1. PRODUCT & COMPANY IDENTIFICATION

Recommended use of the chemical and restriction on use
Recommended use: Polyurea component industrial chemicals
Suitable for use in industrial sector: Polymers industry; chemical industry

Company
SASE Company Inc. Phone: 1800-522-2606
2475 Stock Creek Blvd. Fax: 865.745.4110
Rockford, TN 37853 www.sasecompany.com

Emergency Telephone Number: Call INFOTRAC Day or Night, Within USA or Canada 800.535.5053
Outside USA or Canada: Call 1-703-527-3887 (collect calls accepted)

Use only for hazardous materials (or dangerous goods) incident - spill, leak, fire, exposure, or accident.

Chemical Family: Resin
Synonyms: Urethane System Resin Component

2. HAZARD IDENTIFICATION


Classification of the product

<table>
<thead>
<tr>
<th>Asp. Tox.</th>
<th>Flam. Liq.</th>
<th>Eye Dam./Irrit.</th>
<th>Aquatic Acute</th>
<th>Aquatic Chronic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
<td>2A</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

Aspiration hazard
Flammable liquids
Serious eye damage/eye irritation
Hazardous to the aquatic environment - acute
Hazardous to the aquatic environment - chronic

Label elements

Pictogram:

Signal Word:
Danger

Hazard Statement:
H227 Combustible liquid.
H319 Causes serious eye irritation.
H304 May be fatal if swallowed and enters airways.
H402 Harmful to aquatic life.
H412 Harmful to aquatic life with long lasting effects.

Precautionary Statements (Prevention):
P280 Wear protective gloves and eye/face protection.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P273 Avoid release to the environment.
Wash with plenty of water and soap thoroughly after handling.

Precautionary Statements (Response):
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P331 Do NOT induce vomiting.
- P337 + P311 If eye irritation persists: Call a POISON CENTER or doctor/physician.
- P370 + P378 In case of fire: Use water spray, dry powder, carbon dioxide, foam to extinguish.

Precautionary Statements (Storage):
- P405 Store locked up.
- P403 + P235 Store in a well-ventilated place. Keep cool.

Precautionary Statements (Disposal):
- P501 Dispose of contents/container to hazardous or special waste collection point.

Hazards not otherwise classified

No specific dangers known, if the regulations/notes for storage and handling are considered.


Emergency overview

WARNING: COMBUSTIBLE LIQUID.
Toxic to aquatic organisms.
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Causes skin irritation.
Causes serious eye damage. May cause allergic skin reaction.
Repeated oral exposure may affect certain organs.

3. COMPOSITION / INFORMATION ON INGREDIENTS


<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Content (W/W)</th>
<th>Chemical name</th>
</tr>
</thead>
<tbody>
<tr>
<td>102-60-3</td>
<td>&gt;= 20.0 - &lt; 25.0 %</td>
<td>Tetrahydroxypropylethylediamine</td>
</tr>
<tr>
<td>6846-50-0</td>
<td>&gt;= 10.0 - &lt; 15.0 %</td>
<td>Propanoic acid, 2-methyl-, 2,2-dimethyl-1-(1-methylethyl)-1,3-propanediyl ester</td>
</tr>
<tr>
<td>64742-47-8</td>
<td>&gt;= 5.0 - &lt; 15.0 %</td>
<td>Distillates (petroleum), hydrotreated light</td>
</tr>
<tr>
<td>64742-96-7</td>
<td>&gt;= 5.0 - &lt; 15.0 %</td>
<td>Solvent naphtha (petroleum), heavy aliph.</td>
</tr>
<tr>
<td>1305-78-8</td>
<td>&gt;= 0.0 - &lt; 0.2 %</td>
<td>calcium oxide</td>
</tr>
</tbody>
</table>


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<td>calcium oxide</td>
</tr>
</tbody>
</table>
4. FIRST AID MEASURES

Description of first aid measures

**General advice:**
First aid personnel should pay attention to their own safety. If the patient is likely to become unconscious, place and transport in stable sideways positions (recover position). Immediately remove contaminated clothing.

**If inhaled:**
Keep patient calm, remove to fresh air, seek medical attention.

**If on skin:**
Immediately wash thoroughly with soap and water, see medical attention.

**If in eyes:**
Wash affected areas for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

**If swallowed:**
Rinse mouth and then drink 200 – 300 ml of water, seek medical attention.

**Most important symptoms and effects, both acute and delayed**

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.
Hazards: No hazards anticipated.

**Indication of any immediate medical attention and special treatment needed**

**Note to physician**
Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. FIRE FIGHTING MEASURES

**Extinguishing media**

Suitable extinguishing media:
water spray, dry powder, carbon dioxide, foam

**Special hazards arising from the substance or mixture:**

Hazards during fire-fighting:
No particular hazards known.

**Advice for fire-fighters**
Protective equipment for fire-fighting:
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

**Further information**
Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. ACCIDENTAL RELEASE MEASURES

**Further accidental release measures:**
High risk of slipping due to leakage/spillage of product.

**Personal precautions, protective equipment and emergency procedures**
Use personal protective clothing.

**Environmental precautions**
Do not empty into drains. Do not discharge into the subsoil/soil.

**Methods and material for containment and cleaning up**
Spills should be contained, solidified, and placed in suitable containers for disposal.

### 7. HANDLING & STORAGE

**Precautions for safe handling**
Ensure thorough ventilation of stores and work areas. Protect against moisture.

Protection against fire and explosion:
No explosion proofing necessary.

**Conditions for safe storage, including any incompatibilities**
Segregate from foods and animal feeds. Segregate from acids. Segregate from oxidants.

Suitable materials for containers: carbon steel (iron), High density polyethylene (HDPE), Low density polyethylene (LDPE), Stainless steel 1.4301 (V2)

Further information on storage conditions: No special precautions necessary. Avoid extreme heat. Store protected against freezing.

**Storage stability:**
Storage temperature: 60 - 80°F (16 - 27 °C)

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<table>
<thead>
<tr>
<th>Components with occupational exposure limits</th>
<th>OSHA PEL</th>
<th>TWA value 5 mg/m³</th>
<th>ACGIH TLV</th>
<th>TWA value 2 mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>calcium oxide</td>
<td>PEL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated light</td>
<td>ACGIH TLV</td>
<td>TWA value 200 mg/m³ Non-aerosol (total hydrocarbon vapor); Application restricted to conditions in which there are negligible aerosol exposures. Skin Designation Non-aerosol (total hydrocarbon vapor); The substance can be absorbed through the skin. TWA value 200 mg/m³ Non-aerosol (total hydrocarbon vapor); Application restricted to conditions in which there are negligible aerosol exposures. Skin Designation Non-aerosol (total hydrocarbon vapor); The substance can be absorbed through the skin.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Advice on system design:**
Provide local exhaust ventilation to control vapors/mists.

**Personal protective equipment**

**Respiratory protection:**
Wear a NIOSH-certified (or equivalent) organic vapor/particulate respirator as needed.

**Hand protection:**
Chemical resistant protective gloves

**Eye protection:**

Wear face shield or tightly fitting safety goggles (chemical goggles) if splashing hazard exists.

**Body protection:**
Standard work clothes and shoes.

**General safety and hygiene measures:**
Avoid contact with skin. Handle in accordance with good industrial hygiene and safety practice. Wear protective clothing as necessary to prevent contact. Avoid inhalation of vapors/mists. Wash soiled clothing immediately.

9. **PHYSICAL & CHEMICAL PROPERTIES**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>slight odor</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>not applicable</td>
</tr>
<tr>
<td>Color</td>
<td>colorless, cloudy</td>
</tr>
<tr>
<td>pH value</td>
<td>7.0</td>
</tr>
<tr>
<td>Freezing point</td>
<td>0.00 °C (32°F)</td>
</tr>
<tr>
<td>Boiling point</td>
<td>200.00 °C (392°F)</td>
</tr>
<tr>
<td>Sublimation point</td>
<td>No applicable information provided</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt;61.00°C (&gt;141.8°F) (closed cup)</td>
</tr>
<tr>
<td>Flammability</td>
<td>not flammable</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>For liquids not relevant for classification and labeling. The lower explosion point may be 5 - 15°C (41 - 59°F) below the flash point.</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>&gt;250.00°C (482°F)</td>
</tr>
<tr>
<td>Autoignition</td>
<td>For liquids not relevant for classification and labeling.</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>0.45 mmHg (20.00 °C 68°F)</td>
</tr>
<tr>
<td>Density</td>
<td>8.3100 lb/USg (25.00 °C 77°F)</td>
</tr>
<tr>
<td>Relative density</td>
<td>no applicable information available.</td>
</tr>
<tr>
<td>Vapor density</td>
<td>not applicable</td>
</tr>
<tr>
<td>Partitioning coefficient n-octanol/water (log Pow):</td>
<td>not applicable</td>
</tr>
<tr>
<td>Self-ignition temperature</td>
<td>Not self-igniting</td>
</tr>
<tr>
<td>Thermal decomposition</td>
<td>No decomposition if stored and handled as prescribed/indicated.</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>400,000 mPa.s (cps) (25.00 °C 77°F)</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>no applicable information available</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>Slightly soluble.</td>
</tr>
<tr>
<td>Solubility (quantitative)</td>
<td>no applicable information available</td>
</tr>
<tr>
<td>Solubility (qualitative)</td>
<td>no applicable information available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Value can be approximated from Henry's Law</td>
</tr>
<tr>
<td>Other Information</td>
<td>If necessary, information on other physical and chemical parameters is indicated in this section.</td>
</tr>
</tbody>
</table>

10. **STABILITY & REACTIVITY**

Reactivity
No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals:
No corrosive effect on metal.

Oxidizing properties:
Not an oxidizer.

Chemical stability
The product is stable if stored and handled as prescribed/indicated.

**Possibility of hazardous reactions**
No hazardous reactions if stored and handled as prescribed/indicated

**Conditions to avoid**
Conditions to avoid:
Temperature: <0 degrees Celsius (<32 degrees Fahrenheit)

**Incompatible materials**
Substances to avoid:
Acids, oxidizing agents, isocyanates

**Hazardous decomposition products**
Decomposition products:
Hazardous decomposition products: carbon monoxide, carbon dioxide, nitrogen oxide, hydrogen cyanide

Thermal decomposition:
No decomposition if stored and handled as prescribed/indicated.

### 11. TOXICOLOGICAL INFORMATION

#### Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

**Acute Toxicity/Effects**

**Acute toxicity**
Assessment of acute toxicity: No known acute effects.

**Oral**
No applicable information available.

**Inhalation**
No applicable information available.

**Dermal**
No applicable information available.

**Assessment other acute effects**
Assessment of STOT single:
Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

Origin of data: expert judgement

**Irritation/corrosion**
Assessment of irritating effects: Eye contact causes irritation.

**Sensitization**
Assessment of sensitization: The chemical structure does not suggest a specific alert for such an effect. No applicable information available.

**Aspiration Hazard**
May also damage the lung at swallowing (aspiration hazard).

**Chronic Toxicity/Effects**

**Repeated dose toxicity**
Assessment of repeated dose toxicity: Repeated oral uptake of the substance did not cause substance-related effects. Repeated inhalative uptake of the substance did not cause substance-related effects. Repeated dermal uptake of the substance did not cause substance-related effects.
Genetic toxicity
Assessment of mutagenicity: The chemical structure does not suggest a specific alert for such an effect. No applicable information available.

Carcinogenicity
Assessment of carcinogenicity: The chemical structure does not suggest a specific alert for such an effect. No applicable information available.

Reproductive toxicity
Assessment of reproduction toxicity: The chemical structure does not suggest a specific alert for such an effect. No applicable information available.

Teratogenicity
Assessment of teratogenicity: The chemical structure does not suggest a specific alert for such an effect. No applicable information available.

Other Information
The product has not been tested. The statement has been derived from the properties of the individual components.

Symptoms of Exposure
The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

Medical conditions aggravated by overexposure
Data available do not indicate that there are medical conditions that are generally recognized as being aggravated by exposure to this substance/product.

12. ECOLOGICAL INFORMATION

Toxicity

Aquatic toxicity
Assessment of aquatic toxicity: Acutely harmful for aquatic organisms. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product has not been tested. The statement has been derived from the properties of the individual components.

Persistence and degradability
Assessment biodegradation and elimination (H2O)
Poorly biodegradable.

Elimination information

Poorly biodegradable.

Bioaccumulative potential
Assessment bioaccumulation potential
Does not significantly accumulate in organisms.

Mobility in soil
Assessment transport between environmental compartments
Adsorption to solid soil phase is not expected.

Additional information
Adsorbable organically-bound halogen (AOX):
This product contains no organically-bound halogen.
Other ecotoxicological advice:
The product has not been tested. Do not discharge product into the environment without control.

13. DISPOSAL CONSIDERATIONS

Waste disposal of substance:
Incinerate or dispose of in a licensed facility. Do not discharge substance/product into sewer system.

Container disposal:
Steel drums must be emptied and can be sent to a licensed drum reconditioner for reuse, a scrap metal dealer or an approved landfill. Do not attempt to refill or clean containers since residue is difficult to remove. Under no circumstances should empty drums be burned or cut open with gas or electric torch as toxic decomposition products may be liberated. Do not reuse empty containers.

14. TRANSPORTATION INFORMATION

Land Transport: USDOT
Classified as combustible liquid in containers greater than 119 gallons.

Sea Transport: IMDG
Not classified as a dangerous good under transport regulations

Air Transport: IATA/ICAO
Not classified as a dangerous good under transport regulations

15. REGULATORY INFORMATION

Federal Regulations

Registration status: Chemical TSCA, US released / listed

EPCRA 311/312 (Hazard categories): Acute; Fire

State regulations

<table>
<thead>
<tr>
<th>State RTK</th>
<th>CAS Number</th>
<th>Chemical name</th>
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<tbody>
<tr>
<td>MA, NJ, PA</td>
<td>64742-47-8</td>
<td>Distillates (petroleum), hydrotreated light</td>
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<tr>
<td>MA, NJ, PA</td>
<td>1305-78-8</td>
<td>calcium oxide</td>
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</tbody>
</table>

CA Prop. 65:
THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

NFPA Hazard codes:
Health: 2 Fire: 2 Reactivity: 1 Special:

HMIS III rating
Health: 2 Flammability: 2 Physical hazard: 1

16. OTHER INFORMATION

SDS Prepared by:
Technical Services

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