SAFETY DATA SHEET

Advantra® PHC-8290 PI

Version 1.0  Revision Date 11/18/2016

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Advantra® PHC-8290 PI
Product code : 100000005178

Manufacturer or supplier's details
Company : H.B. Fuller Company
Address : 1200 Willow Lake Boulevard
          Vadnais Heights, MN 55110
Telephone : 1-888-423-8553

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

Recommended use of the chemical and restrictions on use
Recommended use : Hot melt adhesive
Restrictions on use : For industrial use only.

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

| Appearance | Solid form |
| Color      | off-white  |
| Odor       | characteristic |

GHS Classification
Not a hazardous substance or mixture.

GHS label elements
Not a hazardous substance or mixture.

Potential Health Effects

Inhalation : Vapors/fumes may be irritating at application temperatures.
Skin : Contact with hot product will cause thermal burns.
Aggravated Medical Condition : None known.

Carcinogenicity:
IARC : No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA : No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.
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equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Substance / Mixture</th>
<th>Hazardous ingredients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixture</td>
<td></td>
</tr>
</tbody>
</table>

Hazardous ingredients

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paraffin waxes and Hydrocarbon waxes</td>
<td>8002-74-2</td>
<td>20 - 30</td>
</tr>
</tbody>
</table>

SECTION 4. FIRST AID MEASURES

General advice : Show this material safety data sheet to the doctor in attendance.

If inhaled : Move to fresh air.
If symptoms persist, call a physician.

In case of skin contact : Wash off with soap and water.
Cool melted product on skin with plenty of water. Do not remove solidified product.

In case of eye contact : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

If swallowed : Do not induce vomiting. Seek medical attention if symptoms develop. Provide medical care provider with this MSDS.

Notes to physician : Use mineral oil to soften and loosen product for removal.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media : Do NOT use water jet.

Specific hazards during fire fighting : Burning produces irritant fumes.

Special protective equipment for fire-fighters : Wear self-contained breathing apparatus for firefighting if necessary.
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SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
: Refer to protective measures listed in sections 7 and 8.
Methods and materials for containment and cleaning up
: Allow to solidify.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling
: Avoid breathing vapors/fumes of heated product. Prevent contact with molten product.
Conditions for safe storage
: Keep in a dry, cool place.
Materials to avoid
: No special restrictions on storage with other products.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paraffin waxes and Hydrocarbon waxes</td>
<td>8002-74-2</td>
<td>TWA</td>
<td>2 mg/m3</td>
<td>ACGIH</td>
</tr>
</tbody>
</table>

Engineering measures
: At the application temperature, use of local exhaust over the premelting reservoir is encouraged.

Personal protective equipment

Respiratory protection
: In case of insufficient ventilation, wear suitable respiratory equipment.
Filter type
: Particulates type

Hand protection
Material
: Protective gloves
Remarks
: When handling hot material, use heat resistant gloves.

Eye protection
: Safety glasses

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
: Solid form
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<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>off-white</td>
</tr>
<tr>
<td>Odor</td>
<td>characteristic</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Boiling point/boiling range</td>
<td>not determined</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>not determined</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not classified as a flammability hazard</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>upper flammability limit</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>lower flammability limit</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>not determined</td>
</tr>
<tr>
<td>Relative vapor density</td>
<td>not determined</td>
</tr>
<tr>
<td>Density</td>
<td>0.96 g/cm³</td>
</tr>
<tr>
<td>Water solubility</td>
<td>insoluble</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>not determined</td>
</tr>
<tr>
<td>Thermal decomposition</td>
<td>Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

**SECTION 10. STABILITY AND REACTIVITY**

Chemical stability: The product is chemically stable.
Possibility of hazardous reactions: Hazardous polymerization does not occur.
Hazardous decomposition products: Stable under normal conditions. Thermal decomposition can lead to release of irritating gases and vapors.

**SECTION 11. TOXICOLOGICAL INFORMATION**

Acute toxicity
No data available

Skin corrosion/irritation
No data available
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Serious eye damage/eye irritation
No data available

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
No data available

Carcinogenicity
No data available

Reproductive toxicity
No data available

STOT-single exposure
No data available

STOT-repeated exposure
No data available

Aspiration toxicity
No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity
No data available

Persistence and degradability
No data available

Bioaccumulative potential

Mobility in soil
No data available

Other adverse effects
No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods
Waste from residues
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.
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The hazard and precautionary statements displayed on the label also apply to any residues left in the container.

SECTION 14. TRANSPORT INFORMATION

Special precautions for user

Remarks : Not dangerous goods

Domestic regulation

International Regulations

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

SECTION 15. REGULATORY INFORMATION

SARA 311/312 Hazards : No SARA Hazards

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

US State Regulations

California Prop 65 : This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

The ingredients of this product are reported in the following inventories:

- TSCA : On TSCA Inventory
- DSL : All components of this product are on the Canadian DSL
- REACH : Not in compliance with the inventory
- AICS : On the inventory, or in compliance with the inventory
- NZIoC : Not in compliance with the inventory
- ENCS : Not in compliance with the inventory
SECTION 16. OTHER INFORMATION

Prepared by: Global Regulatory Department - phone: 1-651-236-5842 - email: msds.request@hbfuller.com

Further information

NFPA: Health 1 0 0 Flammability

HMIS III:

HEALTH 0
FLAMMABILITY 1
PHYSICAL HAZARD 0

0 = not significant, 1 = Slight, 2 = Moderate, 3 = High, 4 = Extreme, * = Chronic

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