SAFETY DATA SHEET

SECTION 1: IDENTIFICATION OF THE PRODUCT AND SUPPLIER

PRODUCT INFORMATION

PRODUCT: SMARTSTAK PHP 5020
PRODUCT DESCRIPTION: Hot melt adhesive
INTENDED USE: Industrial adhesive
PRODUCT IDENTIFIER: 836996PM

COMPANY INFORMATION

H.B. Fuller Company Australia Pty. Ltd.
16 - 22 Red Gum Drive
Dandenong South, VIC 3175
Telephone: (03) 9797 6222
Emergency telephone No: 1800 033 111

SECTION 2: HAZARDS IDENTIFICATION

GHS Signal Word: Not applicable
GHS Classification: This product is not classified as hazardous under GHS criteria.
GHS Precautions: Safety Precautions: Not applicable - no special precautionary measures are required. Please read the entire Safety Data Sheet for other information regarding handling of this product.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS #</th>
<th>PERCENT</th>
<th>Classification</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polybutene</td>
<td>9003-29-6</td>
<td>10 - 30</td>
<td>Aquatic Chronic 4; H413</td>
<td></td>
</tr>
<tr>
<td>Waxes, paraffin and hydrocarbon</td>
<td>8002-74-2</td>
<td>1 - 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wax, polyethylene</td>
<td>9002-88-4</td>
<td>1 - 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ingredients determined to be not hazardous</td>
<td>99</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SECTION 4: FIRST AID MEASURES

IF IN EYES: None expected to be needed, however, use an eye wash to remove a chemical from your eye regardless of the level of hazard. For hot product, immediately flush eyes with plenty of water for at least 20 minutes. Get immediate medical attention.
IF ON SKIN: Wash with soap and water. For hot material, immediately immerse in or flush the affected area with large amounts of cold water to dissipate heat. Cover with clean gauze and do not attempt to remove the material yourself. Get prompt medical attention. Medical personnel: coat with mineral oil to soften material for removal.
IF INHALED: Remove to fresh air. Call a physician if symptoms persist. If exposed to excessive levels of dusts or fumes, remove to fresh air and get medical attention if cough or other symptoms develop.
IF SWALLOWED: Do not induce vomiting. Seek medical attention if symptoms develop. Provide medical care provider with this MSDS.

SECTION 5: FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: A solid stream of water may scatter molten product. Use water spray, foam, dry chemical or carbon dioxide.
SAFETY DATA SHEET

UNUSUAL FIRE AND EXPLOSION HAZARDS: Material will burn in a fire.

SPECIAL FIRE FIGHTING INSTRUCTIONS: Persons exposed to products of combustion should wear self-contained breathing apparatus and full protective equipment.

HAZARDOUS COMBUSTION PRODUCTS: Carbon dioxide, Carbon monoxide

SECTION 6: ACCIDENTAL RELEASE MEASURES

SPECIAL PROTECTION: No adverse health effects expected from the clean-up of spilled material. Follow personal protective equipment recommendations found in Section 8 of this SDS.

METHODS FOR CLEAN-UP: Allow molten material to solidify before disposal.

SECTION 7: HANDLING AND STORAGE

Handling: No special handling instructions due to toxicity. Avoid breathing vapors/fumes of heated product. Prevent contact with molten product.

Storage: Store in a cool, dry place.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMITS:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Note</th>
<th>AUSTRALIAN EXPOSURE LIMITS</th>
<th>ACGIH EXPOSURE LIMITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waxes, paraffin and hydrocarbon</td>
<td></td>
<td>2 mg/m3 TWA (fume)</td>
<td>2 mg/m3 TWA (fume)</td>
</tr>
<tr>
<td>Wax, polyethylene</td>
<td></td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Biological Limit Values (ACGIH)

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH Biological Exposure Index (BEI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No data available.</td>
<td></td>
</tr>
</tbody>
</table>

ENGINEERING CONTROL METHODS:

VENTILATION: Use local exhaust ventilation or other engineering controls to minimise exposures. At the application temperature, use of local exhaust over the premelting reservoir is encouraged.

EYE PROTECTION: Wear safety glasses when handling this product.

SKIN PROTECTION: Not normally required. Wear chemically resistant gloves to prevent prolonged or repeated contact. When working with heated material, wear thermally insulating gloves and long-sleeved coverall to protect against thermal burns.

GLOVES: Not normally required. Use nitrile gloves if conditions warrant.

RESPIRATORY PROTECTION: Respiratory protection may be required to avoid overexposure when handling this product. Use a respirator if general room ventilation is not available or sufficient to eliminate symptoms. Respirators should be selected by and used following requirements found in OSHA’s respirator standard (29 CFR 1910.134).

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Solid
COLOR: Off-white
ODOR: Neutral
ODOR THRESHOLD: Not established
pH: Not established
FREEZING/MELTING POINT (deg. C): Not established
BOILING POINT (deg. C): Not established
FLASH POINT: Not applicable
EVAPORATION RATE: Not established
FLAMMABILITY: Not a flammable solid or gas
UPPER EXPLOSIVE LIMIT (% in air): Not established
LOWER EXPLOSIVE LIMIT (% in air): Not established
VAPOR PRESSURE (mm Hg): Not established
VAPOR DENSITY: Not established
SPECIFIC GRAVITY: 0.930
SOLUBILITY: Not established
OCTANOL/WATER COEFFICIENT: Not established
AUTOIGNITION TEMPERATURE: Not established
DECOMPOSITION TEMPERATURE: Not established
VISCOSITY: No data available.
SOLIDS (% by weight): 100.0
VOC, weight percent 0.00

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable under normal conditions.
CHEMICAL INCOMPATIBILITY: Not established
HAZARDOUS POLYMERIZATION: Will not occur.
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide

SECTION 11: TOXICOLOGICAL INFORMATION

Component Toxicity / Toxicology Data:

<table>
<thead>
<tr>
<th>COMPONENT NAME</th>
<th>LD50/LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>No data available.</td>
<td></td>
</tr>
</tbody>
</table>

This product is a mixture. Unless noted, the information below is based on components.
Skin corrosion / irritation: Skin contact at room temperature is not irritating.
Serious eye damage / irritation: No irritation hazard in normal industrial use.
Respiratory / skin sensitization: No data available.
Germ cell mutagenicity: No data available.
Carcinogenicity: No data available.
Reproductive toxicity: No data available.
Specific target organ toxicity-single exposure: No data available.
Respiratory irritation / Narcotic effects: No data available.
Specific target organ toxicity-single exposure: No data available.
Target organs potentially affected by exposure: No organs known to be damaged from exposure to this product.
Aspiration hazard: Not an aspiration hazard.

Medical Conditions Aggravated by Exposure: No medical conditions affected by exposure.
SECTION 12: ECOLOGICAL INFORMATION

OVERVIEW: No ecological information available for this product.
MOBILITY: No data available.
PERSISTENCE: No data available.
BIOACCUMULATION: No data available.

This product has not been tested for ecological effects. Relevant information for components is listed below:

<table>
<thead>
<tr>
<th>Component</th>
<th>Ecotoxicity values</th>
</tr>
</thead>
<tbody>
<tr>
<td>No data available.</td>
<td>Acute Toxicity (Fish):</td>
</tr>
<tr>
<td></td>
<td>Acute Toxicity (Daphnia):</td>
</tr>
<tr>
<td></td>
<td>Acute Toxicity (Algae):</td>
</tr>
</tbody>
</table>

SECTION 13: DISPOSAL CONSIDERATIONS

This product is 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: If possible recycle, otherwise dispose strictly in accordance with local industrial waste or environmental protection regulations. This substance may, if permitted by local authorities, be disposed of in an approved incineration facility or be considered for landfill.

SPECIAL PRECAUTIONS: Do not allow this material to contaminate soil, sewerage systems or 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.

SECTION 14: TRANSPORT INFORMATION

Consult Bill of Lading for transportation information.

ADG: NOT REGULATED
IATA: NOT REGULATED
HazChem Code: Not applicable

SECTION 15: REGULATORY INFORMATION

INVENTORY STATUS
AUSTRALIA AICS: All ingredients in this mixture are listed in the Australian Inventory of Chemical Substances.
U.S. EPA TSCA: This product is in compliance with the Toxic Substances Control Act's Inventory requirements.
CANADIAN CEPA DSL: The components of this product are included on the DSL or are exempt from DSL requirements.
EUROPEAN REACH: As a result of the introduction of REACH into Europe, this product cannot be imported into Europe unless the REACH requirements are met.
JAPAN ENCS: This product is in compliance with the Japanese Existing and New Chemical Substances requirements.
KOREAN TCCL: This product is in compliance with the Korean Existing Chemicals List
requirements.

PHILIPPINES: This product is in compliance with the Philippine Inventory of Chemicals and Chemical Substances requirements.

CHINA IECSC INVENTORY: This product is in compliance with the Inventory of Existing Chemical Substances in China (IECSC) requirements.

If you need more information about the inventory status of this product call 1+ 651-236-5858.

**Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP):**

- Not a scheduled poison

**SECTION 16: OTHER INFORMATION**

<table>
<thead>
<tr>
<th>SDS Date of Issue:</th>
<th>22-02-2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Replaces:</td>
<td>15-01-2016</td>
</tr>
<tr>
<td>Changes made to previous issue:</td>
<td>None</td>
</tr>
</tbody>
</table>

**ACRONYMS and DEFINITIONS:**

- ACGIH: American Conference of Governmental Industrial Hygienists
- ADG Code: Australian Code for the Transport of Dangerous Goods by Road and Rail
- AICS: Australian Inventory of Chemical Substances
- BEI: Biological Exposure Index
- 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.
- IARC: International Agency for Research on Cancer
- IATA Code: International Air Transport Association Code
- IMDG Code: International Maritime Dangerous Goods Code
- N.O.S.: Not otherwise specified
- NOHSC: National Health and Safety Commission
- PPE: Personal protection equipment
- SUSMP: Standard for the Uniform Scheduling of Medicines and Poisons
- UN Number: United Nations Number

Prepared by: The Global Regulatory Department
Phone: 1-651-236-5842

The information and recommendations set forth herein are believed to be accurate. Because some of the information is derived from information provided to H.B. Fuller Company Australia Pty. Ltd. from its suppliers, and because H.B. Fuller Company Australia Pty. Ltd. has no control over the conditions of handling and use, H.B. Fuller Company Australia Pty. Ltd. makes no warranty, expressed or implied, regarding the accuracy of the data or the results to be obtained from the use thereof. The information is supplied solely for your information and consideration, and H.B. Fuller Company Australia Pty. Ltd. assumes no responsibility for use or reliance thereon. It is the responsibility of the user of H.B. Fuller Company Australia Pty. Ltd. products to comply with all applicable federal, state and local laws and regulations.