1. Identification

Product identifier: PHENOXY RESIN PKHW-34

Other means of identification: None.

Recommended use: Coatings.

Recommended restrictions: None known.

Manufacturer/Importer/Supplier/Distributor information

Company name: Gabriel Phenoxies, Inc.
Address: 808 Celriver Rd.
Rock Hill, SC 29730 US
Telephone: (803) 329-8059
E-mail: Jwerkmeister@phenoxy.com
Contact person: Jim Werkmeister

2. Hazard(s) identification

Physical hazards: Not classified.

Health hazards: Skin corrosion/irritation Category 2
Serious eye damage/eye irritation Category 1

OSHA defined hazards: Not classified.

Label elements

Signal word: Danger

Hazard statement: Causes skin irritation. Causes serious eye damage.

Precautionary statement:


Response: If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor.

Storage: Store away from incompatible materials.

Disposal: Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC): None known.

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Reaction product: bisphenol-A-(epichlorohydrin) (number average MW &gt; 700)</td>
<td>25068-38-6</td>
<td>34</td>
</tr>
<tr>
<td>1-Propoxy-2-propanol</td>
<td>1569-01-3</td>
<td>&lt;7</td>
</tr>
<tr>
<td>N,N'-Dimethyleneamine</td>
<td>108-01-0</td>
<td>&lt;3</td>
</tr>
</tbody>
</table>
4. First-aid measures

**Inhalation**
Move to fresh air. Call a physician if symptoms develop or persist.

**Skin contact**
Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.

**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 immediately.

**Ingestion**
Rinse mouth. Get medical attention if symptoms occur.

**Most important symptoms/effects, acute and delayed**
Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain.

**Indication of immediate medical attention and special treatment needed**
Treat symptomatically.

**General information**
Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

**Suitable extinguishing media**
Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

**Unsuitable extinguishing media**
Do not use water jet as an extinguisher, as this will spread the fire.

**Specific hazards arising from the chemical**
During fire, gases hazardous to health may be formed.

**Special protective equipment and precautions for firefighters**
Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Fire fighting equipment/instructions**
In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.

**General fire hazards**
The product is not flammable.

6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation. Local authorities should be advised if significant spills cannot be contained.

**Methods and materials for containment and cleaning up**
Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

**Environmental precautions**
Never return spills in original containers for re-use. For waste disposal, see Section 13 of the SDS.

7. Handling and storage

**Precautions for safe handling**
Wear appropriate personal protective equipment. Avoid contact with eyes, skin, and clothing. Use with adequate ventilation. Avoid release to the environment. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities**
Keep container tightly closed. Store in a well-ventilated place. Store in a cool place. Store away from incompatible materials (see Section 10 of the SDS). **Protect from freezing.**

8. Exposure controls/personal protection

**Occupational exposure limits**
No exposure limits noted for ingredient(s).

**Biological limit values**
No biological exposure limits noted for the ingredient(s).

**Appropriate engineering controls**
Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**Individual protection measures, such as personal protective equipment**
Eye/face protection
Wear safety glasses with side shields (or goggles).
Skin protection
Hand protection Wear appropriate chemical resistant gloves. PVC gloves are recommended.
Other Wear suitable protective clothing.
Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment. NIOSH-approved, organic vapor/particulate respirator with a minimum of APF 10
Thermal hazards Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance
Physical state Liquid.
Form Resin dispersion.
Odor Mild. Sour.
Odor threshold Not available.
pH Not available.
Melting point/freezing point Not available.
Initial boiling point and boiling range Not available.
Flash point > 200.0 °F (> 93.3 °C) Closed Cup
Evaporation rate Not available.
Flammability (solid, gas) Not available.
Upper/lower flammability or explosive limits
Flammability limit - lower (%) Not available.
Flammability limit - upper (%) Not available.
Explosive limit - lower (%) Not available.
Explosive limit - upper (%) Not available.
Vapor pressure Not available.
Vapor density Not available.
Relative density 1.05
Solubility(ies)
Solubility (water) Dispersible.
Partition coefficient (n-octanol/water) Not available.
Auto-ignition temperature Not available.
Decomposition temperature Not available.
Viscosity Not available.
Other information
Molecular weight 28000 Daltons

10. Stability and reactivity

Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability Material is stable under normal conditions.
Possibility of hazardous reactions No dangerous reaction known under conditions of normal use.
Conditions to avoid Contact with incompatible materials.
Incompatible materials Strong oxidizing agents.
Hazardous decomposition products No hazardous decomposition products are known.
11. Toxicological information

Information on likely routes of exposure

**Inhalation**
No adverse effects due to inhalation are expected.

**Skin contact**
Causes skin irritation.

**Eye contact**
Causes serious eye damage.

**Ingestion**
Ingestion may cause irritation and malaise.

Symptoms related to the physical, chemical and toxicological characteristics

Causes severe eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain.

Information on toxicological effects

**Acute toxicity**
Occupational exposure to the substance or mixture may cause adverse effects.

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>N,N'-Dimethylethanol-amine (CAS 108-01-0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td>Rabbit</td>
<td>1370 uL/kg</td>
</tr>
<tr>
<td>Ingestion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC50</td>
<td>Rat</td>
<td>1641 ppm, 4 Hours</td>
</tr>
<tr>
<td>Oral</td>
<td>Rat</td>
<td>2 g/kg</td>
</tr>
<tr>
<td>LD50</td>
<td></td>
<td></td>
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<tr>
<td>Standard Reaction product: bisphenol-A-(epichlorohydrin) (number average MW &gt; 700) (CAS 25068-38-6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td>Rat</td>
<td>&gt; 2000 mg/kg</td>
</tr>
<tr>
<td>Oral</td>
<td>Rat</td>
<td>&gt; 5000 mg/kg</td>
</tr>
<tr>
<td>LD50</td>
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<td></td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Causes skin irritation.</td>
<td></td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Causes serious eye damage.</td>
<td></td>
</tr>
<tr>
<td>Respiratory or skin sensitization</td>
<td>No data available.</td>
<td></td>
</tr>
<tr>
<td>Respiratory sensitization</td>
<td>Based on available data, the classification criteria are not met.</td>
<td></td>
</tr>
<tr>
<td>Skin sensitization</td>
<td>No data available.</td>
<td></td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.</td>
<td></td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.</td>
<td></td>
</tr>
</tbody>
</table>

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity

No data available.

Specific target organ toxicity - single exposure

No data available.

Specific target organ toxicity - repeated exposure

No data available.

Aspiration hazard

Due to lack of data the classification is not possible.

12. Ecological information

Ecotoxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability

No data is available on the degradability of this product.

Bioaccumulative potential

No data available for this product.

**Partition coefficient n-octanol / water (log Kow)**

1-Propoxy-2-propanol (CAS 1569-01-3) 0.621

Mobility in soil

No data available.
Other adverse effects  None known.

13. Disposal considerations
Disposal instructions  Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
Hazardous waste code  The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products  Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging  Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information
DOT  Not regulated as dangerous goods.
IATA  Not regulated as dangerous goods.
IMDG  Not regulated as dangerous goods.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code  Not available.

15. Regulatory information
US federal regulations
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)  Not regulated.
CERCLA Hazardous Substance List (40 CFR 302.4)  Not listed.
Superfund Amendments and Reauthorization Act of 1986 (SARA)
Hazard categories  Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No
SARA 302 Extremely hazardous substance  Not listed.
SARA 311/312 Hazardous chemical  Yes
SARA 313 (TRI reporting)  Not regulated.
Other federal regulations
Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List  Not regulated.
Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)  Not regulated.
Safe Drinking Water Act (SDWA)  Not regulated.
US state regulations
US. Massachusetts RTK - Substance List  N,N'-Dimethylethanol-amine (CAS 108-01-0)
US. New Jersey Worker and Community Right-to-Know Act  N,N'-Dimethylethanol-amine (CAS 108-01-0)
US. Pennsylvania Worker and Community Right-to-Know Law  N,N'-Dimethylethanol-amine (CAS 108-01-0)
US. Rhode Island RTK
Not regulated.

US. California Proposition 65
Not Listed.

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s). A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

<table>
<thead>
<tr>
<th>Issue date</th>
<th>17-September-2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revision date</td>
<td>1-January-2016</td>
</tr>
<tr>
<td>Version #</td>
<td>04</td>
</tr>
</tbody>
</table>

HMIS® ratings

<table>
<thead>
<tr>
<th>Health: 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability: 0</td>
</tr>
<tr>
<td>Physical hazard: 0</td>
</tr>
</tbody>
</table>

List of abbreviations

LD50: Lethal Dose, 50%.
LC50: Lethal Concentration, 50%.
EC50: Effective concentration, 50%.
TWA: Time weighted average.
STEL: Short term exposure limit.

References
HSDB® - Hazardous Substances Data Bank

Disclaimer
This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.