

SECTION 1 – IDENTIFICATION

Product Identifier: Sodium Dodecyl Sulfate
Biotechnology Grade

Catalogue Number: 2050

Other means of identification: Dodecyl sulfate sodium salt
Lauryl sulfate sodium salt
Sodium lauryl sulfate
Sulfuric Acid, Monododecyl Ester, Sodium Salt

Recommended use of the chemical and restrictions on use:
Suitable for SDS-based electrophoresis and solubilizing cell membranes.
For R&D use only. Not for pharmaceutical, household or other uses.

Supplier Information:

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SECTION 2 – HAZARDS IDENTIFICATION

GHS Classification:

Flammable solid, Category 2
Acute toxicity, Oral, Category 4
Acute toxicity, Inhalation, Category 4
Skin irritation, Category 2
Serious eye damage, Category 1
Specific target organ toxicity – single exposure, Category 3
Chronic aquatic toxicity, Category 3

GHS Hazard Pictogram(s):



Signal Word: Danger

Hazards statements:

H228: Flammable solid
H302 + H332: Harmful if swallowed or inhaled.
H315: Causes skin irritation.
H318: Causes serious eye damage.
H335: May cause respiratory irritation.
H412: Harmful to aquatic life with long lasting effects

Precautionary statements:

Prevention:

P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P240: Ground/bond container and receiving equipment.
P241: Use explosion-proof electrical/ventilating/light/equipment.
P261: Avoid breathing dust/fume/gas/mist/vapors/spray.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response

P301 + P330 + P331: IF SWALLOWED: rinse mouth. Do NOT induce vomiting
P304 + P340 + P312: IF INHALED: Remove victim to fresh air and keep at rest in a position 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.
P370 + P378: In case of fire: Use water spray, dry chemical powder, carbon dioxide or alcohol-resistant foam for extinction.
P310: Immediately call a POISON CENTER or doctor.

Storage

P403 + P233: Store in a well-ventilated place and keep container tightly closed.

Disposal

P501: Dispose of contents/container in accordance with federal, state and local environmental regulations.

SECTION 3 – COMPOSITION/ INFORMATION ON INGREDIENTS

Chemical Identity:	Sodium Dodecyl Sulfate
Synonyms:	Sodium Lauryl Sulfate Lauryl sulfate sodium salt SDS
Molecular Formula:	C ₁₂ H ₂₅ OSO ₃ Na
Molecular Weight:	288.38 g/mol

Component	Classification	Concentration
Sodium Dodecyl Sulfate		
CAS-No. 151-21-3 EC-No. 205-788-1	Flam. Sol. 2; Acute Tox. 4; Skin Irrit 2; STOT SE 3; Aquatic Chronic 3; H228, H302, H315, H335, H412, H318. Concentration limits: 10 - < 20 %: Eye Irrit. 2, H319; ≥ 20 %: Eye Dam. 1, H318	≤ 100 %

SECTION 4 – FIRST-AID MEASURES

Eye Contact

Immediately flush eyes with copious amounts of water for at least 15 minutes. Immediately call-in ophthalmologist.

Skin Contact

Immediately wash skin thoroughly with soap and copious amounts of water. Consult a physician.

Inhalation

Remove to fresh air. If not breathing, give artificial respiration or if breathing is difficult, give oxygen. Consult a physician.

Ingestion

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

Most important symptoms and effects, both acute and delayed

Sodium 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.

Indication of immediate medical attention and special treatment needed

Data not available.

SECTION 5 – FIRE-FIGHTING MEASURES

Extinguishing Media

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

Special Exposure Hazards

Sulphur oxides

Special Fire-fighting Procedures

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

Further Information

Combustible material, vapours are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapours possible in the event of fire.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal Precautions

Prevent skin/eye contact. Avoid dust formation. Remove all sources of ignition. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental Precautions

Do not allow material into sewers and drainage systems.

Methods for Cleaning Up

Sweep up and shovel. Clean up spills immediately, observing precautions in the safety data sheet and label. Minimize dust generation. Dispose into a chemical waste container.

SECTION 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. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Keep away from sources of ignition - No smoking. Take measures to prevent the buildup of electrostatic charge. Follow all SDS/ label precautions. Avoid contact with skin and eyes. Avoid raising dust.

Conditions for safe storage, including any incompatibilities

Store in tightly closed container in a cool, dry and well-ventilated area.

SECTION 8 – EXPOSURE CONTROLS/ PERSONAL PROTECTION

Occupational Exposure Limits

We are not aware of any national exposure limit.

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice.

Eye/ Face Protection

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

Skin/ 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.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm
Break through time: 480 min

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.

Body protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory Protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

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

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

a)	Appearance	Fine, white or slightly yellow powder
b)	Odour	Odourless
c)	Odour Threshold	Not available
d)	pH (10g/l, 25°C)	6.0 – 9.0
e)	Melting/freezing point	204°C - 207°C
f)	Initial boiling point and boiling range	Not available
g)	Flash point	170°C
h)	Evaporation rate	Not available
i)	Flammability (solid, gas)	Not available
j)	Upper/lower flammability or explosive limits	Not available
k)	Vapour pressure	0.0018 hPa at 20 °C
l)	Vapour density	Not available
m)	Relative density	0.37 g/cm ³

n)	Water solubility	150 g/L at 20 °C
o)	Partition coefficient: n-octanol/water	Log Pow: 1.6 at 25 °C
p)	Autoignition temperature	310.5 °C
q)	Decomposition temperature	Not available
r)	Viscosity	Not available

SECTION 10 – STABILITY AND REACTIVITY

Reactivity

Data not available.

Chemical stability

Data not available.

Possibility of hazardous reactions

Data not available.

Conditions to avoid

Heat, flames, ignition sources and incompatibles.

Incompatible material

Strong oxidizing agents.

Hazardous decomposition products

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

SECTION 11 – TOXICOLOGICAL INFORMATION

Acute toxicity

Oral (LD50): 1.200 mg/kg [Rat]

Inhalation (LC50): > 3.900 mg/m³/h [Rat]

Skin corrosion/irritation

Skin irritation: - 24 h [Rabbit]

OECD Test Guideline 404

Serious eye damage/eye irritation

Risk of serious damage to eyes: OECD Test Guideline 405 [Rabbit]

Respiratory or skin sensitization

Data not available.

Germ cell mutagenicity

Data not 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.

Reproductive toxicity

Data not available.

Specific target organ toxicity – single exposure

Inhalation - May cause respiratory irritation.

Specific target organ toxicity – repeated exposure

Data not available.

Aspiration hazard

Data not available.

Likely routes of exposure

Eye contact. Inhalation. Health effects not known.

Symptoms related to physical, chemical and toxicological characteristics

Inhalation: Harmful if inhaled. Cause respiratory tract irritation.

Ingestion: harmful is swallowed.

Skin: May be harmful if absorb through skin. Causes skin irritation.

Eyes: Causes eye burns.

Delayed and immediate effects and also chronic effects from short and long term exposure

Sodium 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.

Numerical measures of toxicity

Data not available.

Other information

RTECS: WT1050000

SECTION 12 – ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish:

Flow-through test LC50 - Pimephales promelas (fathead minnow) - 29 mg/l - 96h
(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:

Static test EC50 - Desmodesmus subspicatus (Scenedesmus subspicatus) - > 120 mg/l - 72 h

Persistence and degradability

Biodegradability – 95 % readily biodegradable – 28d: OECD Test Guideline 301B

Bioaccumulative potential

Bioaccumulation:

Cyprinus carpio (Carp) - 72 h

Bioconcentration factor (BCF): 3.9 - 5.3

Mobility in soil

Data not available.

Other adverse effect

Toxic to aquatic life.

SECTION 13 – DISPOSAL CONSIDERATIONS

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose off as unused product.

SECTION 14 – TRANSPORT INFORMATION

UN Number

ADR/RID: 1325

IMDG: 1325

IATA-DGR: 1325

UN Proper Shipping Name:

ADR/RID: FLAMMABLE SOLID, ORGANIC, N.O.S. (Sodium dodecyl sulphate)

IMDG: FLAMMABLE SOLID, ORGANIC, N.O.S. (Sodium dodecyl sulphate)

IATA-DGR: FLAMMABLE SOLID, ORGANIC, N.O.S. (Sodium dodecyl sulphate)

Transport Hazard Class(es)

ADR/RID: 4.1

IMDG: 4.1

IATA-DGR: 4.1

Packing Group

ADR/RID: III

IMDG: III

IATA-DGR: III

Environmental Hazards

ADR/RID: no

IMDG: marine pollutant: no

IATA-DGR: no

Special Precaution for Users

Data not available

SECTION 15 – REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

Data not available.

SECTION 16 – OTHER 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. Axil Scientific Pte Ltd shall not be held liable for any damage resulting from handling or from contact with the above product.