

SECTION 1: Identification

1.1. Identification

Product form	: Substance
Trade name	: Sodium dodecyl sulfate
IUPAC name	: sodium dodecyl sulphate
CAS-No.	: 151-21-3
Product code	: 03945
Formula	: C ₁₂ H ₂₆ O ₄ S.Na
Synonyms	: Sodium dodecyl sulfate (SDS) ELECTRO PURE / Sodium lauryl sulfate

1.2. Recommended use and restrictions on use

No additional information available

1.3. Supplier

Polysciences
400 Valley Road
Warrington, PA 18976 - United States
T +1 215 343 6484 - F +1 215 343 0214
info@polysciences.com - www.polysciences.com

1.4. Emergency telephone number

Emergency number : 24-hour emergency phone number ChemTel 1-800-255-3924

SECTION 2: Hazard(s) identification


2.1. Classification of the substance or mixture

GHS US classification

Acute toxicity (oral) Category 4	Harmful if swallowed
Acute toxicity (dermal) Category 4	Harmful in contact with skin
Skin sensitization, category 1B	May cause an allergic skin reaction

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US)	: 
Signal word (GHS US)	: Warning
Hazard statements (GHS US)	: Harmful if swallowed or in contact with skin May cause an allergic skin reaction
Precautionary statements (GHS US)	: Avoid breathing dust/fume/gas/mist/vapors/spray. Wash hands, forearms and face thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection. If swallowed: Call a poison center or doctor if you feel unwell.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Substance type	: Mono-constituent
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Sodium dodecyl sulfate

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Name	Product identifier	%	GHS US classification
Sodium dodecyl sulfate (Main constituent)	(CAS-No.) 151-21-3	100	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Sens. 1B, H317

Full text of hazard classes and H-statements : see section 16

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

- First-aid measures general : Call a poison center/doctor/physician if you feel unwell.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor/physician if you feel unwell.
- First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
- First-aid measures after ingestion : Rinse mouth. Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

- Symptoms/effects after inhalation : May cause respiratory irritation.
- Symptoms/effects after skin contact : Irritation.
- Symptoms/effects after eye contact : Serious damage to eyes.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Water spray. Dry powder. Foam.

5.2. Specific hazards arising from the chemical

- Fire hazard : Flammable solid.
- Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.

6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- For containment : Collect spillage.
- Methods for cleaning up : Mechanically recover the product. Notify authorities if product enters sewers or public waters.
- Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

Sodium dodecyl sulfate

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes. Wear personal protective equipment.
- Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Ground/bond container and receiving equipment.
- Storage conditions : Store at room temp. Keep cool. Store in a well-ventilated place.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Sodium dodecyl sulfate (151-21-3)

No additional information available

8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station.
- Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection.

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Solid
- Appearance : White, cream-colored or light yellow crystals, flakes or powder.
- Color : white cream light yellow
- Odor : slight fatty
- Odor threshold : No data available
- pH : 9.1 Concentration: 1 other:%
- pH solution : 1 (6 – 7.5) %
- Melting point : 204 – 207 °C
- Freezing point : Not applicable
- Boiling point : ≈ 216 °C Atm. press.: 1022 mBar Decomposition: 'yes' Decomp. temp.: 216 °C
- Flash point : 150 °C
- Relative evaporation rate (butyl acetate=1) : No data available

Sodium dodecyl sulfate

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Flammability (solid, gas)	: Flammable solid.
Vapor pressure	: ≤ 0.18 Pa Temp.: 20 °C
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Density	: 0.63 g/ml Type: 'bulk density'
Molecular mass	: 288.4 g/mol
Solubility	: Water: 150 g/l (at 20 °C)
Partition coefficient n-octanol/water (Log Pow)	: 1.6
Auto-ignition temperature	: 248 °C (powder containing 90% SLS)
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: Not applicable
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable solid.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Harmful in contact with skin.
Acute toxicity (inhalation)	: Not classified

Sodium dodecyl sulfate (151-21-3)	
LD50 oral rat	1288 mg/kg
LD50 dermal rat	> 2000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LC50 Inhalation - Rat	> 3900 mg/m ³ (Exposure time: 1 h)
ATE US (oral)	500 mg/kg body weight
ATE US (dermal)	1100 mg/kg body weight

Skin corrosion/irritation	: Not classified pH: 9.1 Concentration: 1 other:%
Serious eye damage/irritation	: Not classified pH: 9.1 Concentration: 1 other:%
Respiratory or skin sensitization	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified

Sodium dodecyl sulfate

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: Irritation.
Symptoms/effects after eye contact	: Serious damage to eyes.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Sodium dodecyl sulfate (151-21-3)	
LC50 fish 1	8 – 12.5 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 1	1.8 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 other aquatic organisms 1	11.1 mg/l Test organisms (species): other aquatic crustacea:Pseudosida ramosa
LC50 fish 2	15 – 18.9 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
NOEC chronic fish	≥ 1.357 mg/l Test organisms (species): Pimephales promelas Duration: '42 d'

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Sodium dodecyl sulfate (151-21-3)	
BCF fish 1	(will not bioconcentrate)
Partition coefficient n-octanol/water (Log Pow)	1.6

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description	: UN1325 Flammable solids, organic, n.o.s., 4.1, II
UN-No.(DOT)	: UN1325
Proper Shipping Name (DOT)	: Flammable solids, organic, n.o.s.
Class (DOT)	: 4.1 - Class 4.1 - Flammable Solid 49 CFR 173.124
Packing group (DOT)	: II - Medium Danger
Hazard labels (DOT)	: 4.1 - Flammable solid



DOT Packaging Non Bulk (49 CFR 173.xxx)	: 212
DOT Packaging Bulk (49 CFR 173.xxx)	: 240
DOT Symbols	: G - Identifies PSN requiring a technical name

Sodium dodecyl sulfate

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

DOT Special Provisions (49 CFR 172.102)	: A1 - Single packaging are not permitted on passenger aircraft. IB8 - Authorized IBCs: Metal (11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B and 31N); Rigid plastics (11H1, 11H2, 21H1, 21H2, 31H1 and 31H2); Composite (11HZ1, 11HZ2, 21HZ1, 21HZ2, 31HZ1 and 31HZ2); Fiberboard (11G); Wooden (11C, 11D and 11F); Flexible (13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 or 13M2). IP2 - When IBCs other than metal or rigid plastics IBCs are used, they must be offered for transportation in a closed freight container or a closed transport vehicle. IP4 - Flexible, fiberboard or wooden IBCs must be sift-proof and water-resistant or be fitted with a sift-proof and water-resistant liner. T3 - 2.65 178.274(d)(2) Normal..... 178.275(d)(2) TP33 - The portable tank instruction assigned for this substance applies for granular and powdered solids and for solids which are filled and discharged at temperatures above their melting point which are cooled and transported as a solid mass. Solid substances transported or offered for transport above their melting point are authorized for transportation in portable tanks conforming to the provisions of portable tank instruction T4 for solid substances of packing group III or T7 for solid substances of packing group II, unless a tank with more stringent requirements for minimum shell thickness, maximum allowable working pressure, pressure-relief devices or bottom outlets are assigned in which case the more stringent tank instruction and special provisions shall apply. Filling limits must be in accordance with portable tank special provision TP3. Solids meeting the definition of an elevated temperature material must be transported in accordance with the applicable requirements of this subchapter.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 151
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 15 kg
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 50 kg
DOT Vessel Stowage Location	: B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.
Emergency Response Guide (ERG) Number	: 133
Other information	: No supplementary information available.

Transportation of Dangerous Goods

Not applicable

Transport by sea

Not applicable

Air transport

Transport document description (IATA)	: UN 1325 Flammable solid, organic, n.o.s., 4.1, II
UN-No. (IATA)	: 1325
Proper Shipping Name (IATA)	: Flammable solid, organic, n.o.s.
Class (IATA)	: 4.1 - Flammable Solids; Self-Reactive Substances; Polymerizing Substances; and Solid Desensitized Explosives
Packing group (IATA)	: II - Medium danger

SECTION 15: Regulatory information

15.1. US Federal regulations

Sodium dodecyl sulfate (151-21-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

Sodium dodecyl sulfate (151-21-3)

Listed on the Canadian DSL (Domestic Substances List)

Sodium dodecyl sulfate

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

EU-Regulations

National regulations

No additional information available

15.3. US State regulations

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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SDS US (GHS HazCom 2012)

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