1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Sodium dodecyl sulfate
Product Number: L4390
Brand: Sigma
Company: Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO  63103
USA
Telephone: +1 800-325-5832
Fax: +1 800-325-5052
Emergency Phone #: (314) 776-6555

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards
Flammable solid, Target Organ Effect, Harmful by ingestion., Toxic by skin absorption, Irritant

Target Organs
Lungs

GHS Label elements, including precautionary statements

Pictogram

Signal word: Danger

Hazard statement(s)
H228 Flammable solid.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H401 Toxic to aquatic life.

Precautionary statement(s)
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.

HMIS Classification
Health hazard: 2
Chronic Health Hazard: *
Flammability: 3
Physical hazards: 1

NFPA Rating
Health hazard: 2
Fire: 3
Reactivity Hazard: 1
Health hazard: 2
Reactivity Hazard: 3

Potential Health Effects

<table>
<thead>
<tr>
<th>Potential</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>May be harmful if inhaled. Causes respiratory tract irritation.</td>
</tr>
<tr>
<td>Skin</td>
<td>Toxic if absorbed through skin. Causes skin irritation.</td>
</tr>
<tr>
<td>Eyes</td>
<td>Causes eye irritation.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Harmful if swallowed.</td>
</tr>
</tbody>
</table>

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms:
- Lauryl sulfatesodium salt
- Sodium lauryl sulfate
- Dodecyl sodium sulfate
- Dodecyl sulfatesodium salt
- SDS

Formula: \( \text{C}_{12}\text{H}_{25}\text{NaO}_{4}\text{S} \)
Molecular Weight: 288.38 g/mol

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Index-No.</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>151-21-3</td>
<td>205-788-1</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters
Wear self contained breathing apparatus for fire fighting if necessary.

Further information
Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas.

Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Methods and materials for containment and cleaning up
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Conditions for safe storage
Keep container tightly closed in a dry and well-ventilated place. Store in cool place.

hygroscopic

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection
Handle with gloves.

Eye protection
Face shield and safety glasses

Skin and body protection
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
Form solid
Colour white

Safety data
pH 7.2
Melting point 204 - 207 °C (399 - 405 °F) - lit.
Boiling point no data available
Flash point 10 °C (50 °F)
Flammability (solid, gas) The substance or mixture is a flammable solid with the subcategory 1.
Ignition temperature no data available
Lower explosion limit no data available
Upper explosion limit no data available
Density 0.370 g/cm3
Water solubility soluble
Partition coefficient: log Pow: 1.6
n-octanol/water

10. STABILITY AND REACTIVITY

**Chemical stability**
Stable under recommended storage conditions.

**Conditions to avoid**
Heat, flames and sparks.

**Materials to avoid**
Oxidizing agents

**Hazardous decomposition products**
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Sulphur oxides

11. TOXICOLOGICAL INFORMATION

**Acute toxicity**
LD50 Oral - rat - 1,288 mg/kg
LC50 Inhalation - rat - 1 h - > 3,900 mg/m3
LD50 Dermal - rabbit - 580 mg/kg

**Skin corrosion/irritation**
Skin - rabbit - Skin irritation - 24 h

**Serious eye damage/eye irritation**
Eyes - rabbit - Eye irritation

**Respiratory or skin sensitization**
Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

**Germ cell mutagenicity**
no data available

**Carcinogenicity**
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity**
no data available

**Specific target organ toxicity - single exposure (GHS)**
Inhalation - May cause respiratory irritation.

**Specific target organ toxicity - repeated exposure (GHS)**
no data available

**Aspiration hazard**
no data available

**Potential health effects**

- **Inhalation**  May be harmful if inhaled. Causes respiratory tract irritation.
- **Ingestion**  Harmful if swallowed.
- **Skin**  Toxic if absorbed through skin. Causes skin irritation.
- **Eyes**  Causes eye irritation.

**Signs and Symptoms of Exposure**
sneezing. The sodium salt of dodecyl sulfate has been reported to cause pulmonary sensitization resulting in hyperactive airway dysfunction and pulmonary allergy accompanied by fatigue, malaise, and aching. Significant symptoms of exposure can persist for more than two years and can be activated by a variety of nonspecific environmental stimuli such as automobile exhaust, perfumes, and passive smoking.

Additional Information
RTECS: WT1050000

12. ECOLOGICAL INFORMATION

Toxicity

<table>
<thead>
<tr>
<th>Tox*icity</th>
<th>mortality NOEC - Oncorhynchus mykiss (rainbow trout) - 19.5 mg/l - 96 h</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mortality LOEC - Pimephales promelas (fathead minnow) - 4.6 mg/l - 8 d</td>
</tr>
<tr>
<td>LC50</td>
<td>Oncorhynchus mykiss (rainbow trout) - 3.6 mg/l - 96 h</td>
</tr>
</tbody>
</table>

Toxicity to algae

| Growth inhibition LOEC - Pseudokirchneriella subcapitata - 2.68 mg/l - 6 d |

Persistence and degradability

no data available

Bioaccumulative potential

<table>
<thead>
<tr>
<th>Bioaccumulation</th>
<th>Cyprinus carpio (Carp) - 72 h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioconcentration factor (BCF):</td>
<td>3.9 - 5.3</td>
</tr>
</tbody>
</table>

Mobility in soil

no data available

PBT and vPvB assessment

no data available

Other adverse effects

no data available

13. DISPOSAL CONSIDERATIONS

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

UN-Number: 2926 Class: 4.1 (6.1) Packing group: II
Proper shipping name: Flammable solids, toxic, organic, n.o.s. (Sodium dodecyl sulphate)
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG

UN-Number: 2926 Class: 4.1 (6.1) Packing group: II EMS-No: F-A, S-G
Proper shipping name: FLAMMABLE SOLID, TOXIC, ORGANIC, N.O.S. (Sodium dodecyl sulphate)
Marine pollutant: No

IATA

UN-Number: 2926 Class: 4.1 (6.1) Packing group: II
Proper shipping name: Flammable solid, toxic, organic, n.o.s. (Sodium dodecyl sulphate)

15. REGULATORY INFORMATION

OSHA Hazards

Flammable solid, Target Organ Effect, Harmful by ingestion., Toxic by skin absorption, Irritant
DSL Status
All components of this product are on the Canadian DSL list.

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Fire Hazard, Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

<table>
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New Jersey Right To Know Components

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California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Further information
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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Co., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.