

MATERIAL SAFETY DATA SHEET

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Section 1 - Product and Company Information

Product Name LAURYL SULFATE SODIUM MOLECULAR BIOLOGY REAGENT
Product Number L4390
Brand SIGMA
Company Sigma-Aldrich
Address 3050 Spruce Street
SAINT LOUIS MO 63103 US
Technical Phone: 800-325-5832
Fax: 800-325-5052
Emergency Phone: 314-776-6555

Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313 No
SODIUM DODECYL SULFATE	151-21-3	No

Formula C12H25O4S.Na
Synonyms AI3-00356 * Akyposal SDS * Aquarex ME * Aquarex methyl * Avirol 101 * Avirol 118 conc * Berol 452 * Carsonol SLS * Carsonol SLS Paste B * Carsonol SLS Special * Conco sulfate WA * Conco sulfate WA-1200 * Conco sulfate WA-1245 * Conco Sulfate WAG * Conco Sulfate WAN * Conco Sulfate WAS * Conco sulfate WN * CP 75424 * Cycloryl 21 * Cycloryl 31 * Cycloryl 580 * Cycloryl 585N * Dehydtag sulfate GL emulsion * Dehydtag sulphate GL emulsion * Detergent 66 * Dodecyl alcohol, hydrogen sulfate, sodium salt * Dodecyl sodium sulfate * Dodecyl sulfate sodium * n-Dodecyl sulfate sodium * Dodecyl sulfate, sodium salt * Dreft * Duponal * Duponal WAQE * Duponol * Duponol C * Duponol ME * Duponol methyl * Duponol QX * Duponol WA * Duponol WA Dry * Duponol WAQ * Duponol WAQA * Duponol WAQE * Duponol WAQM * EMAL O * EMAL 10 * Emersal 6400 * Empicol LPZ * Empicol LS 30 * Empicol LX 28 * Emulsifier No. 104 * Finasol osr(sub 2) * Gardinol * Hexamol SLS * Incronol SLS * Irium * Jordanol SL-300 * Lanette wax-S * Laurylsiran sodny (Czech) * Lauryl sodium sulfate * Lauryl sulfate, sodium salt * Maprofix 563 * Maprofix LK * Maprofix NEU

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Flammable (USA) Highly Flammable (EU). Toxic (USA) Harmful (EU). Harmful in contact with skin and if swallowed. Irritating to eyes, respiratory system and skin.
Target organ(s): Lungs.

HMIS RATING
HEALTH: 2*
FLAMMABILITY: 2
REACTIVITY: 1

NFPA RATING
HEALTH: 2
FLAMMABILITY: 2
REACTIVITY: 1

*additional chronic hazards present.

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

ORAL EXPOSURE

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

INHALATION EXPOSURE

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

DERMAL EXPOSURE

In case of contact, immediately wash skin with soap and copious amounts of water.

EYE EXPOSURE

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

FLAMMABLE HAZARDS

Flammable Hazards: Yes

EXPLOSION DATA

Dust Potential: This material, like most materials in powder form, is capable of creating a dust explosion.

FLASH POINT

N/A

AUTOIGNITION TEMP

N/A

FLAMMABILITY

N/A

EXTINGUISHING MEDIA

Suitable: For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific Hazard(s): Flammable solid. Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area. Shut off all sources of ignition. Use nonsparking tools.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

HANDLING

User Exposure: Do not breathe dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

STORAGE

Suitable: Keep tightly closed. Keep away from heat, sparks, and open flame.

SPECIAL REQUIREMENTS

Hygroscopic.

Section 8 - Exposure Controls / PPE

ENGINEERING CONTROLS

Safety shower and eye bath. Use nonsparking tools. Mechanical exhaust required.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator.

Hand: Compatible chemical-resistant gloves.

Eye: Chemical safety goggles.

GENERAL HYGIENE MEASURES

Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

Appearance

Physical State: Solid

Color: White

Form: Powder

Property

Value

At Temperature or Pressure

Molecular Weight

288.38 AMU

pH

7.2

BP/BP Range

N/A

MP/MP Range

204.0 - 207.0 °C

Freezing Point

N/A

Vapor Pressure	N/A
Vapor Density	N/A
Saturated Vapor Conc.	N/A
SG/Density	0.37 g/cm3
Bulk Density	N/A
Odor Threshold	N/A
Volatile%	N/A
VOC Content	N/A
Water Content	N/A
Solvent Content	N/A
Evaporation Rate	N/A
Viscosity	N/A
Surface Tension	N/A
Partition Coefficient	Log Kow: 1.6
Decomposition Temp.	N/A
Flash Point	N/A
Explosion Limits	N/A
Flammability	N/A
Autoignition Temp	N/A
Refractive Index	N/A
Optical Rotation	N/A
Miscellaneous Data	N/A
Solubility	Solubility in Water: Soluble. clear, colorless Solvent: Insoluble. Other Solvents: ISP.ALC, XYLE

N/A = not available

Section 10 - Stability and Reactivity

STABILITY

Stable: Stable.
 Conditions to Avoid: Moisture.
 Materials to Avoid: Oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Sulfur oxides.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

Section 11 - Toxicological Information

ROUTE OF EXPOSURE

Skin Contact: Causes skin irritation.
 Skin Absorption: Harmful if absorbed through skin.
 Eye Contact: Causes eye irritation.
 Inhalation: May be harmful if inhaled. Material is irritating to mucous membranes and upper respiratory tract.
 Ingestion: Harmful if swallowed.

SENSITIZATION

Sensitization: Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

TARGET ORGAN(S) OR SYSTEM(S)

Lungs.

SIGNS AND SYMPTOMS OF EXPOSURE

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. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

CONDITIONS AGGRAVATED BY EXPOSURE

Causes sneezing. Do not inhale.

TOXICITY DATA

Skin

Rat

2,000 mg/kg

100% MORTALITY

LD50

Skin

Rabbit

580 mg/kg

LD50

Skin

Guinea pig

> 1,200 mg/kg

LD50

Oral

Rat

1288 mg/kg

LD50

Inhalation

Rat

> 3,900 mg/m³

LC50

Intraperitoneal

Rat

210 MG/KG

LD50

Intravenous

Rat

118 MG/KG

LD50

Intraperitoneal

Mouse

250 MG/KG

LD50

Remarks: Behavioral:Change in motor activity (specific assay).

Behavioral:Somnolence (general depressed activity).

Vascular:Regional or general arteriolar or venous dilation.

Intravenous

Mouse

118 MG/KG

LD50

IRRITATION DATA

Skin
Human
250 mg
24H
Remarks: Mild irritation effect

Skin
Human
25 mg
24H
Remarks: Mild irritation effect

Skin
Mouse
25 mg
24H
Remarks: Moderate irritation effect

Skin
Dog
25 mg
24H
Remarks: Mild irritation effect

Skin
Rabbit
50 mg
24H
Remarks: Severe irritation effect

Skin
Rabbit
25 mg
24H
Remarks: Moderate irritation effect

Skin
Rabbit
250 mg
24H
Remarks: Moderate irritation effect

Skin
Rabbit
10 mg
24H

Skin
Rabbit
50 mg
24H
Remarks: Mild irritation effect

Eyes
Rabbit
100 mg
24H
Remarks: Moderate irritation effect

Eyes
Rabbit
0.25 mg

Remarks: Mild irritation effect

Eyes
Rabbit
2 mg

Eyes
Rabbit
10 mg
Remarks: Moderate irritation effect

Skin
Pig
25 mg
24H
Remarks: Mild irritation effect

Skin
Guinea pig
25 mg
24H
Remarks: Mild irritation effect

CHRONIC EXPOSURE - TERATOGEN

Result: Laboratory experiments have shown teratogenic effects.

Species: Mouse
Dose: 480 MG/KG
Route of Application: Skin
Exposure Time: (6-13D PREG)
Result: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

CHRONIC EXPOSURE - MUTAGEN

Result: Laboratory experiments have shown mutagenic effects.

Species: Human
Dose: 100 MG/L
Cell Type: lymphocyte
Mutation test: DNA inhibition

Species: Rat
Dose: 243 UMOL/L
Cell Type: liver
Mutation test: DNA damage

Species: Guinea pig
Dose: 60 UMOL/L
Cell Type: kidney
Mutation test: DNA inhibition

Section 12 - Ecological Information

N/A

PHYSICAL PROPERTIES AFFECTING ECOTOXICITY

COD: 95.1 %
BOD: 95.9 %

ACUTE ECOTOXICITY TESTS

Test Type: LC50 Fish
Species: Onchorhynchus mykiss (Rainbow trout)

Time: 96 h
Value: 3.6 mg/l

Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT

Proper Shipping Name: Flammable solids, toxic, organic, n.o.s.
UN#: 2926
Class: 4.1
Packing Group: Packing Group II
Hazard Label: Flammable solid
Hazard Label: Toxic substances.
PIH: Not PIH

IATA

Proper Shipping Name: Flammable solid, toxic, organic, n.o.s.
IATA UN Number: 2926
Hazard Class: 4.1
Packing Group: II

Section 15 - Regulatory Information

EU ADDITIONAL CLASSIFICATION

Symbol of Danger: F-Xn
Indication of Danger: Highly Flammable. Harmful.
R: 11-21/22-36/37/38
Risk Statements: Highly flammable. Harmful in contact with skin and if swallowed. Irritating to eyes, respiratory system and skin.
S: 26-36/37
Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing and gloves.

US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Flammable (USA) Highly Flammable (EU). Toxic (USA) Harmful (EU).
Risk Statements: Harmful in contact with skin and if swallowed. Irritating to eyes, respiratory system and skin.
Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing and gloves.
US Statements: Target organ(s): Lungs.

UNITED STATES REGULATORY INFORMATION

SARA LISTED: No
TSCA INVENTORY ITEM: Yes

CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS

contains all the information required by the CPR.

DSL: Yes

NDSL: No

Section 16 - Other Information

DISCLAIMER

For R&D use only. Not for drug, household or other uses.

WARRANTY

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 Inc., 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. Copyright 2007 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.