

**Safety data sheet**  
according to 1907/2006/EC, Article 31

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Version number 3.00 (replaces version 2.02)

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

- **1.1 Product identifier**
  - **Trade name:** SDS - Solution 20 %
  - **Article number:** A0675
  - **Application of the substance / the mixture**  
Molecular biology  
Laboratory chemicals
  - **1.3 Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:**  
AppliChem GmbH  
Ottoweg 4  
D-64291 Darmstadt
  - **Further information obtainable from:** Dept. Compliance
  - **1.4 Emergency telephone number:** +49(0)6151 93570 (Inside normal business hours)
- Tel.: +49 (0)6151 93570  
Fax.: +49 (0)6151 935711  
msds@applichem.com

**SECTION 2: Hazards identification**

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**  
Acute Tox. 4 H302 Harmful if swallowed.  
Skin Irrit. 2 H315 Causes skin irritation.  
Eye Dam. 1 H318 Causes serious eye damage.  
STOT SE 3 H335 May cause respiratory irritation.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**  
  
GHS05 GHS07
- **Signal word** Danger
- **Hazard-determining components of labelling:**  
sodium dodecyl sulfate
- **Hazard statements**  
H302 Harmful if swallowed.  
H315 Causes skin irritation.  
H318 Causes serious eye damage.

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H335 May cause respiratory irritation.

· **Precautionary statements**

- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
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/doctor.  
P321 Specific treatment (see on this label).  
P330 Rinse mouth.  
P362+P364 Take off contaminated clothing and wash it before reuse.  
P405 Store locked up.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.  
· **vPvB:** Not applicable.

**SECTION 3: Composition/information on ingredients**

· **3.2 Mixtures**

- **Description:** aqueous solution

· **Dangerous components:**

CAS: 151-21-3 EINECS: 205-788-1 Reg.nr.: 01-2119489461-32-XXXX	sodium dodecyl sulfate Flam. Sol. 1, H228; Acute Tox. 3, H301; Eye Dam. 1, H318; Skin Irrit. 2, H315; STOT SE 3, H335; Aquatic Chronic 3, H412 Specific concentration limits: Eye Dam. 1; H318: C ≥ 20 % Eye Irrit. 2; H319: 10 % ≤ C < 20 %	20%
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- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

**SECTION 4: First aid measures**

· **4.1 Description of first aid measures**

- **General information:** Take affected persons out into the fresh air.  
· **After inhalation:** Supply fresh air; consult doctor in case of complaints.  
· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.  
· **After eye contact:**  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.  
Call a doctor immediately.  
· **After swallowing:**  
Rinse out mouth.  
Seek medical treatment.  
· **4.2 Most important symptoms and effects, both acute and delayed**  
No further relevant information available.  
· **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

**SECTION 5: Firefighting measures**

· **5.1 Extinguishing media**

· **Suitable extinguishing agents:**

CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **5.2 Special hazards arising from the substance or mixture**

In case of fire, the following can be released:  
Carbon monoxide and carbon dioxide

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Sulphur oxides (SOx)

Non-combustible.

· **5.3 Advice for firefighters**

· **Protective equipment:** Wear self-contained respiratory protective device.

· **Additional information**

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

Contain escaping vapours with water.

\* **SECTION 6: Accidental release measures**

· **6.1 Personal precautions, protective equipment and emergency procedures**

Use respiratory protective device against the effects of fumes/dust/aerosol.

Avoid substance contact.

Do not inhale steams/aerosols.

· **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

· **6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Clean up affected area.

· **6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

\* **SECTION 7: Handling and storage**

· **7.1 Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

· **Information about fire - and explosion protection:** The product is not flammable.

· **7.2 Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:** No special requirements.

· **Information about storage in one common storage facility:** Not required.

· **Further information about storage conditions:**

Keep container tightly sealed.

Open receptacle only under localised extractor facilities.

Store under lock and key and with access restricted to technical experts or their assistants only.

· **Recommended storage temperature:** Room Temperature

· **Storage class:** 12

· **7.3 Specific end use(s)** No further relevant information available.

\* **SECTION 8: Exposure controls/personal protection**

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· **DNELs**

**151-21-3 sodium dodecyl sulfate**

Oral	Long-term - systemic effects, general population	24 mg/kg
Dermal	Long-term - local effects, worker	4,060 mg/kg
	Long term - systemic effects, general population	2,440 mg/kg

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Inhalative	Long-term - systemic effects, worker	285 mg/m <sup>3</sup>
	Long-term - systemic effects, general population	85 mg/m <sup>3</sup>

· **PNECs**

**151-21-3 sodium dodecyl sulfate**

Aquatic compartment - freshwater	0.137 mg/L
Aquatic compartment - marine water	0.0137 mg/L
Aquatic compartment - water, intermittent releases	0.055 mg/L
Aquatic compartment - sediment in freshwater	4.82 mg/kg
Aquatic compartment - sediment in marine water	0.482 mg/kg
Terrestrial compartment - soil	0.882 mg/kg
Sewage treatment plant	1,084 mg/L

· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**

· **Appropriate engineering controls** No further data; see item 7.

· **Individual protection measures, such as personal protective equipment**

· **General protective and hygienic measures:**

- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing
- Wash hands before breaks and at the end of work.
- Avoid contact with the eyes and skin.

· **Respiratory protection:**

- Use suitable respiratory protective device only when aerosol or mist is formed.
- Filter ABEK

· **Hand protection**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **For the permanent contact gloves made of the following materials are suitable:**

- Nitrile rubber, NBR
- Recommended thickness of the material:  $\geq 0.11$  mm
- Value for the permeation: Level  $\geq 480$  min

· **As protection from splashes gloves made of the following materials are suitable:**

- Nitrile rubber, NBR
- Recommended thickness of the material:  $\geq 0.11$  mm
- Value for the permeation: Level  $\geq 480$  min

· **Eye/face protection**



Tightly sealed goggles

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- **Body protection:**  
Use protective suit.  
Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled.

## SECTION 9: Physical and chemical properties

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

- **General Information**
- **Physical state** Fluid
- **Colour:** Colourless
- **Odour:** Characteristic
- **Odour threshold:** Not determined.
- **Melting point/freezing point:** Undetermined.
- **Boiling point or initial boiling point and boiling range** Undetermined.
- **Flammability** Not applicable.
- **Lower and upper explosion limit**
- **Lower:** Not determined.
- **Upper:** Not determined.
- **Flash point:** Not applicable.
- **Auto-ignition temperature:** Product is not selfigniting.
- **Decomposition temperature:** Not determined.
- **pH at 20 °C** 8
- **Viscosity:**
- **Kinematic viscosity** Not determined.
- **Dynamic:** Not determined.
- **Solubility**
- **water:** Not determined.
- **Partition coefficient n-octanol/water (log value)** Not determined.
- **Vapour pressure at 20 °C:** 23 hPa
- **Density and/or relative density**
- **Density:** Not determined.
- **Relative density** Not determined.
- **Vapour density** Not determined.

### · 9.2 Other information

- **Appearance:**
- **Form:** Fluid
- **Important information on protection of health and environment, and on safety.**
- **Explosive properties:** Product does not present an explosion hazard.
- **Solvent content:**
- **Water:** 80.0 %
- **Change in condition**
- **Evaporation rate** Not determined.

### · Information with regard to physical hazard classes

- **Explosives** Void
- **Flammable gases** Void
- **Aerosols** Void
- **Oxidising gases** Void
- **Gases under pressure** Void
- **Flammable liquids** Void
- **Flammable solids** Void
- **Self-reactive substances and mixtures** Void

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- |   |      |
|---|------|
| · Pyrophoric liquids  | Void |
| · Pyrophoric solids   | Void |
| · Self-heating substances and mixtures                                      | Void |
| · Substances and mixtures, which emit flammable gases in contact with water | Void |
| · Oxidising liquids   | Void |
| · Oxidising solids  | Void |
| · Organic peroxides   | Void |
| · Corrosive to metals   | Void |
| · Desensitised explosives   | Void |

## SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** oxidizing agent
- **10.6 Hazardous decomposition products:** In the event of fire: See chapter 5

## SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity**  
Harmful if swallowed.
- **LD/LC50 values relevant for classification:**

Components	Type	Value	Species
<b>ATE (Acute Toxicity Estimates)</b>			
Oral	LD50	1,400 mg/kg (rat)	

### 151-21-3 sodium dodecyl sulfate

Oral	LD50	280 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	>5 mg/l (rat)

- **Skin corrosion/irritation**  
Causes skin irritation.
- **Serious eye damage/irritation**  
Causes serious eye damage.
- **After inhalation:** Irritant to skin and mucous membranes.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure**  
May cause respiratory irritation.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.
- **11.2 Information on other hazards**

- **Endocrine disrupting properties**  
None of the ingredients is listed.

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**SECTION 12: Ecological information**

- **12.1 Toxicity**
- **Aquatic toxicity:**

Type of test	Effective concentration	Method	Assessment
<b>151-21-3 sodium dodecyl sulfate</b>			
EC50	>100 mg/l (Aquatic plants)		
	1-10 mg/l (Aquatic Invertebrata)		
EC0	>100 mg/l (micro-organisms)		
LC50/96 h	10-100 mg/l (fish)		

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties**  
 The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
 Do not allow product to reach ground water, water course or sewage system.  
 Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water  
 Danger to drinking water if even small quantities leak into the ground.

**SECTION 13: Disposal considerations**

- **13.1 Waste treatment methods**
- **Recommendation**  
 Chemicals must be disposed of in compliance with the respective national regulations.  
 Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:**  
 Disposal must be made according to official regulations.  
 Packagings that may not be cleansed are to be disposed of in the same manner as the product.

**SECTION 14: Transport information**

· <b>14.1 UN number or ID number</b>	
· <b>ADR, ADN, IMDG, IATA</b>	Void
· <b>14.2 UN proper shipping name</b>	
· <b>ADR, ADN, IMDG, IATA</b>	Void
· <b>14.3 Transport hazard class(es)</b>	
· <b>ADR, ADN, IMDG, IATA</b>	
· <b>Class</b>	Void
· <b>14.4 Packing group</b>	
· <b>ADR, IMDG, IATA</b>	Void
· <b>14.5 Environmental hazards:</b>	Not applicable.
· <b>14.6 Special precautions for user</b>	Not applicable.

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| · <b>14.7 Maritime transport in bulk according to IMO instruments</b> | Not applicable. |
| · <b>UN "Model Regulation":</b>                                       | Void            |

## SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **National regulations:**
- **Other regulations, limitations and prohibitive regulations**
- **Substances of very high concern (SVHC) according to REACH, Article 57**  
None of the ingredients is listed.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**  
H228 Flammable solid.  
H301 Toxic 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.
- **Department issuing SDS:** Dept. Compliance
- **Abbreviations and acronyms:**  
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
ICAO: International Civil Aviation Organisation  
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
DNEL: Derived No-Effect Level (REACH)  
PNEC: Predicted No-Effect Concentration (REACH)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
SVHC: Substances of Very High Concern  
vPvB: very Persistent and very Bioaccumulative  
Flam. Sol. 1: Flammable solids – Category 1  
Acute Tox. 3: Acute toxicity – Category 3  
Acute Tox. 4: Acute toxicity – Category 4  
Skin Irrit. 2: Skin corrosion/irritation – Category 2  
Eye Dam. 1: Serious eye damage/eye irritation – Category 1  
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3  
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3
- **\* Data compared to the previous version altered.**