

SAFETY DATA SHEET

Version 5.7
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1. PRODUCT AND COMPANY IDENTIFICATION

Product name	: Sodium dodecyl sulfate		
Product Number	: L4390		
Brand	: Sigma		
Product Use	: For laboratory research purposes.		
Supplier	: Sigma-Aldrich Canada Co. 2149 Winston Park Drive OAKVILLE ON L6H 6J8 CANADA	Manufacturer	: Sigma-Aldrich Corporation 3050 Spruce St. St. Louis, Missouri 63103 USA
Telephone	: +1 9058299500		
Fax	: +1 9058299292		
Emergency Phone # (For both supplier and manufacturer)	: +1-703-527-3887 (CHEMTREC)		
Preparation Information	: Sigma-Aldrich Corporation Product Safety - Americas Region 1-800-521-8956		

2. HAZARDS IDENTIFICATION

Emergency Overview

Target Organs

Lungs

WHMIS Classification

D1A	Very Toxic Material Causing Immediate and Serious Toxic Effects	Highly toxic by inhalation
D2B	Toxic Material Causing Other Toxic Effects	Moderate skin irritant Moderate respiratory irritant Severe eye irritant

GHS Classification

Flammable solids (Category 2)
 Acute toxicity, Oral (Category 4)
 Acute toxicity, Inhalation (Category 4)
 Skin corrosion/irritation (Category 2)
 Serious eye damage/eye irritation (Category 1)
 Specific target organ toxicity - single exposure (Category 3), Respiratory system
 Acute aquatic toxicity (Category 2)
 Chronic aquatic toxicity (Category 3)

GHS Label elements, including precautionary statements

Pictogram



Signal word	Danger
Hazard statement(s)	
H228	Flammable solid.
H302 + H332	Harmful if swallowed or if inhaled
H315	Causes skin irritation.

H318 Causes serious eye damage.
 H335 May cause respiratory irritation.
 H401 Toxic to aquatic life.
 H412 Harmful to aquatic life with long lasting effects.

Precautionary statement(s)

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P240 Ground and bond container and receiving equipment.
 P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
 P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
 P264 Wash skin thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P271 Use only outdoors or in a well-ventilated area.
 P273 Avoid release to the environment.
 P280 Wear protective gloves/ eye protection/ face protection.
 P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.
 P302 + P352 IF ON SKIN: Wash with plenty of water.
 P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
 P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.
 P332 + P313 If skin irritation occurs: Get medical advice/ attention.
 P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
 P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
 P405 Store locked up.
 P501 Dispose of contents/ container to an approved waste disposal plant.

HMIS Classification

Health hazard: 2
Flammability: 2
Physical hazards: 2

Potential Health Effects

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

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Lauryl sulfatesodium salt
 Sodium dodecyl sulphate
 Sodium dodecyl sulfate
 Sodium lauryl sulfate
 Dodecyl sodium sulfate
 Dodecyl sulfate sodium salt
 SDS

Formula : C₁₂H₂₅NaO₄S
 Molecular weight : 288.38 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
Sodium dodecyl sulphate			
151-21-3	205-788-1	-	<=100%

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. FIREFIGHTING MEASURES**Suitable extinguishing media**

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

Special protective equipment for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Hazardous combustion products

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

Explosion data - sensitivity to mechanical impact

No data available

Explosion data - sensitivity to static discharge

No data available

Further information

Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions**

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up

Sweep up and shovel. 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. Contain spillage, pick up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal according to local regulations (see section 13).

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.

hygroscopic

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Eye protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

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

Specific engineering controls

Use mechanical exhaust or laboratory fumehood to avoid exposure.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form Rods

Colour white

Safety data

pH 9.1 at 10 g/l

Melting point/freezing point Melting point/range: 204 - 207 °C (399 - 405 °F) - lit.

Boiling point No data available

Flash point 170 °C (338 °F)

Flammability (solid, gas) The substance or mixture is a flammable solid with the category 2.

Ignition temperature	No data available
Auto-ignition temperature	310.5 °C (590.9 °F)
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapour pressure	0.0018 hPa (0.0014 mmHg) at 20 °C (68 °F)
Density	0.370 g/cm ³
Water solubility	soluble
Partition coefficient: n-octanol/water	log Pow: 0.83 at 22 °C (72 °F)
Solubility in other solvents	Ethanol - partly soluble
Relative vapour density	No data available
Odour	odourless
Odour Threshold	No data available
Evaporation rate	No data available

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

No data available

Conditions to avoid

Heat, flames and sparks.

Materials to avoid

Oxidizing agents

Hazardous decomposition products

Other decomposition products - No data available

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

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50

LD50 Oral - Rat - male and female - 1,200 mg/kg

Inhalation LC50

LC50 Inhalation - Rat - 1 h - > 3,900 mg/m³

Dermal LD50

Other information on acute toxicity

No data available

Skin corrosion/irritation

Skin - Rabbit - Skin irritation - 24 h - OECD Test Guideline 404

Serious eye damage/eye irritation

Eyes - Rabbit - Risk of serious damage to eyes. - OECD Test Guideline 405

Respiratory or skin sensitisation

Information given is based on data obtained from similar substances.

Germ cell mutagenicity

No data available

Genotoxicity in vitro - Ames test - S. typhimurium - with and without metabolic activation - negative

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.

Reproductive toxicity

No data available

Teratogenicity

No data available

Specific target organ toxicity - single exposure (Globally Harmonized System)

No data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

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	Harmful 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.

Synergistic effects

No data available

Additional Information

RTECS: WT1050000

12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish	flow-through test LC50 - Pimephales promelas (fathead minnow) - 29 mg/l - 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	LC50 - Daphnia dubia (water flea) - 5.55 mg/l - 48 h NOEC - Daphnia dubia (water flea) - 0.684 mg/l - 7 d
Toxicity to algae	Growth inhibition LOEC - Pseudokirchneriella subcapitata - 2.68 mg/l - 6 d static test EC50 - Desmodesmus subspicatus (Scenedesmus subspicatus) - > 120 mg/l - 72 h

Persistence and degradability

Biodegradability	aerobic Result: 95 % - Readily biodegradable Method: OECD Test Guideline 301B
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Bioaccumulative potential

Bioaccumulation Cyprinus carpio (Carp) - 72 h
Bioconcentration factor (BCF): 3.9 - 5.3

Mobility in soil

No data available

PBT and vPvB assessment

No data available

Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Toxic to aquatic life.

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. Offer surplus and non-recyclable solutions to a licensed disposal company. 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: 1325 Class: 4.1 Packing group: III
Proper shipping name: Flammable solids, organic, n.o.s. (Sodium dodecyl sulphate)
Reportable Quantity (RQ):
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG

UN number: 1325 Class: 4.1 Packing group: III EMS-No: F-A, S-G
Proper shipping name: FLAMMABLE SOLID, ORGANIC, N.O.S. (Sodium dodecyl sulphate)
Marine pollutant: No

IATA

UN number: 1325 Class: 4.1 Packing group: III
Proper shipping name: Flammable solid, organic, n.o.s. (Sodium dodecyl sulphate)

15. REGULATORY INFORMATION**WHMIS Classification**

D1A	Very Toxic Material Causing Immediate and Serious Toxic Effects	Highly toxic by inhalation
D2B	Toxic Material Causing Other Toxic Effects	Moderate skin irritant Moderate respiratory irritant Severe eye irritant

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

16. OTHER INFORMATION**Further information**

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