1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: AEROSOL† OT 100% Surfactant
SYNONYMS: Dioctyl sodium sulfosuccinate
CHEMICAL FAMILY: Ester
MOLECULAR FORMULA: C20H37O7NaS
MOLECULAR WGT: 444
USE: Process Chemical
MANUFACTURED BY: CYTEC INDUSTRIES INC., FIVE GARRET MOUNTAIN PLAZA, WEST PATERSON, NEW JERSEY 07424, USA - 973/357-3100
SUPPLIED BY: CYTEC CANADA INC., GARNER ROAD, P.O. BOX 240, NIAGARA FALLS, ONTARIO, CANADA L2E 6T4 1-905/356-9000
EMERGENCY PHONE: In CANADA: 905/356-8310 In USA: 1-800/424-9300 or 1-703/527-3887.
†Trademark or registered Trademark

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>CAS. NO.</th>
<th>%(w/w)</th>
<th>TWA/CEILING</th>
<th>REFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium dioctyl sulfosuccinate</td>
<td>000577-11-7</td>
<td>&gt;97</td>
<td>not established</td>
<td></td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
APPEARANCE AND ODOR: White, waxy solid; faint odor

STATEMENTS OF HAZARD:
WARNING! CAUSES EYE AND SKIN IRRITATION

POTENTIAL HEALTH EFFECTS

EFFECTS OF EXPOSURE:
The acute oral (rat) and dermal (rabbit) LD50 values are 3.1 g/kg and greater than 10.0 g/kg, respectively. The 4-hour LC50 (rat) value is estimated to be greater than 20 mg/L. This material produced no adverse effects on reproductive function in rats administered it over 3 generations. No developmental effects were observed in a teratology study in rats at doses which were not maternally toxic. Direct contact with this material may cause moderate eye and skin irritation. Refer to Section 11 for toxicology information on the WHMIS regulated components of this product.

4. FIRST AID MEASURES

Material is not expected to be harmful by ingestion. No specific first aid measures are required. In case of skin contact, remove contaminated clothing without delay. Flush skin thoroughly with water. Do not reuse clothing without laundering. In case of eye contact, immediately irrigate with plenty of water for 15 minutes. Obtain medical attention if irritation persists or if otherwise necessary.
5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT: Not applicable

FLAMMABLE LIMITS
(% BY VOL): Not applicable

AUTOIGNITION TEMP: Not available

DECOMPOSITION TEMP: Not available

MECHANICAL/STATIC SENSITIVITY: None

EXTINGUISHING MEDIA AND FIRE FIGHTING INSTRUCTIONS

Use water, carbon dioxide or dry chemical to extinguish fires. Wear self-contained, positive pressure breathing apparatus and full firefighting protective clothing. See Section 8 (Exposure Controls/ Personal Protection) for special protective clothing.

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Where exposure level is not known, wear NIOSH approved, positive pressure, self-contained respirator. Where exposure level is known, wear NIOSH approved respirator suitable for level of exposure. Wear same protective clothing/equipment as in Section 8 (Exposure Controls Personal Protection.) Sweep up spills and place in a waste disposal container. Flush area with water.

7. HANDLING AND STORAGE

Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling.

Store in a cool, dry environment.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT (PPE)

Where this material is not used in a closed system, good enclosure and local exhaust ventilation should be provided to control exposure. Food, beverages, and tobacco products should not be carried, stored, or consumed where this material is in use. Before eating, drinking, or smoking, wash face and hands with soap and water. Avoid skin contact. Protective clothing such as impervious gloves, apron, workpants, long sleeve work shirt, or disposable coveralls are recommended to prevent skin contact. For operations where eye or face contact can occur, wear eye protection such as chemical splash proof goggles or face shield. Eyewash equipment and safety shower should be provided in areas of potential exposure. For operations where inhalation exposure can occur, a NIOSH approved respirator recommended by an industrial hygienist may be necessary. A full facepiece respirator also provides eye and face protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: White, waxy solid; faint odor

BOILING POINT: Not available

MELTING POINT: 307-315 F; 153-157 C

VAPOR PRESSURE: Not applicable

SPECIFIC GRAVITY: 1.1

VAPOR DENSITY: Not applicable

% VOLATILE (BY WT): Negligible

pH: Not applicable
10. STABILITY AND REACTIVITY

STABILITY: Stable
CONDITIONS TO AVOID: None known

POLYMERIZATION: Will Not Occur
CONDITIONS TO AVOID: None known

INCOMPATIBLE MATERIALS: Strong acids and alkalies cause hydrolysis. Aqueous solutions of this product corrode steel.

HAZARDOUS DECOMPOSITION/ COMBUSTION PRODUCTS: Thermal decomposition or combustion may produce carbon monoxide, carbon dioxide and/or oxides of sulfur.

11. TOXICOLOGICAL INFORMATION

Toxicological information for the product is found under Section 3, HAZARDS IDENTIFICATION. Toxicological information on the WHMIS regulated components of this product is as follows:

Sodium dioctyl sulfosuccinate (DSS) has an average oral (rat) LD50 of 3.1 g/kg, based on measured values of 1.9 g/kg, 3.08 g/kg, and 4.3 g/kg. The dermal dermal (rabbit) LD50 is >10 g/kg. DSS has caused moderate skin and eye irritation in animals, to varying extents, depending on the formulation of the tested material (e.g. solid vs. solution), the tested concentration, and the exposure duration. Following 24-hour dermal application (rabbits) of 8 - 10 g/kg solid DSS, the only effect observed was mild erythema. In other other rabbit skin irritation tests, the primary irritation score for 100% DSS was -4 and that for 80% DSS with propylene glycol was -3, both resulting in a moderate irritant classification. Solid DSS applied to the eyes of rabbits produced moderate irritation. Solutions of DSS appear to cause irritation at lower concentrations than the solid material. In rabbits, a concentration of 1% was the lowest reported effective dose necessary to produce slight dermal erythema and at concentrations from 5 - 25% moderate dermal irritation occurred. Mild eye irritation in rabbits occurred following treatment with concentrations between 0.1 and 0.5% DSS. Humans appear to be less sensitive to DSS for skin irritation. In humans, a concentration of 1% was the highest no-effect level observed for skin irritation following a 24-hr patch test. In a modified Draize- Shelanski repeat-insult patch test, DSS showed little evidence of irritation and no evidence of eliciting an allergic response in human subjects. Results from a 90-day subacute oral diet (rat) study indicate a NOEL of 0.94 g/kg/day and results from a 6-month subchronic oral diet (rat) study indicate a LOEL of 0.87 g/kg/day. No indication of significant gross or microscopic adverse effects were reported. Chronic toxicity studies in rats (2-yr) and dogs (1-yr) also reported no significant adverse effects at the doses administered. No adverse effect on reproductive function or fetal development were observed in rats treated with DSS at 0.5 and 1.0% doses, which were not maternally toxic.

12. ECOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>LC50</th>
<th></th>
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<tbody>
<tr>
<td>BLUEGILL, 96 HOUR:</td>
<td>37 mg/L</td>
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<tr>
<td>TROUT 96 HOUR:</td>
<td>28 mg/L</td>
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<tr>
<td>DAPHNIA, 48 HOUR:</td>
<td>36 mg/L</td>
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</table>

<table>
<thead>
<tr>
<th>BOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>28 Day: 66.7 %</td>
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</table>

<table>
<thead>
<tr>
<th>OCTANOL/H2O PARTITION COEF.:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not available</td>
</tr>
</tbody>
</table>
13. DISPOSAL CONSIDERATIONS

Cytec encourages the recycle, recovery and reuse of materials, where permitted, as an alternative to disposal as a waste. Cytec recommends that organic materials classified as hazardous waste according to the relevant local or national regulations be disposed of by thermal treatment or incineration at approved facilities. All local and national regulations should be followed.

14. TRANSPORT INFORMATION

This section provides basic shipping classification information. Refer to appropriate transportation regulations for specific requirements.

<table>
<thead>
<tr>
<th>SHIPPING NAME:</th>
<th>TRANSPORT CANADA</th>
<th>ICAO/IATA</th>
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</thead>
<tbody>
<tr>
<td>HAZARD CLASS:</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>SUBSIDIARY CLASS:</td>
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<td>Not Applicable</td>
</tr>
<tr>
<td>UN / ID NUMBER:</td>
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<td>Not Applicable</td>
</tr>
<tr>
<td>PACKING GROUP:</td>
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<td>Not Applicable</td>
</tr>
<tr>
<td>TRANSPORT LABEL REQUIRED:</td>
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<td>None Required</td>
</tr>
<tr>
<td>PACKING INSTR:</td>
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<td>PASSENGER Not Applicable</td>
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<tr>
<td>Max Net Qty:</td>
<td>Not Applicable</td>
<td>CARGO Not Applicable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SHIPPING NAME:</th>
<th>D.O.T. SHIPPING INFORMATION</th>
<th>IMO SHIPPING INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAZARD CLASS/ PACKING GROUP:</td>
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<td>Not Applicable</td>
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<tr>
<td>UN NUMBER:</td>
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<td>IMDG PAGE:</td>
<td>Not Applicable</td>
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<tr>
<td>D.O.T. HAZARDOUS SUBSTANCES:</td>
<td>(PRODUCT REPORTABLE QUANTITY) Not Applicable</td>
<td>Not Applicable</td>
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<tr>
<td>TRANSPORT LABEL REQUIRED:</td>
<td>None Required</td>
<td>None Required</td>
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</table>

ADDITIONAL TRANSPORT INFORMATION

TECHNICAL NAME (N.O.S.): Not Applicable
15. REGULATORY INFORMATION

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and this Material Safety Data Sheet contains all the information required by the Controlled Products Regulations.

WHMIS CLASSIFICATION: CLASS D DIVISION 2B TOXIC

INVENTORY INFORMATION

CANADA DSL: Components of this product have been reported to Environment Canada in accordance with subsection 25 of the Canadian Environmental Protection Act and are included on the Domestic Substances List.

US TSCA: All components of this product are included on the TSCA Inventory in compliance with the Toxic Substances Control Act, 15 U. S. C. 2601 et. seq. This product contains a chemical substance that is subject to export notification under Section 12 (b) of the Toxic Substances Control Act, 15 U. S. C. 2601 et. seq. (This requirement applies to exports from the United States only.)


16. OTHER INFORMATION

NFPA HAZARD RATING (National Fire Protection Association)

<table>
<thead>
<tr>
<th>Fire</th>
<th>Health</th>
<th>Reactivity</th>
<th>Special</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>0</td>
<td>-</td>
</tr>
</tbody>
</table>

FIRE: Materials that must be preheated before ignition can occur.

HEALTH: Materials which on intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical treatment is given.

REACTIVITY: Materials which in themselves are normally stable, even under fire exposure conditions, and which are not reactive with water.

REASON FOR ISSUE:

Revised Sections 3 & 11