1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: HOWEFILL HF-50
Supplier: Arlon EMD
9433 Hyssop Drive
Rancho Cucamonga, CA 91730 - USA
Telephone: 001-860-774-9605
Fax: 001-860-779-5778
Email: info@arlonemd.com
Emergency Telephone Number: 800-424-9300 (U.S. & Canada)
001-703-527-3887 (International – Call Collect)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)/Regulation (EC) No 1272/2008 [CLP]: Not Classified

2.2 GHS Label elements, including precautionary statements (OSHA 29 CFR 1910[HCS]/Regulation (EC) No 1272/2008 [CLP])

Pictogram

Signal word Warning!

Hazard statement(s)
Inhalation May cause respiratory irritation.
Skin Causes skin irritation.
Eyes Causes eye irritation.
Ingestion Harmful if swallowed.

Precautionary statement(s)
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink, or smoke when using this product.
P280 Wear protective gloves/ eye protection/ face protection
P302 + P312 IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P321 Specific treatment (see supplemental first aid instructions on this label)
P332 + P313 If skin irritation occurs: Get medical advice/attention.
P337 + P313 If eye irritation persists: Get medical advice/attention.
P362 Take off contaminated clothing and wash before reuse.
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS – None known

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Cas #</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polymide Resin</td>
<td>Confidential</td>
<td>&gt;35</td>
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</table>

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST-AID MEASURES

General Advice: If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

If Inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing is irregular, provide artificial respiration or oxygen by trained professional. Get medical attention if adverse health effects persist or are severe.

In Case of Skin Contact: Take off contaminated clothing. Immediately wash with plenty of soap and water. If skin irritation occurs, get medical advice/attention. Wash clothing before reuse.

In Case of Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if symptoms persist.

If Swallowed: Rinse out mouth. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Get medical attention immediately.

5. FIRE-FIGHTING MEASURES

Conditions of Flammability: Flash Point: No data available
Auto Ignition Temperature: No data available
UEL: No data available
LEL: No data available

Suitable Extinguishing Media: X Water Spray X Foam X CO₂
X Dry Chemical Other:

Special Protective Equipment for Fire Fighters: Fire-fighters should wear NIOSH-approved positive pressure, self-contained breathing apparatus (SCBA) and full protective gear. Avoid fire-fighting from downwind. Cool containers with water spray. Provide adequate ventilation. Prevent fire extinguishing water from contaminating surface water or the ground water system.

Hazardous Combustion Products: Many chemicals that can evolve during any partial decomposition of chemical products. The amounts or identities cannot be predicted and can differ in each situation. Carbon oxides, nitrogen oxides (NOx).
6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear personal protective equipment (see section 8). Remove all sources of ignition. Avoid contact with skin and eyes. Avoid breathing dust/mist. Ensure adequate ventilation.

Environmental Precautions: Prevent leakage into the sewer, drainage system or soil. Avoid release to environment. Inform the relevant authorities if the product has caused environmental pollution.

Methods and Materials for Containment and Cleaning Up: Sweep or shovel into the appropriate container for disposal. Cloth gloves are not recommended as they may accumulate debris. Prevent airborne dust.

7. HANDLING AND STORAGE

Precautions for Safe Handling: Avoid contact with skin and eyes. Avoid formation of dust. Avoid contact with skin and eyes. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection. Wear suitable protective clothing, gloves, and eye/face protection. Open and handle container with care. Do not eat, drink, or smoke while handling. (See section 8).

Conditions for Safe Storage: Store in a cool, dry, and well-ventilated area. Keep away from Ultraviolet light.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with Workplace Controls Parameters: Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Provide eyewash stations.

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS No.</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
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<tr>
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</table>

Personal Protective Equipment:

Respiratory Protection: In case of inadequate ventilation wear respiratory protection. 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.

Hand Protection: Wear resistant gloves to prevent cutting or mechanical irritation. Rubber or vinyl preferred. Cotton gloves tend to accumulate dust and debris and are not suitable.

Eye Protection: Safety glasses with side shields (ANSI Z87 recommended). Do not wear contact lenses.

Skin and Body Protection: 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.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety practices. Do not eat, drink, or smoke when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:
Form: Powder
Color: Light yellow/brown

Safety Data:
ph: No data available
Melting/Freezing Point: 150-350 deg. C
Boiling Point: No data available
Flash Point: No data available
Ignition Temperature: No data available
Auto Ignition Temperature: No data available
Lower Explosion Limit: No data available
Upper Explosion Limit: No data available
Vapor Pressure: No data available
Density: 0.801 g/cc (calculated)
Water Solubility: Not soluble in water
Partition Coefficient: No data available
Relative Vapor Density: No data available
Odor: Odorless
Odor Threshold: No data available
Evaporation Rate: No data available

10. STABILITY AND REACTIVITY

Chemical Stability: Stable under recommended storage conditions, temperatures, and pressures.
Possibility of Hazardous Reactions: No data available.
Conditions to Avoid: Exposure to moisture. Moisture sensitive. Dust generation. When exposed to high temperatures may produce hazardous decomposition products.
Materials to Avoid: Avoid strong oxidizing agents, strong reducers, free radical initiators, oxygen scavengers.
Hazardous decomposition products: Combustion products may include carbon dioxide, carbon monoxide, nitrogen oxides, and other organic compounds.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:
Oral LD50: No data available
Dermal LD50: No data available
Other Info. on Acute Toxicity: No data available
Skin Corrosion/Irritation: No data available
Serious Eye Damage/Irritation: No data available
Respiratory or Skin Sensitization: No data available
Germ Cell Mutagenicity: No data available

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

Reproductive Toxicity: No data available
Teratogenicity: No data available.
Specific Target Organ Toxicity – Single Exposure (GHS):
Specific Target Organ Toxicity – Repeated Exposure (GHS):
Aspiration Hazard: Inhalation - May cause respiratory irritation.
Potential Health Effects:
Inhalation: No data available.
Ingestion: No data available.
Skin: Causes skin irritation.
Eyes: Causes eye irritation.
Signs and Symptoms of Overexposure: No data available.
Synergistic Effects Additional Information: Not available.

12. ECOLOGICAL INFORMATION:

No data available.

13. DISPOSAL CONSIDERATIONS

Product: Dispose of in accordance with applicable, federal, state, provincial, and local laws, and regulations.
Contaminated Packaging: Recommend contaminated packaging material should be disposed of as stated above for residues and unused product.

14. TRANSPORT INFORMATION

DOT (U.S.) Classification: Not dangerous goods.
IMDG Classification: Non-hazardous for transportation.
IATA Classification: Not dangerous goods.

15. REGULATORY INFORMATION

TSCA: All components are listed in TSCA inventory or are exempt.
SARA 302 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 Components: 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.
SARA 311/312 Hazards: Acute Health Hazard.
Massachusetts Right To Know Components: No components are subject to the Massachusetts Right to Know Act.
Pennsylvania Right To Know Components: No components are subject to the Pennsylvania Right to Know Act.
New Jersey Right To Know Components: No components are subject to the Pennsylvania Right to Know Act.
California Prop. 65 Component: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

HMIS Classification:

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Reactivity</th>
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</thead>
<tbody>
<tr>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

NA = Not Applicable
NE = Not Established

FILE: HOWFILL HF-50 SDS
PREPARED BY: Vipul Shah
Acronyms

ACGIH: American Conference of Governmental Industrial Hygienists.
CAS No.: Chemical Abstracts Service registration number.
GHS: Globally Harmonized System of Classification and Labeling of Chemicals.
HMIS: Hazardous Materials Information System
IARC: International Agency for Research on Cancer.
OSHA: Occupational Safety and Health Administration (United States).
PEL: Permissible Exposure Limit.
SARA: Superfund Amendments and Reauthorization Act.
STEL: Short Term Exposure Limit.
TSCA: Toxic Substances Control Act, (United States chemical inventory).
TLV: Threshold Limit Value.
TWA: Time Weighted Average.
UEL/LEL: Upper Explosion Limit/Lower Explosion Limit.

DISCLAIMER:
The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the result to be obtained from the use thereof.

Arlon EMD assumes no responsibility for personal injury or property damage to vendees, users or third parties caused by the material. Such vendees or users assume all risks associated with the use of the material. MSDS has been prepared in accordance with ANSI standard Z400.1-2044, and regulation (EC) N° 1907/2006.

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