Material Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Dodecyl sulfate sodium salt
Cat No.: AC226140000; AC226141000; AC226145000
Synonyms: Sodium lauryl sulfate; SDS; Dodecyl Sodium Sulfate
Recommended Use: Laboratory chemicals

Company: Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Recipe: Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Entity / Business Name

Emergency Telephone Number
For information in the US, call: 001-800-ACROS-01
For information in Europe, call: +32 14 57 52 11
Emergency Number, Europe: +32 14 57 52 99
Emergency Number, US: 001-201-796-7100
CHEMTREC Phone Number, US: 001-800-424-9300
CHEMTREC Phone Number, Europe: 001-703-527-3887

2. HAZARDS IDENTIFICATION

DANGER!

Emergency Overview
Flammable solid. Harmful if swallowed or absorbed through the skin. Causes eye, skin, and respiratory tract irritation. May cause allergic respiratory reaction.

Appearance: Off-white
Physical State: Solid
Odor: Slight

Target Organs: Respiratory system, Skin, Eyes
Potential Health Effects:
Acute Effects:
Principle Routes of Exposure

Eyes
Irritating to eyes.

Skin
Irritating to skin. Harmful in contact with skin.

Inhalation
Irritating to respiratory system. May be harmful if inhaled. May cause allergic respiratory reaction.

Ingestion
Harmful if swallowed. Causes gastrointestinal tract irritation.

Chronic Effects
Repeated contact may cause allergic reactions in very susceptible persons.

See Section 11 for additional Toxicological information.

Aggravated Medical Conditions
No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium lauryl sulfate</td>
<td>151-21-3</td>
<td>&gt;85</td>
</tr>
<tr>
<td>Sodium sulfate</td>
<td>7757-82-6</td>
<td>6.5</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>7647-14-5</td>
<td>1.5</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Eye Contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

Skin Contact
Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Obtain medical attention.

Inhalation
Remove from exposure, lie down. Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Obtain medical attention.

Ingestion
Do not induce vomiting. Call a physician or Poison Control Centre immediately.

Notes to Physician
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash Point
> 100°C / > 212°F

Method
No information available.

Autoignition Temperature
248°C / 478.4°F

Explosion Limits
Upper
No data available

Lower
No data available

Suitable Extinguishing Media
Water spray. Carbon dioxide (CO₂). Dry chemical. chemical foam.

Unsuitable Extinguishing Media
No information available.

Hazardous Combustion Products
No information available.

Sensitivity to mechanical impact
No information available.
Sensitivity to static discharge
No information available.

Specific Hazards Arising from the Chemical
Flammable. Keep product and empty container away from heat and sources of ignition.

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

<table>
<thead>
<tr>
<th></th>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>N/A</td>
</tr>
</tbody>
</table>

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions
Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.

Environmental Precautions
Should not be released into the environment

Methods for Containment and Clean Up
Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Sweep up or vacuum up spillage and collect in suitable container for disposal.

7. HANDLING AND STORAGE

Handling
Avoid contact with skin and eyes. Do not breathe dust. Use explosion-proof equipment. Use only non-sparking tools.

Storage
Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Keep away from heat and sources of ignition. Flammables area.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Measures
Use explosion-proof electrical/ventilating/lighting/equipment. Ensure that eyewash stations and safety showers are close to the workstation location.

Exposure Guidelines
This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

NIOSH IDLH: Immediately Dangerous to Life or Health

Personal Protective Equipment

Eye/face Protection
Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection
Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection
Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State
Solid

Appearance
Off-white

doctor
slight

Odor Threshold
No information available.

pH
8.5-10 1% aq.sol.
9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vapor Pressure</td>
<td>No information available.</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>No information available.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No information available.</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>206°C / 402.8°F</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>206°C / 402.8°F</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No information available.</td>
</tr>
<tr>
<td>Flash Point</td>
<td>&gt; 100°C / &gt; 212°F</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No information available.</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>No information available.</td>
</tr>
<tr>
<td>Solubility</td>
<td>No information available.</td>
</tr>
<tr>
<td>log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>288.38</td>
</tr>
<tr>
<td>Molecular Formula</td>
<td>C12 H25 Na O4 S</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

**Stability**
Stable under normal conditions.

**Conditions to Avoid**

**Incompatible Materials**
Strong oxidizing agents, Strong acids, Strong bases

**Hazardous Decomposition Products**
Carbon monoxide (CO), Carbon dioxide (CO₂), Sulfur oxides, Sodium oxides

**Hazardous Polymerization**
Hazardous polymerization does not occur.

**Hazardous Reactions**
None under normal processing.

11. TOXICOLOGICAL INFORMATION

**Acute Toxicity**

<table>
<thead>
<tr>
<th>Component Information</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium lauryl sulfate</td>
<td>1288 mg/kg (Rat)</td>
<td>580 mg/kg (Rabbit)</td>
<td>3900 mg/m³ (Rat) 1 h</td>
</tr>
<tr>
<td>Sodium sulfate</td>
<td>10000 mg/kg (Rat)</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>3 g/kg (Rat)</td>
<td>10 g/kg (Rabbit)</td>
<td>42 g/m³ (Rat) 1 h</td>
</tr>
</tbody>
</table>

**Irritation**
Irritating to eyes, respiratory system and skin

**Toxicologically Synergistic Products**
No information available.

**Chronic Toxicity**

**Carcinogenicity**
There are no known carcinogenic chemicals in this product
Sensitization
No information available.

Mutagenic Effects
No information available.

Reproductive Effects
No information available.

Developmental Effects
No information available.

Teratogenicity
No information available.

Other Adverse Effects
The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

Endocrine Disruptor Information
No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity
Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Do not empty into drains.

<table>
<thead>
<tr>
<th>Component</th>
<th>Freshwater Algae</th>
<th>Freshwater Fish</th>
<th>Microtox</th>
<th>Water Flea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium lauryl sulfate</td>
<td>3.59 - 15.8 mg/L</td>
<td>1.31 mg/L</td>
<td>= 0.46 mg/L</td>
<td>1.8 mg/L EC50 = 48 h</td>
</tr>
<tr>
<td></td>
<td>EC50 = 96 h</td>
<td>LC50 96 h</td>
<td>EC50 72 h</td>
<td></td>
</tr>
<tr>
<td></td>
<td>53 mg/L EC50 = 72 h</td>
<td>9.9-20.1 mg/L</td>
<td>Photobacterium</td>
<td>Photobacterium</td>
</tr>
<tr>
<td></td>
<td>30 - 100 mg/L EC50 = 96 h</td>
<td>EC50 96 h</td>
<td>phosphoreum 30 min</td>
<td>phosphoreum 30 min</td>
</tr>
<tr>
<td></td>
<td>117 mg/L EC50 = 96 h</td>
<td>4.5 mg/L</td>
<td>= 0.72 mg/L</td>
<td>= 1.19 mg/L</td>
</tr>
<tr>
<td>Sodium sulfate</td>
<td>Not listed</td>
<td>Photobacterium</td>
<td>EC50 48 h</td>
<td>EC50 15 min</td>
</tr>
<tr>
<td></td>
<td>Pimephales promelas: LC50:</td>
<td>13.5 - 14.5 g/L/96h</td>
<td>Photobacterium</td>
<td>Photobacterium</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>Not listed</td>
<td>Pimephales prome: LC50:</td>
<td>Not listed</td>
<td>EC50: 1000 mg/L/48H</td>
</tr>
<tr>
<td></td>
<td>7850 mg/L/96H</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Persistence and Degradability
Expected to be biodegradable.

Bioaccumulation/ Accumulation
No information available

Mobility

<table>
<thead>
<tr>
<th>Component</th>
<th>log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium lauryl sulfate</td>
<td>1.6</td>
</tr>
<tr>
<td>Sodium sulfate</td>
<td>-3</td>
</tr>
</tbody>
</table>

13. DISPOSAL CONSIDERATIONS
13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods  Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. TRANSPORT INFORMATION

DOT

UN-No  UN2926
Proper Shipping Name  FLAMMABLE SOLID, TOXIC, ORGANIC, N.O.S.
Proper technical name  (SODIUM DODECYL SULFATE)
Hazard Class  4.1
Subsidiary Hazard Class  6.1
Packing Group  III

TDG

UN-No  UN2926
Proper Shipping Name  FLAMMABLE SOLID, TOXIC, ORGANIC, N.O.S.
Hazard Class  4.1
Subsidiary Hazard Class  6.1
Packing Group  III

IATA

UN-No  UN2926
Proper Shipping Name  FLAMMABLE SOLID, TOXIC, ORGANIC, N.O.S.*
Hazard Class  4.1
Subsidiary Hazard Class  6.1
Packing Group  III

IMDG/IMO

UN-No  UN2926
Proper Shipping Name  FLAMMABLE SOLID, TOXIC, ORGANIC, N.O.S.
Hazard Class  4.1
Subsidiary Hazard Class  6.1
Packing Group  III

15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>Component</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>NLP</th>
<th>PICCS</th>
<th>ENCS</th>
<th>AICS</th>
<th>CHINA</th>
<th>KECL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium lauryl sulfate</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sodium sulfate</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Legend:
X - Listed
E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
P - Indicates a commenced PMN substance
R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
S - Indicates a substance that is identified in a proposed or final Significant New Use Rule
T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base
Production and Site Reports (40 CFR 710(B).
Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable
SARA 313
Not applicable

SARA 311/312 Hazardous Categorization
Acute Health Hazard Yes
Chronic Health Hazard No
Fire Hazard Yes
Sudden Release of Pressure Hazard No
Reactive Hazard No

Clean Water Act
Not applicable

Clean Air Act
Not applicable

OSHA
Not applicable

CERCLA
Not Applicable

California Proposition 65
This product does not contain any Proposition 65 chemicals.

State Right-to-Know

<table>
<thead>
<tr>
<th>Component</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
<th>Illinois</th>
<th>Rhode Island</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium sulfate</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

U.S. Department of Transportation
Reportable Quantity (RQ): N
DOT Marine Pollutant N
DOT Severe Marine Pollutant N
U.S. Department of Homeland Security
This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade
No information available

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

B4 Flammable solid
D2B Toxic materials

16. OTHER INFORMATION

Prepared By
Regulatory Affairs
Thermo Fisher Scientific
Tel: (412) 490-8929

Creation Date
24-Nov-2010

Print Date
16-Jun-2011

Revision Summary
“***”, and red text indicates revision

Disclaimer
The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of MSDS