SAFETY DATA SHEET

SECTION 1: IDENTIFICATION OF THE PRODUCT AND SUPPLIER

PRODUCT INFORMATION
PRODUCT: FOSTER 83-13HM ZP
PRODUCT DESCRIPTION: Hot melt adhesive
INTENDED USE: Adhesive
PRODUCT IDENTIFIER: 842117PM

COMPANY INFORMATION
H.B. Fuller Company
1200 Willow Lake Boulevard
Vadnais Heights, MN  55110
Telephone: 888-423-8553

Medical Emergency Phone Number (24 Hours): 1-888-853-1758
Transport Emergency Phone Number (CHEMTREC): 1-800-424-9300

SECTION 2: HAZARDS IDENTIFICATION

GHS Classification: This product is not classified as hazardous under GHS criteria.
GHS Precautions:
Safety Precautions: No special precautionary measures are required. Please read the entire Safety Data Sheet for other information regarding handling of this product.
First Aid Measures: IF SWALLOWED: Do not induce vomiting. Seek medical attention if symptoms develop. IF IN EYES: Use an eye wash to remove chemical from the eye. IF ON SKIN: Wash with soap and water. IF INHALED: Remove individual to fresh air after an airborne exposure if any symptoms develop.

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>Mineral oil</td>
<td>Proprietary</td>
<td>10 - 30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mineral oil, white</td>
<td>8042-47-5</td>
<td>0.1 - 1</td>
<td>Asp. Tox. 1; H304</td>
<td></td>
</tr>
</tbody>
</table>

Unlisted ingredients are not 'hazardous' per the Occupational Safety and Health Administration Hazard Communication Standard (29 CFR 1910.1200) and/or are not found on the Canadian Workplace Hazardous Materials Information System ingredient disclosure list. See Section 8 for exposure limit guidelines.

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.
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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.
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.
Transport Emergency Phone Number (CHEMTREC): 1-800-424-9300

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. Consult the Technical Data Sheet for specific storage instructions.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMITS:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Note</th>
<th>ACGIH EXPOSURE LIMITS</th>
<th>OSHA PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mineral oil</td>
<td></td>
<td>5 mg/m3 TWA (excluding metal working fluids, inhalable fraction)</td>
<td>5 mg/m3 TWA (as mist)</td>
</tr>
<tr>
<td>Mineral oil, white</td>
<td>No data available.</td>
<td></td>
<td>5 mg/m3 TWA (as mist)</td>
</tr>
</tbody>
</table>

ENGINEERING CONTROL METHODS:

VENTILATION: General room ventilation might be required under normal conditions of use. 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 considered a skin hazard. Where use can result in skin contact, practice good personal hygiene. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work. When material is heated, wear thermally insulating gloves to protect against thermal burns.
GLOVES: Not normally required. Use nitrile gloves if conditions warrant.
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**RESPIRATORY PROTECTION:** No respiratory protection required under normal conditions of use. 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**

<table>
<thead>
<tr>
<th>PHYSICAL STATE:</th>
<th>Solid</th>
</tr>
</thead>
<tbody>
<tr>
<td>COLOR:</td>
<td>Light Amber</td>
</tr>
<tr>
<td>ODOR:</td>
<td>Neutral</td>
</tr>
<tr>
<td>ODOR THRESHOLD:</td>
<td>Not established</td>
</tr>
<tr>
<td>pH:</td>
<td>Not established</td>
</tr>
<tr>
<td>FREEZING/MELTING POINT (deg. C):</td>
<td>Not established</td>
</tr>
<tr>
<td>BOILING POINT (deg. C):</td>
<td>Not established</td>
</tr>
<tr>
<td>FLASH POINT:</td>
<td>&gt; 204°C (400°F) COC</td>
</tr>
<tr>
<td>EVAPORATION RATE:</td>
<td>Not established</td>
</tr>
<tr>
<td>FLAMMABILITY:</td>
<td>Not a flammable solid or gas</td>
</tr>
<tr>
<td>UPPER EXPLOSIVE LIMIT (% in air):</td>
<td>Not established</td>
</tr>
<tr>
<td>LOWER EXPLOSIVE LIMIT (% in air):</td>
<td>Not established</td>
</tr>
<tr>
<td>VAPOR PRESSURE (mm Hg):</td>
<td>Not established</td>
</tr>
<tr>
<td>VAPOR DENSITY:</td>
<td>Not established</td>
</tr>
<tr>
<td>SPECIFIC GRAVITY:</td>
<td>0.960</td>
</tr>
<tr>
<td>SOLUBILITY:</td>
<td>Not established</td>
</tr>
<tr>
<td>OCTANOL/WATER COEFFICIENT:</td>
<td>Not established</td>
</tr>
<tr>
<td>AUTOIGNITION TEMPERATURE:</td>
<td>Not established</td>
</tr>
<tr>
<td>DECOMPOSITION TEMPERATURE:</td>
<td>Not established</td>
</tr>
<tr>
<td>VISCOSITY:</td>
<td>No data available.</td>
</tr>
<tr>
<td>SOLIDS (% by weight):</td>
<td>100.0</td>
</tr>
<tr>
<td>VOC, weight percent:</td>
<td>0.00</td>
</tr>
</tbody>
</table>

**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: No irritation hazard in normal industrial use.
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.
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Specific target organ toxicity-single exposure: No data available.
Respiratory irritation / Narcotic effects: No data available.
Specific target organ toxicity-repeated 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.
Hazards specific to product use: Contact with product at elevated temperatures can result in thermal burns.

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

To the best of our knowledge, this product does not meet the definition of hazardous waste under the U.S. EPA Hazardous Waste Regulations 40 CFR 261. Dispose of in an approved landfill. Consult your state, local or provincial authorities and your local waste vendor for more restrictive requirements.

SECTION 14: TRANSPORT INFORMATION

Consult Bill of Lading for transportation information.

US DOT: NOT REGULATED
IATA: NOT REGULATED

SECTION 15: REGULATORY INFORMATION

INVENTORY STATUS
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.
AUSTRALIA AICS: This product is in compliance with the Australian Inventory of Chemical Substances requirements.
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
SAFETY DATA SHEET

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 651-236-5858.

This product may contain chemical substances that are regulated for export by various government agencies (such as the Environmental Protection Agency, the Bureau of Industry and Security, or the Drug Enforcement Administration, among others). Before exporting this product from the USA or Canada, we recommend you contact us at reg.request@hbfuller.com to request an export review.

FEDERAL REPORTING

EPA SARA Title III Section 313
Unless listed below, this product does not contain toxic chemical(s) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR part 372. EPA has advised that when a percentage range is listed the midpoint may be used to fulfill reporting obligations.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS#</th>
<th>%</th>
</tr>
</thead>
</table>

STATE REPORTING
Proposition 65, The Safe Drinking Water and Toxic Enforcement Act of 1986:
Unless listed below, this product does not contain known levels of any chemical known to the State of California to cause cancer or reproductive harm.

<table>
<thead>
<tr>
<th>Chemical Name/List</th>
<th>CAS</th>
<th>Percent</th>
</tr>
</thead>
</table>

Substances of Very High Concern (SVHC) Content:
Unless listed below, this product does not contain SVHC’s at 0.1% or greater, as of the version date of this SDS.

SECTION 16: OTHER INFORMATION

SDS VERSION DATE: 11-17-2016

This Safety Data Sheet is prepared to comply with the United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200) and the Canadian Workplace Hazardous Materials Information System (WHMIS).

HMIS RATING: HEALTH -- 0 FLAMMABILITY -- 1 REACTIVITY -- 0
See SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for personal protective equipment recommendations.

Prepared by: The Global Regulatory Department
Phone: 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 the H.B. Fuller Company from its suppliers, and because the H.B. Fuller Company has no control over the conditions of handling and use, the H.B. Fuller Company 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 the H.B. Fuller Company assumes no responsibility for use or reliance thereon. It is the responsibility of the user of H.B. Fuller Company products to comply with all applicable federal, state and local laws and regulations.