

# SODIUM DODECYL SULFATE

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date: 12/16/2014 Version: 1.0

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Substance  
Trade name : SODIUM DODECYL SULFATE  
CAS No : 151-21-3  
Product code : AB01920  
Formula : C<sub>12</sub>H<sub>25</sub>NaO<sub>4</sub>S

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

Use of the substance/mixture : Laboratory use/Manufacturing component/Research  
Use of the substance/mixture : Surfactant

#### 1.3. Details of the supplier of the safety data sheet

AmericanBio, Inc.  
15 Erie Dr.  
Natick, MA 01760 - USA  
T 800.443.0600 - F 508.655.2754  
[info@americanbio.com](mailto:info@americanbio.com) - [www.americanbio.com](http://www.americanbio.com)

#### 1.4. Emergency telephone number

Emergency number : 855.835.2572 (U.S.) :: 760.602.8703 (Outside U.S.)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification (GHS-US)

Acute Tox. 4 (Oral) H302  
Acute Tox. 4 (Dermal) H312

#### 2.2. Label elements

##### GHS-US labeling

Hazard pictograms (GHS-US) :



GHS07

Signal word (GHS-US) : Warning  
Hazard statements (GHS-US) : H302+H312 - Harmful if swallowed or in contact with skin  
Precautionary statements (GHS-US) : P264 - Wash hands, forearms and face thoroughly after handling  
P270 - Do not eat, drink or smoke when using this product  
P280 - Wear eye protection, protective clothing, protective gloves  
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  
P312 - Call a POISON CENTER/doctor/physician if you feel unwell  
P321 - Specific treatment (see SECTION 4 on this label)  
P330 - If swallowed, rinse mouth  
P362+P364 - Take off contaminated clothing and wash it before reuse  
P501 - Dispose of contents/container to Local/Federal regulations

#### 2.3. Other hazards

No additional information available

#### 2.4. Unknown acute toxicity (GHS-US)

No data available

### SECTION 3: Composition/information on ingredients

#### 3.1. Substance

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Name	Product identifier	%	Classification (GHS-US)
SODIUM DODECYL SULFATE (Main constituent)	(CAS No) 151-21-3	100	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312

Full text of H-phrases: see section 16

### 3.2. Mixture

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general	: Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital. Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service. Assure fresh air breathing. Allow the victim to rest.
First-aid measures after skin contact	: Wash immediately with lots of water. Soap may be used. Do not apply (chemical) neutralizing agents. Take victim to a doctor if irritation persists. Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Immediately call a POISON CENTER or doctor/physician. Specific measures (see Consult a doctor/medical service on this label). Wash with plenty of soap and water. Wash contaminated clothing before reuse.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists. Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
First-aid measures after ingestion	: Rinse mouth with water. Do not induce vomiting. Call Poison Information Centre ( <a href="http://www.big.be/antigif.htm">www.big.be/antigif.htm</a> ). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital. Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Call a POISON CENTER/doctor/physician if you feel unwell.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation	: AFTER INHALATION OF DUST: Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Headache. Dry/sore throat.
Symptoms/injuries after skin contact	: Red skin. Tingling/irritation of the skin. Blue/grey discolouration of the skin. ON CONTINUOUS EXPOSURE/CONTACT: Dry skin. Cracking of the skin. Repeated exposure to this material can result in absorption through skin causing significant health hazard. Harmful in contact with skin.
Symptoms/injuries after eye contact	: Irritation of the eye tissue.
Symptoms/injuries after ingestion	: Nausea. Diarrhoea. Irritation of the gastric/intestinal mucosa. Swallowing a small quantity of this material will result in serious health hazard.
Chronic symptoms	: ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Skin rash/inflammation.

### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

suitable extinguishing media	: Water spray. Alcohol-resistant foam. Polymer foam. ABC powder. Carbon dioxide. Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: No unsuitable extinguishing media known. Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard	: DIRECT FIRE HAZARD. Non-flammable. In finely divided state: increased fire hazard. INDIRECT FIRE HAZARD. Heating increases the fire hazard. Reactions involving a fire hazard: see "Reactivity Hazard".
Explosion hazard	: DIRECT EXPLOSION HAZARD. Fine dust is explosive with air. INDIRECT EXPLOSION HAZARD. Dust cloud can be ignited by a spark.
Reactivity	: On burning: release of toxic and corrosive gases/vapours (sulphur oxides, carbon monoxide - carbon dioxide). Reacts with (strong) oxidizers: (increased) risk of fire.

### 5.3. Advice for firefighters

Precautionary measures fire	: Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows.
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|--------------------------------|--|
| Firefighting instructions      | : Dilute toxic gases with water spray. Take account of environmentally hazardous firefighting water. Use water moderately and if possible collect or contain it. Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment. |
| Protection during firefighting | : Heat/fire exposure: compressed air/oxygen apparatus. Do not enter fire area without proper protective equipment, including respiratory protection.   |

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

- |                                  |   |
|----------------------------------|---|
| Protective equipment             | : Gloves. Face-shield. Protective clothing. Dust cloud production: compressed air/oxygen apparatus. Dust cloud production: dust-tight suit.   |
| Emergency procedures             | : Mark the danger area. Prevent dust cloud formation. No naked flames. Wash contaminated clothes. Evacuate unnecessary personnel.   |
| Measures in case of dust release | : In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows. Dust production: stop engines and no smoking. In case of dust production: no naked flames or sparks. Dust: spark-/explosionproof appliances/lighting equipment. |

##### 6.1.2. For emergency responders

- |                      |  |
|----------------------|--|
| Protective equipment | : Equip cleanup crew with proper protection. |
| Emergency procedures | : Ventilate area.                            |

#### 6.2. Environmental precautions

Prevent soil and water pollution. Prevent spreading in sewers. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

#### 6.3. Methods and material for containment and cleaning up

- |                         |   |
|-------------------------|---|
| For containment         | : Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply. Dam up the solid spill. Knock down/dilute dust cloud with water spray. Do not use compressed air for pumping over spills.   |
| Methods for cleaning up | : Stop dust cloud by covering with sand/earth. Scoop solid spill into closing containers. Carefully collect the spill/leftovers. Powdered: do not use compressed air for pumping over spills. See "Material-handling" for suitable container materials. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling. On land, sweep or shovel into suitable containers. Minimize generation of dust. Store away from other materials. |

#### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

- |                               |  |
|-------------------------------|--|
| Precautions for safe handling | : Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Do not discharge the waste into the drain. Powdered form: no compressed air for pumping over. Avoid raising dust. Keep away from naked flames/heat. Finely divided: spark- and explosionproof appliances. Finely divided: keep away from ignition sources/sparks. Observe normal hygiene standards. Keep container tightly closed. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Provide good ventilation in process area to prevent formation of vapor. |
| Hygiene measures              | : Do not eat, drink or smoke when using this product. Wash hands/forearms/face thoroughly after handling.  |

#### 7.2. Conditions for safe storage, including any incompatibilities

- |                               |  |
|-------------------------------|--|
| Storage conditions            | : Keep only in the original container in a cool, well ventilated place away from : Direct sunlight. Keep container closed when not in use. |
| Incompatible products         | : Strong bases. strong acids.  |
| Incompatible materials        | : Sources of ignition. Direct sunlight.  |
| Storage temperature           | : < 38 °C  |
| Heat-ignition                 | : KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.  |
| Prohibitions on mixed storage | : KEEP SUBSTANCE AWAY FROM: oxidizing agents.  |
| Storage area                  | : Store in a dry area. Keep container in a well-ventilated place. Keep out of direct sunlight. Meet the legal requirements.                |
| Special rules on packaging    | : SPECIAL REQUIREMENTS: closing. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.           |

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Packaging materials : SUITABLE MATERIAL: cardboard. glass. plastics.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Exposure controls

Personal protective equipment : Avoid all unnecessary exposure.  
Materials for protective clothing : GIVE EXCELLENT RESISTANCE: No data available. GIVE GOOD RESISTANCE: No data available. GIVE LESS RESISTANCE: No data available. GIVE POOR RESISTANCE: No data available.  
Hand protection : Gloves. Wear protective gloves.  
Eye protection : Face shield. In case of dust production: protective goggles. Chemical goggles or safety glasses.  
Skin and body protection : Protective clothing. In case of dust production: head/neck protection. In case of dust production: dustproof clothing.  
Respiratory protection : Dust production: dust mask with filter type P2. Wear approved mask.  
Other information : When using, do not eat, drink or smoke.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Solid  
Appearance : Crystalline solid. Powder. Flakes.  
Molecular mass : 288.38 g/mol  
Color : White to light yellow.  
Odor : Mild odour. Characteristic odour.  
Odor threshold : No data available  
pH : 6 - 9 (1 %)  
pH solution : 1 %  
Relative evaporation rate (butyl acetate=1) : No data available  
Melting point : 204 °C  
Freezing point : No data available  
Boiling point : No data available  
Flash point : No data available  
Self ignition temperature : 248 °C  
Decomposition temperature : No data available  
Flammability (solid, gas) : No data available  
Vapor pressure : < 0.1 hPa  
Relative vapor density at 20 °C : No data available  
Relative density : > 1.1  
Density : > 1100 kg/m<sup>3</sup>  
Solubility : Soluble in water.  
Water: 10 g/100ml  
Ethanol: < 0.1 g/100ml  
Acetone: < 0.1 g/100ml  
Log Pow : 1.6  
Log Kow : No data available  
Viscosity, kinematic : No data available  
Viscosity, dynamic : No data available  
Explosive properties : No data available  
Oxidizing properties : No data available  
Explosive limits : No data available

### 9.2. Other information

VOC content : 0 %

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### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

On burning: release of toxic and corrosive gases/vapours (sulphur oxides, carbon monoxide - carbon dioxide). Reacts with (strong) oxidizers: (increased) risk of fire.

#### 10.2. Chemical stability

Stable under normal conditions. Not established.

#### 10.3. Possibility of hazardous reactions

Not established.

#### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

#### 10.5. Incompatible materials

strong acids. Strong bases.

#### 10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Harmful if swallowed. Harmful in contact with skin.

SODIUM DODECYL SULFATE ( Y )151-21-3	
LD50 oral rat	1288 mg/kg (977 mg/kg bodyweight; 1427 mg/kg bodyweight; Rat; Rat; Rat; Experimental value; Experimental value)
LD50 dermal rat	< 2000 mg/kg (Rat)
LD50 dermal rabbit	> 580 mg/kg (>500 mg/kg bodyweight; Rabbit; Rabbit)

Skin corrosion/irritation	: Not classified pH: 6 - 9 (1 %)
Serious eye damage/irritation	: Not classified pH: 6 - 9 (1 %)
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met. Harmful if swallowed. Harmful in contact with skin.
Symptoms/injuries after inhalation	: AFTER INHALATION OF DUST: Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Headache. Dry/sore throat.
Symptoms/injuries after skin contact	: Red skin. Tingling/irritation of the skin. Blue/grey discolouration of the skin. ON CONTINUOUS EXPOSURE/CONTACT: Dry skin. Cracking of the skin. Repeated exposure to this material can result in absorption through skin causing significant health hazard. Harmful in contact with skin.
Symptoms/injuries after eye contact	: Irritation of the eye tissue.
Symptoms/injuries after ingestion	: Nausea. Diarrhoea. Irritation of the gastric/intestinal mucosa. Swallowing a small quantity of this material will result in serious health hazard.
Chronic symptoms	: ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Skin rash/inflammation.

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general : Classification concerning the environment: not applicable.

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Ecology - water : Water pollutant (surface water). Maximum concentration in drinking water: 200 mg/l (sodium) (Directive 98/83/EC). Toxic to fishes. Toxic to invertebrates (Daphnia). Slightly harmful to algae (EC50: 100 - 1000 mg/l). Inhibition of activated sludge.

SODIUM DODECYL SULFATE (151-21-3)	
LC50 fish 1	4.62 mg/l (96 h; Salmo gairdneri (Oncorhynchus mykiss); Nominal concentration)
EC50 Daphnia 1	6.3 - 7.8 mg/l (48 h; Daphnia magna; Static system)
EC50 other aquatic organisms 1	18 mg/l (168 h; Lemna sp.)
LC50 fish 2	7.97 mg/l (96 h; Brachydanio rerio)
EC50 Daphnia 2	12.6 mg/l (48 h; Daphnia pulex)
Threshold limit other aquatic organisms 1	40 mg/l (72 h; Protozoa)
Threshold limit algae 1	14.8 mg/l (72 h; Chlorophyta)
Threshold limit algae 2	0.02 mg/l (192 h; Scenedesmus quadricauda; Growth rate)

### 12.2. Persistence and degradability

SODIUM DODECYL SULFATE (151-21-3)	
Persistence and degradability	Readily biodegradable in water. Not established.

### 12.3. Bioaccumulative potential

SODIUM DODECYL SULFATE (151-21-3)	
BCF fish 1	3.9 - 5.3 (72 h; Cyprinus carpio)
BCF fish 2	7.15 (Pisces; Chronic)
Log Pow	1.6
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500). Not established.

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Other information : Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste disposal recommendations : Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Dissolve or mix with a combustible solvent. Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber with energy recovery. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to Local/Federal regulations.

Additional information : Hazardous waste according to Directive 2008/98/EC.

Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

In accordance with DOT

No dangerous good in sense of transport regulations

### Additional information

Other information : No supplementary information available.

State during transport (ADR-RID) : Rail and road transport: not subject to ADR-RID.

### ADR

Transport document description : UN N/A

Packing group (ADR) : N/A

Hazard identification number (Kemler No.) : N/A

Classification code (ADR) : N/A

### Transport by sea

No additional information available

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### Air transport

No additional information available

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### SODIUM DODECYL SULFATE (151-21-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

### 15.2. International regulations

#### CANADA

No additional information available

### EU-Regulations

No additional information available

### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute Tox. 4 (Dermal) H312

Acute Tox. 4 (Oral) H302

Eye Irrit. 2 H319

Skin Irrit. 2 H315

Full text of H-phrases: see section 16

### Classification according to Directive 67/548/EEC or 1999/45/EC

Xn; R21/22

Xi; R36/38

Full text of R-phrases: see section 16

### 15.2.2. National regulations

No additional information available

### 15.3. US State regulations

No additional information available

## SECTION 16: Other information

Other information : None.

Full text of H-phrases: see section 16:

Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
H302	Harmful if swallowed
H312	Harmful in contact with skin

SDS US (GHS HazCom 2012)

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