SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Revision Date 10/15/2014 Version 2.0

SECTION 1. Identification

Product identifier

Product number	822050
Product name	Dodecyl sulfate sodium salt for synthesis
Synonyms	SDS
CAS-No.	151-21-3

Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Chemical for synthesis

Details of the supplier of the safety data sheet

Company	EMD Millipore Corporation | 290 Concord Road, Billerica, MA 01821, United States of America | General Inquiries: +1-978-715-4321 | Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5)
Emergency telephone	800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

SECTION 2. Hazards identification

GHS Classification

Flammable solid, Category 2, H228
Acute toxicity, Category 4, Oral, H302
Skin irritation, Category 2, H315
Serious eye damage, Category 1, H318
Specific target organ systemic toxicity - single exposure, Category 3, Respiratory system, H335

For the full text of the H-Statements mentioned in this Section, see Section 16.

GHS-Labeling

Hazard pictograms



Signal Word
Danger

Hazard Statements
H228 Flammable solid.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.

Precautionary Statements
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/ lighting/ equipment.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ 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.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/ physician.
P321 Specific treatment (see supplemental first aid instructions on this label).
P330 Rinse mouth.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
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.

Other hazards
None known.

SECTION 3. Composition/information on ingredients

Formula	$C_{12}H_{25}OSO_2ONa$	$C_{12}H_{25}NaO_4S$ (Hill)
Synonyms	SDS	
Molar mass	288.37 g/mol	

Hazardous ingredients
Chemical Name (Concentration)
CAS-No.
dodecyl sulphate sodium salt (>= 90 % - <= 100 %)
151-21-3

Exact percentages are being wihtheld as a trade secret.

SECTION 4. First aid measures

Description of first-aid measures

General advice

First aider needs to protect himself.

Inhalation

After inhalation: fresh air.

Skin contact

After skin contact: wash off with plenty of water. Remove contaminated clothing. Call a physician immediately.

Eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist.

Ingestion

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

Cough, Shortness of breath, Tiredness, Irritation and corrosion

Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Water, Carbon dioxide (CO2), Foam, Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

Special hazards arising from the substance or mixture

Combustible.
Forms explosive mixtures with air on intense heating.
Development of hazardous combustion gases or vapors possible in the event of fire.
Fire may cause evolution of:
Sulfur oxides

Advice for firefighters

Special protective equipment for fire-fighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system. Remove container from danger zone and cool with water.

SECTION 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid substance contact. Avoid inhalation of dusts. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

Environmental precautions

Do not empty into drains. Risk of explosion.

Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills.
Observe possible material restrictions (see sections 7 and 10).
Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

SECTION 7. Handling and storage

Precautions for safe handling

Observe label precautions.

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Conditions for safe storage, including any incompatibilities

Tightly closed. Dry. Keep away from heat and sources of ignition. Keep locked up or in an area accessible only to qualified or authorized persons.

Store at +15°C to +25°C (+59°F to +77°F).

SECTION 8. Exposure controls/personal protection

Exposure limit(s)

Contains no substances with occupational exposure limit values.

Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

Individual protection measures

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

Hygiene measures

Immediately change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance.

Eye/face protection

Tightly fitting safety goggles

Hand protection
Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Other protective equipment:
protective clothing

Respiratory protection
required when dusts are generated.
Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

SECTION 9. Physical and chemical properties

Physical state	powder
Color	white
Odor	odorless
Odor Threshold	Not applicable
pH	6 - 9 at 10 g/l 68 °F (20 °C)
Melting point	204 - 207 °C
Boiling point/boiling range	Not applicable
Flash point	> 302 °F (> 150 °C)
Evaporation rate	No information available.
Flammability (solid, gas)	The substance or mixture is a flammable solid with the category 2. Flammability (solids)
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Vapor pressure	No information available.
Relative vapor density	No information available.
Density	1.1 g/cm³ at 68 °F (20 °C)
Relative density	No information available.

Water solubility	150 g/l at 68 °F (20 °C)
Partition coefficient: n-octanol/water	log Pow: 1.6 (experimental) Bioaccumulation is not expected. (Lit.)
Autoignition temperature	No information available.
Decomposition temperature	716 °F (380 °C)
Viscosity, dynamic	No information available.
Explosive properties	Not classified as explosive.
Oxidizing properties	none
Bulk density	ca. 490 - 560 kg/m³

SECTION 10. Stability and reactivity

Reactivity

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

Forms explosive mixtures with air on intense heating.

Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

Possibility of hazardous reactions

Exothermic reaction with:

strong oxidizing agents

Conditions to avoid

Strong heating (decomposition).

Incompatible materials

no information available

Hazardous decomposition products

in the event of fire: See section 5.

SECTION 11. Toxicological information

Information on toxicological effects

Likely route of exposure

Inhalation, Eye contact, Skin contact, Ingestion

Target Organs

Gastro-intestinal system

Lungs
Eyes
Skin
Respiratory organs

Acute oral toxicity
LD50 Rat: 1,427 mg/kg
OECD Test Guideline 401

absorption
Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

Acute inhalation toxicity
LC50 Rat: > 3.9 mg/l; 1 h (RTECS)

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

Acute dermal toxicity
absorption

LD50 Rabbit: > 2,000 mg/kg
(External MSDS)

Skin irritation
Rabbit
Result: Irritations
OECD Test Guideline 404

Causes skin irritation.

Eye irritation
Rabbit
Result: Irreversible effects on the eye
OECD Test Guideline 405

Causes serious eye damage.

Sensitization
Maximization Test (GPMT)
Result: negative
(IUCLID)

Genotoxicity in vitro
Ames test
Salmonella typhimurium
Result: negative
Method: OECD Test Guideline 471

Mutagenicity (mammal cell test):
MOUSE LYMPHOMA TEST
Result: negative
Method: OECD Test Guideline 476

Specific target organ systemic toxicity - single exposure
Target Organs: Respiratory system
May cause respiratory irritation.

Specific target organ systemic toxicity - repeated exposure
The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard
Regarding the available data the classification criteria are not fulfilled.

Carcinogenicity

IARC	No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
ACGIH	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Further information

Other dangerous properties can not be excluded.
Handle in accordance with good industrial hygiene and safety practice.

SECTION 12. Ecological information

Ecotoxicity

Toxicity to fish
flow-through test LC50 Pimephales promelas (fathead minnow): 29 mg/l; 96 h
OECD Test Guideline 203

flow-through test NOEC Pimephales promelas (fathead minnow): > 1.357 mg/l; 42 d (ECHA)

Toxicity to daphnia and other aquatic invertebrates
EC0 E.sulcatum: 40 mg/l; 72 h (Lit.)

EC50 Daphnia magna (Water flea): 6 mg/l; 48 h (IUCLID)

Toxicity to algae
static test EC50 Desmodesmus subspicatus (green algae): 53 mg/l; 72 h
DIN 38412

Toxicity to bacteria
microtox test EC50 Photobacterium phosphoreum: 0.46 mg/l; 30 min (IUCLID)

EC50 activated sludge: 130 mg/l; 3 h
OECD Test Guideline 209

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)
flow-through test NOEC Ceriodaphnia Dubia (water flea): 0.88 mg/l; 7 d

US-EPA

Persistence and degradability

Biodegradability

95 %; 28 d; aerobic
OECD Test Guideline 301B
Readily biodegradable.

Ratio BOD/ThBOD

BOD5 99 %
(Lit.)

Bioaccumulative potential

Partition coefficient: n-octanol/water

log Pow: 1.6
(experimental)
Bioaccumulation is not expected. (Lit.)

Mobility in soil

No information available.

Additional ecological information

Discharge into the environment must be avoided.

SECTION 13. Disposal considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14. Transport information

Land transport (DOT)

UN number	UN 2926
Proper shipping name	FLAMMABLE SOLID, TOXIC, ORGANIC, N.O.S. (SODIUM DODECYL SULFATE)
Class	4.1 (6.1)
Packing group	III
Environmentally hazardous	--

Air transport (IATA)

UN number	UN 2926
Proper shipping name	FLAMMABLE SOLID, TOXIC, ORGANIC, N.O.S. (SODIUM DODECYL SULFATE)
Class	4.1 (6.1)
Packing group	III
Environmentally hazardous	--
Special precautions for user	no

Sea transport (IMDG)

UN number	UN 2926
Proper shipping name	FLAMMABLE SOLID, TOXIC, ORGANIC, N.O.S. (SODIUM DODECYL SULFATE)
Class	4.1 (6.1)
Packing group	III
Environmentally hazardous	--
Special precautions for user	yes
EmS	F-A S-G

SECTION 15. Regulatory information

United States of America

SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 302

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

DEA List I

Not listed

DEA List II

Not listed

US State Regulations

Massachusetts Right To Know

Remarks

No components are subject to the Massachusetts Right to Know Act.

California Prop 65 Components

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

Notification status

TSCA:	All components of the product are listed in the TSCA-inventory.
DSL:	All components of this product are on the Canadian DSL.

SECTION 16. Other information

Training advice

Provide adequate information, instruction and training for operators.

Labeling

Hazard pictograms



Signal Word
Danger

Hazard Statements
H228 Flammable solid.
H302 Harmful if swallowed.
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.
P273 Avoid release to the environment.
P280 Wear eye protection.
Response
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P313 Get medical advice/ attention.

Full text of H-Statements referred to under sections 2 and 3.

H228	Flammable solid.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.

Key or legend to abbreviations and acronyms used in the safety data sheet
Used abbreviations and acronyms can be looked up at www.wikipedia.org.

Revision Date10/15/2014

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to appropriate safety precautions. It does not represent a warranty of any product properties and we assume no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.
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