Safety Data Sheet

#90036493 · Full 16-section SDS

According to Regulation (EC) No 1907/2006
According to Regulation (EC) No 2020/878

Molekula Limited
1 Millennium Way
Newton Aycliffe
Durham, DL5 6JW
United Kingdom

info@molekula.com
+44 (0) 3302 000333

PRODUCT	CAS NUMBER	FORMULA	VERSION	REVISION DATE
SDS (Sodium dodecyl sulfate) - (≥ 95%)	**151-21-3**	**C12H25NaO4S**	**10**	**07 Oct 2026**

SECTION 1

Identification

1.1 Product identifier

Product name	SDS (Sodium dodecyl sulfate)
CAS number	151-21-3
EC / EINECS number	205-788-1
Chemical formula	C12H25NaO4S
Molecular weight	288.38
SMILES	CCCCCCCCCCCCOS(=O)(=O)[O-].[Na+]

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

Research and development; not suitable for human consumption or veterinary purposes.

1.3 Details of the supplier of the safety data sheet

Molekula Limited
1 Millennium Way, Newton Aycliffe
Durham, DL5 6JW, United Kingdom
info@molekula.com · +44 (0) 3302 000333

1.4 Emergency telephone number

0344 892 0111 — National Poisons Information Service (NPIS) (United Kingdom — for healthcare professionals (via TOXBASE))

SECTION 2

Hazard identification

2.1 Classification of the substance or mixture

Serious eye damage, Category 1
Hazardous to the aquatic environment, Chronic Category 3
Skin irritation, Category 2
Acute toxicity (oral), Category 4
Acute toxicity (inhalation), Category 4
Specific target organ toxicity - single exposure, Category 3
Flammable solids, Category 2

2.2 Label elements

DANGER

CODE	HAZARD STATEMENT
H228	Flammable solid
H302+332	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

CODE	PRECAUTIONARY STATEMENT
P210	Keep away from heat/sparks/open flames/hot surfaces - No smoking
P260	Do not breathe dust/fume/gas/mist/vapours/spray
P273	Avoid release to the environment
P280	Wear protective gloves/protective clothing/eye protection/face protection
P301+310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
P305+351+338	IF IN EYES: Rinse with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing

2.3 Other hazards

No data available.

SECTION 3

Composition / information on ingredients

3.1 Substances

Name	SDS (Sodium dodecyl sulfate)
CAS number	151-21-3
EC number	205-788-1
Concentration / purity	~100.0% Concentration limits: 10 - < 20 %: Eye Irrit. 2, H319; >= 20 %: Eye Dam. 1, H318;
Classification according to Regulation (EC) No 1272/2008	Serious eye damage, Category 1 Hazardous to the aquatic environment, Chronic Category 3 Skin irritation, Category 2 Acute toxicity (oral), Category 4 Acute toxicity (inhalation), Category 4 Specific target organ toxicity - single exposure, Category 3 Flammable solids, Category 2
Hazard statements	H228, H302+332, H315, H318, H335, H412
Acute toxicity estimate (ATE)	Not reported
Impurities / stabilising additives	*Not applicable*

SECTION 4

First-aid measures

4.1 Description of first aid measures

Inhalation	Remove person to fresh air and keep comfortable for breathing; immediately call a poison center/doctor; give artificial respiration if breathing stops and oxygen if breathing is difficult.
Skin contact	Immediately remove all contaminated clothing, rinse skin with water/shower, and immediately call a poison center/doctor.
Eye contact	Remove contact lenses if present and rinse eyes with water for at least 15 minutes; seek medical attention.
Ingestion	Give water to drink (two glasses at most) and seek medical advice immediately; administer activated charcoal (20-40 g in a 10% slurry); induce vomiting only in exceptional cases if no medical care within one hour and the person is fully conscious; do not attempt to neutralise.

Get medical attention if any discomfort continues. Show this Safety Data Sheet (SDS) to medical personnel. First aiders/ medical personnel need to protect themselves.

4.2 Most important symptoms and effects, both acute and delayed

Not applicable

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically; immediately call a poison center/doctor.

SECTION 5

Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media	Foam, carbon dioxide, dry powder or water fog.
Unsuitable extinguishing media	Do not use water jet, as it will spread the fire.

5.2 Special hazards arising from the substance or mixture

Combustible.
Carbon monoxide (CO)
Carbon dioxide (CO2)
Sulphur oxides (SOx)
Sodium oxides
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.

5.3 Advice for firefighters

Evacuate area, avoid breathing fumes, wear suitable protective equipment/clothing, and cool exposed containers with water spray.

SECTION 6

Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Do not breathe vapor/spray and avoid contact with skin and eyes; in case of fire, evacuate and fight fire remotely due to explosion risk; see section 8 for PPE.

6.2 Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

6.3 Methods and material for containment and cleaning up

Collect with absorbent, non-combustible material into suitable containers, avoiding dust formation.

6.4 Reference to other sections

For specific precautions, see Section 8 and Section 13.

SECTION 7

Handling & storage

7.1 Precautions for safe handling

Work under hood, do not inhale substance, keep away from heat/sparks/open flames, no smoking, take measures against static discharge, and wash skin thoroughly after handling.
Observe good chemical hygiene practices. Keep away from food, drink and animal feeding stuffs.
Wash contaminated skin thoroughly after handling. Do not eat, drink or smoke when using this product.
Remove contaminated clothing and launder thoroughly before re-use.

7.2 Conditions for safe storage, including any incompatibilities

Storage temperature	Ambient
Conditions for safe storage (incompatibilities)	Store in a dry place in a closed container at ambient temperature, away from heat; Hygroscopic, handle under inert gas.

7.3 Specific end use(s)

See Section 1.2.

SECTION 8

Exposure controls / personal protection

8.1 Control parameters

Occupational exposure limits (OEL / WEL)	None reported
DNEC/PNEC data	DNEL Worker (longterm), Inhalation, systemic effects: 285mg/m3 Consumer (longterm), Inhalation, systemic effects: 85mg/m3 Effects (longterm), Dermal, systemic effects: 4060mg/kg bw/day PNEC Freshwater: 0.176mg/l Freshwater sediment: 6.97mg/kg sediment dw Water Intermittent: 0.055mg/L Microorganisms in sewage: 1.35mg/L Soil (Agr.): 1.29mg/kg soil dw Marine water: 0.0176mg/L Marine water sediment: 0.697mg/kg sediment dw

8.2 Exposure controls

Eye / face protection	Chemical splash goggles Wear eye/face protection as recommended. All eye/face protection should comply with EN ISO 16321-1:2022.
Skin / hand protection	Wear protective nitrile gloves (thickness 0.11 mm, breakthrough time 480 min); inspect gloves before use and wash contaminated skin thoroughly after handling.
Respiratory protection	Half-mask with filter Keep self-contained breathing apparatus readily available for emergency use. Provide adequate ventilation. If ventilation is insufficient, suitable respiratory protection must be provided. Respiratory equipment: Reusable Air-Purifying Respirator (APR). Filter type: ABEK. Standard: EN 14387.
Other protection	Wash skin thoroughly after handling; wear fire/flame resistant/retardant clothing.
Environmental exposure controls	Avoid discharge into drains.

SECTION 9

Physical & chemical properties

9.1 Information on basic physical and chemical properties

Appearance / physical state	Solid DERIVED FROM: LITERATURE
Colour	White / off-white DERIVED FROM: LITERATURE
Odour	Odourless DERIVED FROM: LITERATURE
Melting / freezing point	204 - 207 °C DERIVED FROM: LITERATURE
Boiling point	*No data available*
Flammability	Flammable solid. DERIVED FROM: LITERATURE
Lower and upper explosion limit	*No data available*
Flash point	150 °C DERIVED FROM: LITERATURE
Auto-ignition temperature	310.05 °C DERIVED FROM: LITERATURE
Decomposition temperature	*No data available*
pH	9.1 (10 g/l) DERIVED FROM: LITERATURE
Acidity	Neutral DERIVED FROM: LITERATURE
Kinematic viscosity	*No data available*
Solubility	Soluble in water. 130g/l in 20℃ DERIVED FROM: LITERATURE
Partition coefficient n-octanol/water (log value)	*No data available*
Vapour pressure	<0.0000001 kPa DERIVED FROM: LITERATURE
Density (g/mL)	1.03 g/mL DERIVED FROM: LITERATURE
Relative vapour density	*No data available*
Particle characteristics	*No data available*

9.2 Other information

No data available

SECTION 10

Stability & reactivity

10.1 Reactivity

Forms explosive mixtures with air on intense heating; approx. 15 K below the flash point is to be rated as critical.

10.2 Chemical stability

Stable under the prescribed storage conditions.

10.3 Possibility of hazardous reactions

Violent reactions possible with strong oxidizing agents.

10.4 Conditions to avoid

Strong heating.

10.5 Incompatible materials

Strong oxidizing agents.

10.6 Hazardous decomposition products

See section 5.

SECTION 11

Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (LD50 / LC50)	Oral LD50 (rat): 977 mg/kg Dermal LD50 (rat): 2000 mg/kg ATE inhalation (dust/mist, 4 h): 1.51 mg/l.
Skin corrosion / irritation	Classification criteria not met; irritating to rabbit skin (24 h).
Eye corrosion / irritation	Classification criteria not met; irreversible effects on the eye in rabbit.
Respiratory / skin sensitisation	Based on available data, the classification criteria are not met.
Carcinogenicity	Based on available data, the classification criteria are not met.
Mutagenicity	Classification criteria not met Negative in Ames test, in vitro mouse lymphoma test and mouse dominant lethal test.
Reproductive toxicity	Based on available data, the classification criteria are not met.
STOT (single / repeated exposure)	Classification criteria not met for single or repeated exposure; inhalation may cause respiratory irritation.
Aspiration hazard	Based on available data, the classification criteria are not met.

11.2 Information on other hazards

This product does not contain any known or suspected endocrine disruptors.

SECTION 12

Ecological information

12.1 Toxicity

Fish
LC50 (Pimephales promelas, 96 h): 29 mg/l

Algae
ErC50 (Desmodesmus subspicatus, 72 h): >120 mg/l

Crustacean
EC50 (Ceriodaphnia dubia, 48 h): 5.55 mg/l

Activated sludge EC50 (3 h): 135 mg/l;

Chronic Toxicity
Fish
NOEC Ceriodaphnia dubia (7 d): 0.88 mg/l

Crustacean
NOEC Pimephales promelas (42 d): 1.36 mg/l.

12.2 Persistence and degradability

Readily biodegradable (95% aerobic degradation in 28 days).

12.3 Bioaccumulative potential

BCF 3.9-5.3 (Cyprinus carpio, 72 h).

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

See Section 11.2.

12.7 Other adverse effects

No data available

SECTION 13

Disposal considerations

13.1 Waste treatment methods

Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14

Transport information

14.1 UN number or ID number

UN1325

14.2 UN proper shipping name

FLAMMABLE SOLID, ORGANIC, N.O.S.

14.3 Transport hazard class(es)

4.1

14.4 Packing group

III

14.5 Environmental hazards

Not applicable

14.6 Special precautions for user

Special precautions for user	Tunnel restriction code: E; Transport category: 3; IMDG EmS: F-G, S-G; IBC Instruction: IBC08.
Transport category	2
Tunnel code	(E)
Packing instruction (ADR)	P002
Packing instruction (IMDG)	P002

14.7 Maritime transport in bulk according to IMO instruments

No data available

SECTION 15

Regulatory information

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

Substance-specific regulations (e.g. licences)	National regulations: no data available.
REACH code	Y110
ECHA notification	*Not applicable*

15.2 Chemical safety assessment

No

SECTION 16

Other information

Revision notes / other information	This version (v10) was created on 07.10.2026 and replaces version 4.1 (29.01.2024) with no significant changes. Version 4.1, issued 29.01.2024 and replaced v4.0 (29.06.2023) added hazard classes: Flam. Sol. 1/2, Acute Tox. 4 (oral, inhalation), Skin Irrit. 2, Eye Dam. 1, STOT SE 3, Aquatic Chronic 3.

This Safety Data Sheet was generated automatically from the data Molekula holds against this product, in the 16-section GHS/CLP format. Fields shown as “No data available” carry no recorded value; fields shown as “Not applicable” were assessed as not relevant to this substance. For queries, contact Molekula at info@molekula.com.