of containers. Wear full protective equipment and self-contained breathing apparatus. Move containers from fire area if it can be done without risk. The residue of this product will burn and give off toxic vapours and gases, once all the water in the product has evaporated. Prevent fire fighting medium from entering drains or waterways.</td>
</tr>
</tbody>
</table>

6. ACCIDENTAL RELEASE MEASURES

<table>
<thead>
<tr>
<th>EMERGENCY PROCEDURES</th>
<th>Slippery when spilled – avoid accidents. Wearing full PPE (see Section 8), increase ventilation in the hazard area and restrict access. Shut off leak if safe to do so. Dyke spill to minimise environmental pollution. Inform emergency services if substance has spilled into sewer, drains or waterways.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLEAN UP PROCEDURE</td>
<td>Small Spills: Wipe up with rags, sponge, mop or paper. Allow the soaked substrates to dry in a well ventilated area before disposal as general industrial waste.</td>
</tr>
<tr>
<td></td>
<td>Large spills: Wearing full personal protective equipment, contain spill with sand, earth, sawdust or Vermiculite. Prevent run-off into drains or waterways. Bail or pump any free liquid into sealable plastics containers. Collect absorbed material and place it also into sealable plastics containers. Seal all containers and clearly label them to ensure appropriate disposal. Hose down residue with</td>
</tr>
</tbody>
</table>
plenty of water. Take steps to prevent rinse water from entering drains or waterways.

7. HANDLING AND STORAGE

PRECAUTION FOR SAFE HANDLING
Practice sound industrial hygiene. Avoid breathing vapours, mists or aerosols.
Wash hands before work breaks and at the end of a shift. Avoid skin contact.

STORAGE
Store in a cool (< 30ºC), dry place away from heat sources and out of direct sunlight. Protect against freezing. Keep containers closed, securely sealed and protect against physical damage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE STANDARDS
An Australian exposure standard for this mixture has not been set by NOHSC
However this mixture contains a small amount diisobutyl phthalate and trace amounts of vinyl acetate monomer, the Australian exposure standard for which have been set by NOHSC as shown below:

<table>
<thead>
<tr>
<th>Exposure Standard [NOHSC:1003(2004)]</th>
<th>TWA</th>
<th>STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vinyl acetate monomer</td>
<td>10 ppm</td>
<td>20 ppm</td>
</tr>
<tr>
<td>Diisobutyl phthalate (DIBP) (UK – OES)</td>
<td>5 mg/m³</td>
<td>No data</td>
</tr>
</tbody>
</table>

BIOLOGICAL LIMIT VALUES
Not applicable

ENGINEERING CONTROLS
Good general dilution ventilation. Use local exhaust ventilation if mists or vapours are produced. Ensure that ventilation is sufficient to control exposure levels below exposure standards.

PERSONAL PROTECTION EQUIPMENT
Use personal protective equipment that minimizes skin and eye contact, and vapour, mists or aerosol inhalation. The type of protective equipment to be used depends largely the volume and the manner in which the substance is used. To ensure proper protection for any given situation, seek guidance from the following sources: protective clothing – AS 2919; gloves – AS 2161; eye protection – AS 1337; respiratory protection – AS 1715; feet protection – AS 2210. The suitability of each PPE for use with this substance should then be ascertained with the respective PPE suppliers.

Under condition of ordinary use, wear safety glasses with side shields, nitrile rubber or Viton gloves, long sleeved overalls, and impervious boots. In the event of a large spill or if working in confined spaces, or if mists, aerosols or vapours are generated and their airborne concentration is unknown, in the addition to the above, a full-face AS/NZ 1716 compliant cartridge type respirator with an organic vapour filter; combine it with a particulate filter in the presence of aerosols or mist (for selection guidance see AS/NZ 1715). If the
respirator is the sole means of respiratory protection, use a full-face air supplied respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

**PHYSICAL DESCRIPTION & PROPERTIES**
- **Appearance**: White, viscous liquid
- **Odour**: Sweet, characteristic
- **pH**: ca. 6.0
- **Vapour Pressure**: 23 hP at 20°C (water)
- **Vapour Density**: Not established
- **Boiling Point**: > 90°C
- **Freezing/Melting Point**: Not established
- **Solubility in Water**: Fully miscible
- **Specific Gravity**: ca. 1.12
- **Flammability**: Not flammable

**OTHER PROPERTIES**
- No relevant data

10. STABILITY AND REACTIVITY

**CHEMICAL STABILITY**
- This material is stable under normal ambient and anticipated storage and handling conditions.

**CONDITIONS TO AVOID**
- Avoid extremes of temperatures; in particular do not allow material to freeze.

**INCOMPATIBLE MATERIALS**
- Acids, alkalies, chlorine or divalent ions e.g. iron.

**HAZARDOUS DECOMPOSITION PRODUCTS**
- Carbon monoxide, carbon dioxide, acetic acid and other noxious vapours and gases of unknown composition.

**HAZARDOUS REACTIONS**
- Hazardous polymerization will not occur. Will react vigorously with chlorine.

11. TOXICOLOGICAL INFORMATION

This mixture has not been tested as a whole for its health effects. The toxicological information given below is based on similar mixtures.

**ACUTE HEALTH EFFECTS**
- **Swallowed**: Ingestion of this mixture may irritate the gastric tract, causing nausea and vomiting.
- **LD₅₀ not established**
Eyes: Direct contact with the eyes may result in moderate irritation. May cause reddening of the affected eye and lacrimation but is unlikely to cause permanent damage.

Skin: May be mildly irritating on frequent or prolonged skin contact. Irritation may produce itching and reddening of the exposed area.

Inhaled: Inhalation of vapour, aerosols or mist from the mixture may cause irritation of the nose, throat and respiratory system.

CHRONIC HEALTH EFFECTS

Vinyl acetate monomer is classified as a Group 2B carcinogen by IARC (i.e. “The agent is possibly carcinogenic to humans”). None of the components of this mixture has been listed as a sensitizer, mutagen or teratogen.

12. ECOLOGICAL INFORMATION

No ecotoxicological information for this mixture or analogous mixtures could be found.

13. DISPOSAL CONSIDERATIONS

This product and its containers are a prescribed waste and may only be disposed of in accordance with applicable State and local regulations. These regulations vary from jurisdiction to jurisdiction and hence the user is counselled to seek advice from the local authority and classify the waste before considering disposal. The disposal information given below is a general guide and does not replace the requirement of the local regulations.

**DISPOSAL**

Small quantities Dry and fully cured material may be disposed of as general industrial waste. Empty containers should be treated in a similar manner once the residue in the container is fully cured.

Large amounts must be disposed of strictly in accordance with local industrial waste disposal or environmental protection regulations. This material has the potential to be an environmental hazard. Therefore ensure that the product is fully cured before disposing it, if permitted, as landfill or by incineration.

SPECIAL PRECAUTIONS

Do not allow the uncured mixture to contaminate sewerage systems, soil, surface or ground water.

When large amounts of this product need to be disposed of the services of a registered, professional waste disposal organisation is highly recommended.

14. TRANSPORT INFORMATION
This product has not been classified as Dangerous Goods. This product does not need to be transported in accordance with the ADG Code requirements.

<table>
<thead>
<tr>
<th>UN Number</th>
<th>None allocated</th>
<th>Proper Shipping Name:</th>
<th>None allocated</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADG Class:</td>
<td>None allocated</td>
<td>ADG Subsidiary Risk:</td>
<td>None allocated</td>
</tr>
<tr>
<td>ADG Packaging Group:</td>
<td>None allocated</td>
<td>Hazchem Code:</td>
<td>None allocated</td>
</tr>
<tr>
<td>IMDG/IMO Code:</td>
<td>Unrestricted</td>
<td>ICAO/IATA Code:</td>
<td>Unrestricted</td>
</tr>
</tbody>
</table>

**15. REGULATORY INFORMATION**

- **AICS**: All ingredients are listed in AICS
- **SUSDP**: Not a scheduled poison

**16. OTHER INFORMATION**

- **MSDS**
  - Issue Number: 04
  - Date of Issue: October 2011
  - Replaces Issue: October 2006
  - Changes made to the previous issue: None

**ACRONYMS**

- ADG Code: Australian Code for the Transport of Dangerous Goods by Road and Rail
- AICS: Australian Inventory of Chemical Substances.
- CAS Number: Chemical Abstracts Service Registry Number
- CNS: Central nervous system
- DG: Dangerous Goods
- Hazchem Code: An emergency action code of numbers and letters, which gives information to emergency services.
- N.O.S.: Not otherwise specified.
- PPE: Personal protection equipment
- R-Phrases: Risk Phrases.
- S-Phrases: Safety Phrases.
- SUSDP: Standard for the Uniform Scheduling of Drugs and Poisons.
- UN Number: United Nations Number

This MSDS summarises at the date of issue our best knowledge of the health and safety hazard information of the product, and in particular, how to safely handle and use the product in the workplace. Since H.B. Fuller Company Australia Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, review this MSDS in the context of how the user intends to handle and use then product in the workplace. If clarification or further information is needed to ensure that an appropriate assessment can be made, the user should contact this company. Our responsibility for the products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available on request.