1. Chemical Product and Company Identification

Product Name: HOUGHTO-SAFE 419-TY
Company Name: Houghton International Inc.
Madison & Van Buren Aves
Valley Forge, PA 19482
Website: www.houghtonintl.com
Telephone: (610) 666-4000
Emergency 24 HOUR - (800) 424-9300 (CHEMTREC)
FAX: (610) 666-1376
Customer Service: (888) 459-9844

2. Hazardous Ingredients

EXPOSURE LIMITS HAVE NOT BEEN ESTABLISHED FOR ANY OF THE COMPONENTS IN THIS PRODUCT.
SEE SECTION 3 FOR HEALTH HAZARD INFORMATION.

3. Hazards Identification

Primary Entry Routes: EYES, SKIN, INHALATION

Acute Effects

Inhalation: MISTS MAY CAUSE IRRITATION OF UPPER RESPIRATORY TRACT.
Eye: MODERATE IRRITANT.
Skin: MILD IRRITANT ON PROLONGED CONTACT.
Ingestion: AVOID INGESTION. MAY CAUSE NAUSEA, DIZZINESS, DIARRHEA, VOMITING.

Carcinogenicity: NO COMPONENT KNOWN TO BE PRESENT IN THIS PRODUCT AT GREATER THAN 0.1% IS LISTED AS A CARCINOGEN BY IARC, NTP OR OSHA.

Medical Conditions Aggravated by Long Term Exposure: PERSONS WITH CHRONIC RESPIRATORY DISEASE MAY SHOW INCREASED SYMPTOMS DUE TO IRRITATION OF MISTS.

Chronic Effects: UNKNOWN

HMIS:
Health: 0
Flammability: 0
Reactivity: 0
4. First Aid Measures

Inhalation  REMOVE TO SOURCE OF FRESH AIR.
Eye Contact  FLUSH WITH WATER 15 MINUTES; CONSULT PHYSICIAN.
Skin Contact  WASH WITH SOAP AND WATER. REMOVE CONTAMINATED CLOTHING AND LAUNDER BEFORE REUSING.
Ingestion  INDUCE VOMITING. CONSULT PHYSICIAN.
Note to Physicians  NO SPECIFIC ANTIDOTE KNOWN. BASED ON INDIVIDUAL REACTIONS OF THE PATIENT, THE PHYSICIAN'S JUDGMENT SHOULD BE USED TO CONTROL SYMPTOMS AND CLINICAL CONDITIONS.

N/A - Not Applicable

5. Fire Fighting Measures

Flash Point  N/A
Autoignition Temperature  N/D
LEL  N/D
UEL  N/D
Extinguishing Media  PRODUCT CONTAINS WATER. USE MEDIA APPROPRIATE FOR SURROUNDING FIRE.
Unusual Fire or Explosion Hazards  NONE.
Fire Fighting Instructions  PRODUCT IS A FIRE RESISTANT FLUID; NOT FLAMMABLE AS USED. IF WATER IS REMOVED, PRODUCT WILL BURN. CAN BE EXTINGUISHED WITH WATER, CARBON DIOXIDE, OR FOAM.

NFPA:

- Health  0
- Flammability  0
- Reactivity  0
5. Fire Fighting Measures - continued

Special N/A

N/A - Not Applicable; ND - Not Determined; > - Greater Than; < - Less Than

6. Accidental Release Measures

Spill or Release Procedures APPLY DRY ABSORBENT MATERIAL AND SWEEP UP.

7. Handling and Storage

Handling Precautions AVOID CONTACT WITH STRONG OXIDIZERS. WASH THOROUGHLY AFTER HANDLING.

Storage Requirements KEEP CONTAINERS CLOSED WHEN NOT IN USE.

8. Exposure Controls/Personal Protection

Engineering Controls GENERAL VENTILATION IS ADEQUATE.

Personal Protective Equipment

   Eye/Face Protection SAFETY GOGGLES OR SAFETY GLASSES WITH SIDE SHIELDS.
   Skin Protection RUBBER IF SKIN IS SENSITIVE.
   Respiratory Protection NOT REQUIRED.
   Other EYE WASH AND SAFETY SHOWER RECOMMENDED.

Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, or applying cosmetics.

9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>CLEAR, WATER-WHITE LIQUID</td>
</tr>
<tr>
<td>Odor</td>
<td>BLAND</td>
</tr>
<tr>
<td>Vapor Pressure (mmHg)</td>
<td>AS WATER</td>
</tr>
<tr>
<td>pH (Neat)</td>
<td>9.5</td>
</tr>
<tr>
<td>pH (Dilution)</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>N/A</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>COMPLETE</td>
</tr>
</tbody>
</table>
9. Physical and Chemical Properties - continued

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vapor Density (Air = 1)</td>
<td>AS WATER</td>
</tr>
<tr>
<td>Specific Gravity (Water = 1)</td>
<td>1.045</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>215°F</td>
</tr>
<tr>
<td>Freezing/ Melting Point</td>
<td>N/D</td>
</tr>
<tr>
<td>Evaporation Rate (BuAc = 1)</td>
<td>AS WATER</td>
</tr>
</tbody>
</table>

N/D - Not Determined; N/A - Not Applicable; > - Greater Than; < - Less Than

10. Stability and Reactivity

Stability: THIS PRODUCT IS STABLE AT ROOM TEMPERATURE IN CLOSED CONTAINERS UNDER NORMAL STORAGE AND HANDLING CONDITIONS.

Chemical Incompatibilities: STRONG OXIDIZERS

Hazardous Decomposition Products: THERMAL; OXIDES OF CARBON

Hazardous Polymerization: HAZARDOUS POLYMERIZATION WILL NOT OCCUR.

11. Toxicological Information

NO DATA AVAILABLE

12. Ecological Information

NO DATA AVAILABLE

13. Disposal Considerations


RCRA Hazardous Waste Number: N/A
14. Transportation Information

Proper Shipping Name
NOT HAZARDOUS

15. Regulatory Information

TSCA Section 8(b)
ALL OF THE COMPONENTS IN THIS PRODUCT ARE ON THE TSCA INVENTORY.

CERCLA Reportable
NONE

Quantity

SARA Title III, Section 313

Ozone Depleting
THIS PRODUCT WAS NOT MANUFACTURED, DOES NOT CONTAIN, AND WAS NOT PACKAGED USING ANY CLASS I OR CLASS II OZONE DEPLETING SUBSTANCE AS DEFINED BY THE CLEAN AIR ACT.

16. Other Information

Prepared By
GARY CARL

Title
MANAGER, PRODUCT SAFETY

Disclaimer: The information presented herein has been compiled from sources considered to be dependable and is accurate as of the date issued. However, since data, safety standards, and government regulations are subject to change and the conditions of handling and use are beyond our control, Houghton International makes no warranty regarding the accuracy of such data or its suitability for any purchaser’s use or for any consequence of its use. The data in this MSDS relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. Safe handling and use remains the responsibility of the purchaser and the purchaser has the sole responsibility to determine the suitability of the materials for any use and the manner of use contemplated. Houghton International assumes no responsibility for injury to the recipient or to third persons or for any damage to any property and the recipient assumes all such risks.