# MATERIAL SAFETY DATA SHEET

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>HMIS</th>
<th>Personal Protective Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>2</td>
<td>Health Hazard: 2</td>
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<tr>
<td>1</td>
<td>1</td>
<td>Fire Hazard: 1</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>Reactivity: 0</td>
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</table>

**Product code:** S1331  
**Product Name:** SODIUM LAURYL SULFATE, ULTRAPURE  
**Chemical Name:** Sulfuric acid, monododecyl ester, sodium salt  
**Synonyms:**  
- Sodium dodecyl sulfate; Aquarex methyl;  
- Dodecyl alcohol, hydrogen sulfate, sodium salt;  
- Dodecyl sulfate sodium; Dref; Duponal; Gardinal;  
- Irium; Lauryl Sodium Sulfate;  
- Lauryl sulfate, sodium salt; Melanol CL;  
- Perlandrol L; Sodium n-dodecyl sulfate;  
- Sodium Lauryl Sulphate; Sodium monododecyl sulfate;  
- Sodium monolauryl sulfate;  
- Stepanol ME; Standapol WAQ;  
- Stepanol WAQ; Witcolate C, Witcolate A  

**Recommended use:** Emulsifying agent.  
**CAS #:** 151-21-3  
**RTECS #:** WT1050000  
**Formula:** C12-H25-O4-S-Na  
**Cl#:** Not available  
**Supplier:** Spectrum Chemicals and Laboratory Products, Inc.  
14422 South San Pedro St.  
Gardena, CA 90248  
(310) 516-8000  
**Order Online At:** [https://www.spectrumchemical.com](https://www.spectrumchemical.com)  
**Emergency Telephone Number:** CHEMTREC: 1-800-424-9300  
**Contact Person:**  
- Regina Wachenheim (East Coast)  
- Martin LaBenz (West Coast)  

## 2. HAZARDS IDENTIFICATION
2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING!
Harmful if absorbed through skin
May be harmful if swallowed
Irritating to eyes
Irritating to skin

MAY FORM COMBUSTIBLE DUST CONCENTRATIONS IN AIR

Inhalation:
Irritating to respiratory system.

Ingestion:
May be harmful if swallowed. Causes digestive (gastrointestinal) tract irritation. Ingestion may cause nausea, vomiting, and diarrhea. May cause bloating. May affect the liver.

OSHA Regulatory Status
This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

POTENTIAL HEALTH EFFECTS

Principal Routes of Exposure:
Ingestion. Inhalation.

Acute Potential Health Effects:

Skin Contact:
Toxic in contact with skin. Causes skin irritation.

Eye Contact:
Causes eye irritation.

Inhalation:
Irritating to respiratory system.

Ingestion:
May be harmful if swallowed. Causes digestive (gastrointestinal) tract irritation. Ingestion may cause nausea, vomiting, and diarrhea. May cause bloating. May affect the liver.

Chronic Potential Health Effects:

Component
Sodium Lauryl Sulfate
151-21-3 (100)

Carcinogen Status:
No information available

Target Organs:
No information available

Mutagenic Effects:
May affect genetic material
Mutations in microorganisms

Teratogenic Effects:
No information available

Aggravated Medical Conditions:
No information available

See Section 11 for additional Toxicological Information

POTENTIAL ENVIRONMENTAL EFFECTS

No information available

Product code: S1331
Product name: SODIUM LAURYL SULFATE, ULTRAPURE
3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Weight %</th>
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<tbody>
<tr>
<td>Sodium Lauryl Sulfate</td>
<td>151-21-3</td>
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</tbody>
</table>

4. FIRST AID MEASURES

General Advice: Poison information centres in each State capital city can provide additional assistance for scheduled poisons (13 1126). Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. First aider needs to protect himself.

Skin Contact: Toxic in contact with skin. Wash off immediately with soap and plenty of water. Continue flushing with plenty of water for at least 15 minutes. Remove all contaminated clothes and shoes. Get medical attention. Call a physician or Poison Control Centre immediately.

Eye Contact: Flush eye with water for 15 minutes. Get medical attention.

Inhalation: Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.

Ingestion: Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Harmful if swallowed. Obtain medical attention.

Notes to Physician: Treat symptomatically

5. FIRE-FIGHTING MEASURES

Flammable Properties

Flashpoint (°C/°F): No information available.

Flash Point Tested according to:
Not available

Lower Explosion Limit (%): No information available

Upper Explosion Limit (%): No information available

Autoignition Temperature (°C/°F): No information available

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

Unsuitable Extinguishing Media: No information available.

Hazardous Combustion Products: Carbon monoxide; Carbon dioxide

Specific hazards: May be combustible at high temperatures. Avoid generating dust. Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

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

Personal Precautions:
Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Remove all sources of ignition. Avoid dust formation. Avoid dispersal of dust in the air. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Nonsparking tools should be used.

Environmental Precautions:
No information available.

Methods for Cleaning Up:
Sweep up and shovel into suitable containers for disposal. Avoid dust formation. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Handling

Technical Measures/Precautions:
Provide sufficient air exchange and/or exhaust in work rooms. Minimize dust generation and accumulation. Avoid dust formation. Dry powders can build static electricity charges when subjected to friction of transfer and mixing operations. All equipment used when handling the product must be grounded. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Keep away from incompatible materials.

Safe Handling Advice:
Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid dust formation. Do not ingest. Do not breathe vapours/dust. Keep away from heat and sources of ignition. Handle in accordance with good industrial hygiene and safety practice.

Storage

Technical Measures/Storage Conditions:
Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials.

Incompatible Materials:
Strong oxidizing agents.
Engineering measures to reduce exposure: Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e. there is no leakage from the equipment). It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in the handling of this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment.

Personal Protective Equipment

Eye protection: Goggles.

Skin and body protection: Long sleeved clothing. Chemical resistant apron. Gloves.

Respiratory protection: Wear respirator with dust filter.

Hygiene measures: Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

National occupational exposure limits

United States
U.S Occupational Exposure Limits: Not determined

<table>
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<tr>
<th>Components</th>
<th>OSHA</th>
<th>NIOSH</th>
<th>ACGIH</th>
<th>AIHA WHEEL</th>
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Canada
Canada Occupational Exposure Limits: Not determined

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<tr>
<th>Components</th>
<th>Alberta</th>
<th>British Columbia</th>
<th>Ontario</th>
<th>Quebec</th>
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Australia and Mexico
Occupational Exposure Limits for Australia and Mexico: Not determined

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<tbody>
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<td>Sodium Lauryl Sulfate 151-21-3</td>
<td>None</td>
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</table>

9. PHYSICAL AND CHEMICAL PROPERTIES
9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid.
Appearance: Powder.
Color: White. Light yellow.

Odor: Faint odor of fatty substances.
Taste: No information available
Molecular/Formula weight: 288.38

Flash point (°C): No data available
Lower Explosion Limit (%): No information available
Upper Explosion Limit (%): No information available

Autoignition Temperature (°C/°F): No information available
Melting point/range(°C/°F): 204-207 °C/399.2-404.6 °F
Boiling point/range(°C/°F): No information available

pH: No information available
Specific gravity: 0.4-0.48
Density (g/cm3): No information available

Decomposition temperature(°C/°F): No information available
Bulk density: No information available
Vapor pressure @ 20°C (kPa): No information available

Evaporation rate: No information available
Vapor density: No information available
VOC content (g/L): No information available

Odor threshold (ppm): No information available
Partition coefficient (n-octanol/water): 1.6
Miscibility: No information available

Solubility:
Soluble in Water
Solubility in Water: 150 g/L at 20 °C

10. STABILITY AND REACTIVITY

Stability: Stable at normal conditions

Conditions to avoid: Heat. Avoid dust formation. Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Incompatible materials.

Incompatible Materials: Strong oxidizing agents.


Possibility of Hazardous Reactions: No information available

Polymerization: Hazardous polymerisation does not occur

Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component Information

Sodium Lauryl Sulfate - 151-21-3
**Product Information**

**LC50/inhalation/rat** = 3900 mg/m³ 1 hr

**LC50/inhalation/mouse** = No information available

**LD50/dermal/rabbit** = 580 mg/kg Dermal LD50 Rabbit

**LD50/dermal/rat** = No information available

**LD50/oral/rabbit** = 580 mg/kg Oral LD50 Rabbit

**LD50/oral/rat** = 977 mg/kg

**Local Effects**

**Skin irritation:**
Causes skin irritation.

**Eye irritation:**
Causes eye irritation.

**Inhalation:**
Irritating to respiratory system. Symptoms may include coughing and shortness of breath. May cause sore throat.

**Ingestion:**
May be harmful if swallowed. Causes digestive (gastrointestinal) tract irritation. Ingestion may cause nausea, vomiting, diarrhea. May cause bloating. May affect behavior/central nervous system (somnolence).

**Sensitization:**
No information available

**Chronic Toxicity**

**Chronic Toxicity**
Prolonged or repeated ingestion may affect the liver. Prolonged or repeated skin contact may cause dryness of the skin. Prolonged skin contact may cause skin irritation and/or dermatitis.

**Carcinogenic effects:**
Not considered carcinogenic

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<thead>
<tr>
<th>Components</th>
<th>NTP</th>
<th>IARC</th>
<th>OSHA HCS - Carcinogens</th>
<th>ACGIH - Carcinogens</th>
<th>Australia - Prohibited Carcinogenic Substances</th>
<th>Australia - Notifiable Carcinogenic Substances</th>
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<tr>
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<td>Not listed</td>
<td>Not listed</td>
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</table>

**Mutagenic Effects:**
May affect genetic material
Mutations in microorganisms

**Reproductive Effects:**
May cause adverse developmental effects based on animal data. Increased rates of fetal anomalies and fetal death were reported in association with maternal toxicity among the offspring of pregnant mice treated orally with 200 mg/kg/day or topically with 170 to 1700 mg/kg/day of Sodium Lauryl Sulfate (REPROTOX). No information on developmental toxicity effects on humans was found.

**Teratogenic Effects:**
No information available

**Target Organs:**
No information available

**Product code:** S1331  
**Product name:** SODIUM LAURYL SULFATE, ULTRAPURE
12. ECOLOGICAL INFORMATION

ECOTOXICITY

Toxicity to terrestrial and aquatic plants and animals: No information available

Ecotoxicity effects: Aquatic environment.

Aquatic toxicity:

*Sodium Lauryl Sulfate - 151-21-3*

**Freshwater Algae Data:**
- 3.59 - 15.6 mg/L EC50 Pseudokirchneriella subcapitata 96 h
- 30 - 100 mg/L EC50 Desmodesmus subspicatus 96 h
- 117 mg/L EC50 Pseudokirchneriella subcapitata 96 h
- 53 mg/L EC50 Desmodesmus subspicatus 72 h

**Freshwater Fish Species Data:**
- 10.2 - 22.5 mg/L LC50 Pimephales promelas 96 h semi-static 1
- 10.8 - 16.6 mg/L LC50 Poecilia reticulata 96 h static 1
- 13.5 - 18.3 mg/L LC50 Poecilia reticulata 96 h semi-static 1
- 15 - 18.9 mg/L LC50 Pimephales promelas 96 h static 1
- 22.1 - 22.8 mg/L LC50 Pimephales promelas 96 h static 1
- 4.06 - 5.75 mg/L LC50 Lepomis macrochirus 96 h static 1
- 4.2 - 4.8 mg/L LC50 Lepomis macrochirus 96 h flow-through 1
- 4.3 - 8.5 mg/L LC50 Oncorhynchus mykiss 96 h static 1
- 5.8 - 7.5 mg/L LC50 Pimephales promelas 96 h static 1
- 6.2 - 9.6 mg/L LC50 Pimephales promelas 96 h 1
- 8 - 12.5 mg/L LC50 Pimephales promelas 96 h static 1
- 9.9 - 20.1 mg/L LC50 Brachydanio rerio 96 h semi-static 1
- 1.31 mg/L LC50 Cyprinus carpio 96 h semi-static 1
- 4.2 mg/L LC50 Oncorhynchus mykiss 96 h 1
- 4.5 mg/L LC50 Lepomis macrochirus 96 h 1
- 4.62 mg/L LC50 Oncorhynchus mykiss 96 h flow-through 1
- 7.97 mg/L LC50 Brachydanio rerio 96 h flow-through 1

**Water Flea Data:**
- 1.8 mg/L EC50 Daphnia magna 48 h

**Mobility:** Expected to be immobile in soil based on estimated Koc.

**Persistence and degradability:** No information available

**Bioaccumulative potential:** Potential for bioconcentration in aquatic organisms is moderate.

13. DISPOSAL CONSIDERATIONS

**Waste from residues / unused products:**
Waste must be disposed of in accordance with Federal, State and Local regulation.

**Contaminated packaging:**
Empty containers should be taken for local recycling, recovery or waste disposal

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<thead>
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<tbody>
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</tbody>
</table>

14. TRANSPORT INFORMATION

**DOT**
- **UN-No:** UN2811
- **Proper Shipping Name:** Toxic solids, organic, n.o.s.

**Product code:** S1331  **Product name:** SODIUM LAURYL SULFATE, ULTRAPURE
Hazard Class: 6.1
Packing Group: III
Subsidiary Risk: Not applicable
Marine Pollutant: No data available
ERG No: 154
DOT RQ (lbs): No information available
Symbol(s): G

TDG (Canada)
UN-No: UN2811
Proper Shipping Name: Toxic solid, organic, n.o.s.
Hazard Class: 6.1
Packing Group: III
Subsidiary Risk: No information available
Description: No information available

ADR
UN-No: UN2811
Proper Shipping Name: Toxic solid, organic, n.o.s.
Hazard Class: 6.1
Packing Group: III
Subsidiary Risk: No information available
Classification Code: No information available
Description: No information available
CEFIC Tremcard No: No information available

IMO / IMDG
UN-No: UN2811
Proper Shipping Name: Toxic solid, organic, n.o.s.
Hazard Class: 6.1
Packing Group: III
Subsidiary Risk: No information available
Description: No information available
IMDG Page: No information available
Marine Pollutant: No information available
EMS: F-A
MFAG: No information available
Maximum Quantity: No information available

RID
UN-No: UN2811
Proper Shipping Name: Toxic solid, organic, n.o.s.
Hazard Class: 6.1
Packing Group: III
Subsidiary Risk: 6.1
Classification Code: No information available
Description: No information available

ICAO
UN-No: UN2811
Proper Shipping Name: Toxic solid, organic, n.o.s.
Hazard Class: 6.1
Packing Group: III
Subsidiary Risk: No information available
Description: No information available

IATA
UN-No: UN2811

Product code: S1331
Product name: SODIUM LAURYL SULFATE; ULTRAPURE
Proper Shipping Name: Toxic solid, organic, n.o.s.
Hazard Class: 6.1
Packing Group: III
Subsidiary Risk: No information available
ERG Code: 6L
Description: No information available

15. REGULATORY INFORMATION

International Inventories

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<th>Components</th>
<th>U.S. TSCA</th>
<th>Philippines (PICCS)</th>
<th>KOREA KECL</th>
<th>Japan ENCS</th>
<th>CHINA</th>
<th>Australia (AICS)</th>
<th>EINECS-No.</th>
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<td>Present (2)-1679 (2)-1675</td>
<td>Present</td>
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<td>Present 205-788-1</td>
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U.S. Regulations


Chemicals Known to the State of California to Cause Cancer:
This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:
This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

<table>
<thead>
<tr>
<th>Components</th>
<th>Carcinogen</th>
<th>Developmental Toxicity</th>
<th>Male Reproductive Toxicity</th>
<th>Female Reproductive Toxicity</th>
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CERCLA/SARA

<table>
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<tr>
<th>Components</th>
<th>CERCLA - Hazardous Substances and their Reportable Quantities</th>
<th>Section 302 Extremely Hazardous Substances and TPQs</th>
<th>Section 302 Extremely Hazardous Substances and RQs</th>
<th>Section 313 - Chemical Category</th>
<th>Section 313 - Reporting de minimis</th>
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<tbody>
<tr>
<td>Sodium Lauryl Sulfate</td>
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U.S. TSCA

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<tr>
<th>Components</th>
<th>TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)</th>
<th>TSCA 8(d) - Health and Safety Reporting</th>
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<tbody>
<tr>
<td>Sodium Lauryl Sulfate</td>
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<td>Not Applicable</td>
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</table>

Canada

WHMIS hazard class:
D2B Toxic materials

Sodium Lauryl Sulfate
D2B

Canada Controlled Products Regulation:
This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

<table>
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<tr>
<th>Components</th>
<th>WHMIS Ingredient Disclosure List -</th>
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Inventory

<table>
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<tr>
<th>Components</th>
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<th>Canada (NDSL)</th>
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<table>
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<tr>
<th>Components</th>
<th>CEPA Schedule I - Toxic Substances</th>
<th>CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting</th>
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<tbody>
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EU Classification

**R-phrase(s)**
R21/22 - Harmful in contact with skin and if swallowed.
R36/37/38 - Irritating to eyes, respiratory system and skin.

<table>
<thead>
<tr>
<th>Components</th>
<th>Classification</th>
<th>Concentration Limits:</th>
<th>Safety Phrases</th>
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<tr>
<td>Sodium Lauryl Sulfate</td>
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<td>No information</td>
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The product is classified in accordance with Annex VI to Directive 67/548/EEC

**Indication of danger:**
Xn - Harmful.
Xi - Irritant.

![Xn](image1) ![Xi](image2)

16. OTHER INFORMATION

The MSDS format complies with ANSI Z400.1/Z129.1-2010 standards.

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<tr>
<th>Preparation Date:</th>
<th>21-Aug-2014</th>
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<tbody>
<tr>
<td>Reason for revision:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Prepared by:</td>
<td>Sonia Owen</td>
</tr>
<tr>
<td>Literature reference:</td>
<td>No information available</td>
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</table>

Product code: S1331  Product name: SODIUM LAURYL SULFATE, ULTRAPURE
All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. The physical properties reported in this MSDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

Product code: S1331

Product name: SODIUM LAURYL SULFATE, ULTRAPURE