Canada Colors and Chemicals Limited

152 Kennedy Road South
Brampton, Ontario
Canada
L6W 3G4

General Inquiry Number: (905) 459-1232

Safety Data Sheet Attached
SAFETY DATA SHEET

1. IDENTIFICATION

Product Identifier(s): Jempak 1298
Other Means of Identification: Not available
Recommended Use: Surfactant
Restrictions on Use: For industrial use only.
Manufacturer/Supplier: JEMPAK Corporation
Address: 1485 Speers Road, Oakville ON L6L 2X5
Telephone Number: 1-905-827-1123
Emergency Telephone Number: 24-hour CANUTEC 1-613-996-6666
Transportation Emergency: CHEMTREC 1-800-424-9300 (U.S. and Canada)

2. HAZARD(S) IDENTIFICATION

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the Mixture:

<table>
<thead>
<tr>
<th>HAZARD CLASS</th>
<th>HAZARDOUS CATEGORY</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACUTE TOXICITY, ORAL</td>
<td>4</td>
</tr>
<tr>
<td>SKIN CORROSION/IRRITATION</td>
<td>1C</td>
</tr>
<tr>
<td>SERIOUS EYE DAMAGE/IRRITATION</td>
<td>1</td>
</tr>
<tr>
<td>HAZARDOUS TO THE AQUATIC ENVIRONMENT, ACUTE</td>
<td>2</td>
</tr>
<tr>
<td>HAZARDOUS TO THE AQUATIC ENVIRONMENT, CHRONIC</td>
<td>3</td>
</tr>
</tbody>
</table>

Signal word, hazard statement(s), symbol(s) and precautionary statement(s) in accordance with paragraph (f) of 29 CFR 1910.1200

Hazard pictograms:

Signal word: DANGER

Hazard Statements:
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H318 Causes severe eye damage.
H401 Toxic to aquatic life.
H412 Harmful to aquatic life with long lasting effects.

Precautionary Statements:
P103 Read label before use.
P260 Do not breathe dusts or mists.
P264 Wash hands/face/forearms/clothing thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P280 Wear protective gloves, protective clothing, eye protection, and face protection.

Precautionary Statements Response: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water (or shower). Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician, if you feel unwell. Specific treatment (see Section 4 of this Safety Data Sheet). IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Get medical attention immediately. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER or physician, if you feel unwell. Store locked up. Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations. IF exposed or concerned: Get medical advice/attention.

Hazards not otherwise classified: Not available.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical</th>
<th>CAS#</th>
<th>Weight %</th>
<th>Trade Secret</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linear alkyl benzenesulfonate</td>
<td>85536-14-7</td>
<td>90-100</td>
<td>*</td>
</tr>
<tr>
<td>Benzene, C10-13-alkyl derivs.</td>
<td>67774-74-7</td>
<td>1-5</td>
<td>*</td>
</tr>
<tr>
<td>Sulfuric acid</td>
<td>7664-93-9</td>
<td>1-5</td>
<td>*</td>
</tr>
</tbody>
</table>

*the exact percentage (concentration) of composition withheld as a trade secret

### 4. FIRST-AID MEASURES

**EYES CONTACT:** Immediately flush eyes with water. Rinse cautiously with water for at least 15 minutes while holding the eyelids open. Remove contact lenses if applicable and easy to do. Continue rinsing. Call a poison center or physician immediately. Symptoms may include stinging, pain, tearing, redness, swelling or blurred vision. Permanent eye damage including blindness could result.

**SKIN CONTACT:** Rinse well with water/shower. Take off contaminated clothing and wash it before reuse. Call a poison center or physician immediately. Chemical burns must be treated by a physician. Symptoms may include burning pain and severe corrosive skin damage.

**INHALED:** Move person to fresh air. If experiencing respiratory symptoms call a Poison Control Centre or doctor.

**INGESTION:** Call a poison center or physician immediately. Do not induce vomiting. If vomiting occurs, keep head low so stomach contents are not inhaled into the lungs.

**MOST IMPORTANT SYMPTOMS/EFFECTS, ACUTE OR DELAYED:** Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, pain, tearing, redness, swelling or blurred vision. Permanent eye damage including blindness could result.

### 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media:** Dry chemical, foam, carbon dioxide, water fog.

**Unsuitable Extinguishing Media:** None known.

**Specific Fire and Explosion Hazards:** Not flammable.

**Upper and Lower Explosive Limits:** Not available.

**Hazardous Combustion Products:** Carbon oxides and sulfur oxides

**Autoignition Temperature (°C/°F):** Not available.

**Special protective equipment and precautions for fire-fighters:** Fire-fighters should wear full protective gear with
self-contained breathing apparatus (SCBA).

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures: Do not get in eyes. Do not get on skin. Wear rubber gloves and safety glasses if directly handling the product. Ensure adequate ventilation. Keep people away from and upwind of spill/leak.

Methods and Materials for Containment and Cleaning Up: Should not be released to the environment. Do not flush into surface water or sanitary sewer system. Avoid release to the environment. Collect spillage.

7. HANDLING AND STORAGE

Precautions for safe handling: Do not breathe vapors or spray mist. Do not get in eyes, on skin or on clothing. Do not ingest. Use only under a chemical fume hood. Wear personal protective equipment. Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product.

Conditions for safe storage: Keep container tightly closed in a cool, dry, well-ventilated area.

Incompatible materials: No specific data

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure guidelines:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV STEL 15 min</th>
<th>ACGIH TLV 8 hr TWA</th>
<th>NIOSH REL TWA</th>
<th>OSHA PEL 8 hr TWA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric acid</td>
<td>No data available</td>
<td>0.2 mg/m³</td>
<td>1 mg/m³</td>
<td>1 mg/m³</td>
</tr>
</tbody>
</table>

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value. OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits. NIOSH IDLH: Immediately Dangerous to Life or Health.

Appropriate engineering controls: Showers, eyewash stations, and ventilation system

Ventilation: Ensure adequate ventilation.

Personal Protective Equipment

Eye/Face Protection: Tight sealing safety goggles. Face shield.

Hand Protection: Rubber gloves.

Skin Protection: Long-sleeved clothing.

Respiratory Protection: When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

Ingestion: Do not swallow.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Viscous liquid
pH (100%): <1.0 (as is)
Vapour Density (Air = 1): Not available
Decomposition Temperature: Not available

Colour; Odour: Dark amber
Flash Point: >93.9°C (201°F)
Autoignition Temperature (°C/°F): Not available
Evaporation Rate: Est. slower than ethyl ether
Viscosity @ 25°C (77°F): 5100 SUS @ 100°F
Solubility in Water @ 25°C (77°F): Not available
Vapour Pressure: Not available
Boiling Point (°C/°F): >100°C (>212°F)
Odour Threshold (ppm): Not available

10. STABILITY AND REACTIVITY

Reactivity: None under normal conditions of use, storage and transport.
Chemical Stability: Stable under normal conditions of use, storage and transport.
Possibility of hazardous reactions: Hazardous polymerization will not occur.
Conditions to avoid: None known.
Sensitivity to static discharges, shock, or vibration: Not available.
Incompatible materials: Strong oxidizing agents.
Hazardous decomposition products: Carbon oxides and sulfur oxides.

11. TOXICOLOGICAL INFORMATION

Information on the likely routes of exposure

HEALTH EFFECTS FROM ACUTE EXPOSURE:
Eyes: Liquid causes serious eye damage. Symptoms may include stinging, pain, tearing, redness, swelling or blurred vision. Permanent eye damage including blindness could result.
Skin: Liquid causes severe skin corrosion and irritation. Symptoms may include burning pain and severe corrosive skin damage.
Inhalation: May be harmful if inhaled.
Ingestion: Harmful if swallowed.

<table>
<thead>
<tr>
<th>ACUTE TOXICITY DATA</th>
<th>Rat - Inhalation LC50</th>
<th>Rabbit - Dermal LD50</th>
<th>Rat - Ingestion LD50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linear alkyl benzenesulfonate</td>
<td>No data available</td>
<td>&gt;2000 mg/kg</td>
<td>1219 mg/kg</td>
</tr>
<tr>
<td>Benzene, C10-13-alkyl derivs.</td>
<td>No data available</td>
<td>No data available</td>
<td>&gt;5000 mg/kg</td>
</tr>
<tr>
<td>Sulfuric acid</td>
<td>255 mg/m3/4 hr</td>
<td>No data available</td>
<td>&gt;2000 mg/kg</td>
</tr>
</tbody>
</table>

HEALTH EFFECTS FROM CHRONIC EXPOSURE:
Aggravation of Pre-existing Conditions: Insufficient data available.
Respiratory Sensitization: No known effect.
Reproductive Effects: No known effect.
Germ Cell Mutagenicity: No known effect.
Carcinogenicity: No known effect.
Toxicologically Synergistic Materials: Not available.
12. ECOLOGICAL INFORMATION

Ecotoxicity: The environmental impact of this product has not been investigated.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Toxicity to Algae</th>
<th>Toxicity to Fish</th>
<th>Toxicity to Microorganisms</th>
<th>Daphnia Magna (Water Flea)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linear alkyl benzenesulfonate</td>
<td>EC50 = 36 mg/L (72 hr)</td>
<td>LC50 = 5.6 mg/L (96 hr flow-through)</td>
<td>No data available</td>
<td>EC50 = 5.2 mg/L (48 hr)</td>
</tr>
<tr>
<td>Benzene, C10-13-alkyl derivs.</td>
<td>EC50 &gt; 0.1 mg/L (72 hr)</td>
<td>NOEC 10 mg/m3 (Fresh water)</td>
<td>No data available</td>
<td>EC50 &gt; 0.041 mg/L (48 hr)</td>
</tr>
<tr>
<td>Sulfuric acid</td>
<td>No data available</td>
<td>LC50 &gt; 500 mg/L (96 hr static)</td>
<td>No data available</td>
<td>EC50 = 29 mg/L (24 hr)</td>
</tr>
</tbody>
</table>

Persistence and Degradability: Not available.

Bioaccumulative Potential: Not available.

Mobility in Soil: Not available.

Other Adverse Effects: Not available.

13. DISPOSAL CONSIDERATIONS

Dispose of contents and containers in accordance with local, provincial/state and federal regulations.

Contaminated Packaging: Dispose of as hazardous waste.

14. TRANSPORT INFORMATION

DOT

- UN number: UN2586
- UN proper shipping name: ALKYLSULFONIC ACIDS, LIQUID
- Class: 8
- Packing group: III
- Special precautions for user: Read safety instructions, SDS and emergency procedures before handling.

IATA

- UN number: UN2586
- UN proper shipping name: ALKYLSULFONIC ACIDS, LIQUID
- Class: 8
- Packing group: III
- Special precautions for user: Read safety instructions, SDS and emergency procedures before handling.
  - Other information: Allowed.
    - Passenger and cargo aircraft: Allowed.
      - Cargo aircraft only: 5 L A803

IMDG

- UN number: UN2586
- UN proper shipping name: ALKYLSULFONIC ACIDS, LIQUID
- Class: 8
- Packing group: III
- Environmental hazards: No.
- Marine pollutant: Not available.
- EmS: Not available.
- Special precautions for user: Read safety instructions, SDS and emergency procedures before handling.
15. REGULATORY INFORMATION

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting at the local and regional, or state level pertaining to releases of this material.

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 (Right to Know) - Substance List
  Not regulated.
- US. Rhode Island RTK
  Not regulated.
- New Jersey RTK
  Not regulated
- Pennsylvania Worker and Community Right-To-Know Law
  Not regulated
- California Proposition 65
  Not regulated

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>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*A "Yes" indicates that all components of this product comply 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

Issuing date: 1 March 2018

Notice: Information for this SDS was obtained from sources considered accurate and reliable. The above information is believed to be correct but does not purport to be all inclusive and should be used only as a guide. As conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained in accordance with all applicable occupational health and safety requirements. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any...
information contained in this SDS.

End of SDS