SAFETY DATA SHEET
Penetone® Corporation, 125 Kingsland Ave., Clifton, NJ 07014

DE-ICER™ 821
Page: 1 of 7
Date Prepared: September 25, 2019
SDS No.: 3180

SECTION 1: IDENTIFICATION

Product name: DE-ICER 821
Recommended use: Ice and snow melter
Physical Description: Granular white pellets with slight ammonia odor
Generic Ingredients: Urea

Manufacturer: Penetone Corporation
125 Kingsland Ave.
Clifton, NJ 07014
800-631-1652 or 201-567-3000

Business Contact:
Customer Service
800-631-1652 x2602 or 2272
Product Safety
800-631-1652 x2211 or 2257

Emergency Phone Numbers: PENETONE 201-567-3000 CHEMTREC 800-424-9300

SECTION 2: HAZARDS IDENTIFICATION

GHS CLASSIFICATION:

<table>
<thead>
<tr>
<th>Health</th>
<th>Physical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin irritation: 2</td>
<td>not classified</td>
</tr>
<tr>
<td>Eye irritation: 2A</td>
<td></td>
</tr>
</tbody>
</table>

WARNING!
Causes Skin Irritation.
Causes Severe Eye Irritation.

Precautions

Prevention:
Wear protective gloves, clothing, eye protection, and face protection. Wash hands and exposed skin thoroughly after handling.

Response:
If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS#</th>
<th>Concentration Wt%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urea</td>
<td>57-13-6</td>
<td>100</td>
</tr>
</tbody>
</table>

SECTION 4: FIRST-AID MEASURES

General Description of Symptoms & First-Aid Measures
Most likely work-place exposure routes will be skin contact and eye contact. Repeated or prolonged contact may cause reddening, itching and inflammation.

Eyes
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists or develops: Get medical advice or attention. Penetone recommends that after any eye exposure a physician be seen immediately.
Ingestion
If swallowed: Rinse mouth. Call a poison center, doctor, physician or other competent medical authority if you feel unwell.

Inhalation
If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center, doctor, physician or other competent medical authority if you feel unwell.

Skin
If on skin: Wash with plenty of water or a mild soap. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice or attention.

Special Treatment / Other
None

SECTION 5: FIRE FIGHTING MEASURES

Flammable Properties
Classification: Non-flammable
Flash Point: Not applicable
Autoignition Temperature: Not applicable
Lower Flammable Limit: Not applicable  Upper Flammable Limit: Not applicable

Specific Hazards
Product is a powder and presents no unusual fire hazards.

Extinguishing Media
Suitable: SMALL FIRE: Use dry chemical, carbon dioxide (CO₂), water spray or regular foam.  LARGE FIRE: water spray, water fog, or foam.

Unsuitable: None.

Protection & Precautions for Firefighters
Protective Equipment & Clothing: Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters protective clothing will only provide limited protection.

Fire Fighting Guidance: Cool containers with flooding quantities of water until well after fire is out. Move containers from fire area if you can do it safely. Dike fire control water for later disposal; do not scatter material. Containers can expand and explode under fire conditions due to vapor buildup. Always stay away from containers engulfed in fire.


SECTION 6: ACCIDENTAL RELEASE MEASURES

Land Spill
Sweep up material. Put all material into proper waste disposal container with lid tightly covered. Rinse area with plenty of water.

Water Spill
Urea will completely mix/dissolve in water making recovery difficult. Undissolved pellets should be recovered if possible. Localized high concentration of product may cause fish kills, but no persistent or long term effects are anticipated. Check with local environmental regulatory agencies for reporting requirements

See SECTION 8 for EXPOSURE CONTROLS and PERSONAL PROTECTION.
SECTION 7: HANDLING & STORAGE

Handling
Avoid contact with eyes, skin and clothing. After handling, always wash hands thoroughly with soap and water. Avoid personal contact with any residue. Do not cut, weld, or reuse empty container.

Storage
Keep container tightly closed when not in use. Do not store in direct sunlight. Avoid storing above 120°F (49°C). Do not store near strong acids, bases, or oxidizers. Avoid storing near nitrates. Do not store near sodium or calcium hypochlorite (bleach.)

SECTION 8: EXPOSURE CONTROLS and PERSONAL PROTECTION

Engineering Controls
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.

Personal Protection

Inhalation A respiratory protection program that meets OSHA’s 29 CFR 1910.134 or ANSI Z88.2 requirements must be followed whenever workplace conditions warrant respirator use. Use of an organic vapor mask or respirator is recommended.

Skin Wear chemical resistant gloves such as: rubber, nitrile, neoprene, or latex when skin contact is possible. Protective clothing including gloves, apron, sleeves, boots, head and face protection should be worn depending on how the product is used. PPE should be cleaned thoroughly after each use.

Eyes Penetone recommends always wearing safety glasses as a minimum in any workplace. Conditions may warrant the use of chemical goggles and possibly a face shield. Consult your standard operating procedure or safety professional for advice. Use protective eye and face devices that comply with ANSI Z87.1-1987.

Additional Remarks
Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the hazards and/or potential hazards that may be encountered during use.

Occupational Exposure Limits

<table>
<thead>
<tr>
<th>Component Name</th>
<th>Source</th>
<th>Value</th>
<th>Type</th>
<th>Notation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particulate, n.o.s. (respirable)</td>
<td>ACGIH</td>
<td>3 mg/m³</td>
<td>TWA</td>
<td>Appendix B</td>
</tr>
<tr>
<td></td>
<td>NIOSH</td>
<td>---</td>
<td></td>
<td>see Appendix D</td>
</tr>
<tr>
<td>OSHA Z1</td>
<td>5 mg/m³</td>
<td>TWA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Particulate, n.o.s. (total)</td>
<td>ACGIH</td>
<td>10 mg/m³</td>
<td>TWA</td>
<td>Appendix B</td>
</tr>
<tr>
<td></td>
<td>NIOSH</td>
<td>---</td>
<td></td>
<td>see Appendix D</td>
</tr>
<tr>
<td>OSHA Z1</td>
<td>15 mg/m³</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

No OELs have been established for any of the components

SECTION 9: PHYSICAL & CHEMICAL PROPERTIES

Appearance: granular white pellets
Odor: slight ammonia
Odor Threshold: not determined
pH: not applicable
Melting Point / Freezing: 271°F
Boiling Point / Boiling Point Range: 275°F (decomposes)
**SECTION 10: STABILITY & REACTIVITY**

**Reactivity**
Stable. Will not undergo hazardous polymerization.

**Chemical Stability**
Stable. Will not undergo hazardous polymerization.

**Hazardous Reactions**
Can react with sodium or calcium hypochlorite (bleach) to form explosive nitrogen trichloride.

**Conditions to Avoid**
Do not store near strong acids, bases, or oxidizers. Avoid storing near nitrates. Do not store near sodium or calcium hypochlorite (bleach).

**Incompatible Materials**
Do not store near strong acids, bases, or oxidizers. Avoid storing near nitrates. Do not store near sodium or calcium hypochlorite (bleach).

**Hazardous Decomposition Products**
Smoke, fumes, and oxides of carbon and nitrogen. Heating above 270°F generates biuret, ammonia, and nitrogen oxides.

**SECTION 11: TOXICOLOGICAL INFORMATION**

**Product Summary**
Product is nontoxic.

**Acute Toxicity:**
- **Dermal:** no data available
- **Inhalation:** no data available
- **Oral:** LD50 14,300-15,000 mg/kg rat; LD50 = 11,500-13,000 mg/kg mouse

**Skin Corrosion/Irritation**
10% solution not irritating: mouse
Serious Eye Damage/Irritation
50% solution not irritating: rabbit

Repeated Dose Toxicity
Rat 24 weeks dermal NOAEL 40% in ointment

Sensitization - Respiratory or Skin
Not a skin sensitizer.

Germ Cell Mutagenicity
Bacterial reverse mutation assay - negative. Chromosomal aberration test, Chinese hamster, positive (very high dose; mouse, positive (very high dose). Bone marrow cytogenetic test, mouse, positive (very high dose).

Carcinogenicity
Not listed as a carcinogen by ACGIH, IARC, NTP, or OSHA.

Reproductive / Developmental Toxicity
No toxic effects on mouse gonads up to 6,750 mg/kg/day. No toxic effects on rat gonads up to 2,250 mg/kg/day. Not teratogenic.

Specific Target Organ Effects - Single Exposure
No data available

Specific Target Organ Effects - Repeated or Prolonged Exposure
No data available

Aspiration Hazard
Not an aspiration hazard

Other Information
Despite extensive medical use, no significant side effects on humans have been noted.

SECTION 12: ECOLOGICAL INFORMATION

Product Summary
Product is nontoxic to aquatic organisms.

Ecotoxicity
LC50 > 9,100 mg/l Barilius barma 96h
EC50 > 10,000 mg/l Daphnia magna 24h
TT > 10,000 mg/l Scenedesmus quadricauda 196 hr cell multiplication inhibition test

Applications of nitrogenous fertilizers to grassland for long periods may have deleterious effects on earthworms in the absence of liming.

Persistence and Degradability
Ultimately biodegradable (OECDTG 302B) 93-98% (SCAS 24 hr)

Bioaccumulative Potential
Low

Mobility in soil
No data available

Other Adverse Effects
Since urea is a fertilizer, it may promote eutrophication in waterways.
SECTION 13: DISPOSAL CONSIDERATIONS

Product is a nonhazardous waste under RCRA definitions. Dispose of contents/container in accordance with all applicable federal, state, and local regulations.

*Note:* Contaminated product, soil, water, container residues and spill cleanup materials may be hazardous wastes. Appropriate hazardous waste designation is the responsibility of the user.

SECTION 14: TRANSPORT INFORMATION

ID No.: Not applicable, nonhazardous material
Proper Shipping Name: Not applicable
Hazard Class: Not applicable
Packing Group: Not applicable
Label: None
Marine Pollutant: No
RQ: None
Special Precautions: None

SECTION 15: REGULATORY INFORMATION

TSCA
The ingredients in this product are listed on the TSCA inventory.

RCRA HAZARD CLASS
Nonhazardous waste

SARA 311/312 REPORTABLE HAZARD CATEGORIES: Immediate (Acute) Health

REPORTING REQUIREMENTS (all quantities in pounds)

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS / 313 Code</th>
<th>Section 302 (EHS) TPQ</th>
<th>Section 304 EHS RQ</th>
<th>CERCLA RQ (1)</th>
<th>Section 313</th>
<th>CAA 112(r) TQ</th>
<th>CWA / OPA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No component subject to reporting requirements</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NEW JERSEY RIGHT-TO-KNOW INFORMATION
This product contains urea (CAS# 57-13-6)

CALIFORNIA PROPOSITION 65 INFORMATION
This product does not contain any chemicals recognized by the state of California to cause cancer and/or birth defects or reproductive harm.

SCAQMD INFORMATION
Is there a photochemically reactive material present? No
What is the % by volume of photochemically reactive material? 0
What is the VOC content? 0
What is the vapor pressure of VOC's? Not applicable
SECTION 16: OTHER INFORMATION

REVISION SUMMARY
Change in Section 1

SUPERSEDES ISSUE DATE
April 1, 2015

HAZARD RATING SYSTEMS:

<table>
<thead>
<tr>
<th>HMIS</th>
<th>NFPA</th>
<th>KEY</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEALTH</td>
<td>1</td>
<td>1 = Severe</td>
</tr>
<tr>
<td>FLAMMABILITY</td>
<td>0</td>
<td>3 = Serious</td>
</tr>
<tr>
<td>REACTIVITY</td>
<td>0</td>
<td>2 = Moderate</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>1 = Slight</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0 = Minimal</td>
</tr>
</tbody>
</table>

FOR ADDITIONAL PRODUCT INFORMATION, CONTACT YOUR SALES ENGINEER
FOR ADDITIONAL HEALTH/SAFETY INFORMATION, CALL 201-567-3000

THE INFORMATION PRESENTED HEREIN HAS BEEN COMPILED FROM SOURCES CONSIDERED TO BE DEPENDABLE AND ACCURATE TO THE BEST OF PENETONE'S KNOWLEDGE. THE INFORMATION RELATES TO THIS SPECIFIC MATERIAL. IT MAY NOT BE VALID FOR THIS MATERIAL IF USED IN COMBINATION WITH ANY OTHER MATERIALS OR IN ANY PROCESS. IT IS THE USER'S RESPONSIBILITY TO SATISFY ONESELF AS TO THE SUITABILITY AND COMPLETENESS OF THIS INFORMATION FOR HIS OWN PARTICULAR USE.