

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

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Printing date 29.03.2023

Revision: 29.03.2023

Version number 13.02 (replaces version 13.01)

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

· **1.1 Product identifier**

· **Trade name:** SDS

· **Article number:** A2263

· **CAS Number:**

151-21-3

· **EC number:**

205-788-1

· **Registration number** 01-2119489461-32-XXXX

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

· **Sector of Use**

SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites

SU9 Manufacture of fine chemicals

SU10 Formulation [mixing] of preparations and/or re-packaging (excluding alloys)

· **Process category**

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition

PROC4 Chemical production where opportunity for exposure arises

PROC5 Mixing or blending in batch processes

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities

PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

PROC13 Treatment of articles by dipping and pouring

PROC14 Tableting, compression, extrusion, pelletisation, granulation

PROC15 Use as laboratory reagent

· **Environmental release category** ERC2 Formulation into mixture

· **Application of the substance / the mixture**

Laboratory chemicals

Chemical for various applications

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

AppliChem GmbH

Ottoweg 4

D-64291 Darmstadt

Tel.: +49 (0)6151 93570

Fax.: +49 (0)6151 935711

msds@applichem.com

· **Further information obtainable from:** Dept. Compliance

· **1.4 Emergency telephone number:** +49(0)6151 93570 (Mo-Th 08:00 - 17:00 h; Fr 08:00 - 14:30 h)

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SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**

Flam. Sol. 1	H228 Flammable solid.
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.
Aquatic Chronic 3	H412 Harmful to aquatic life with long lasting effects.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**

The substance is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS02 GHS05 GHS07

- **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**

P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
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

- **3.1 Substances**
- **CAS No. Description**

151-21-3 sodium dodecyl sulfate
- **Identification number(s)**
- **EC number:** 205-788-1

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- **Specific concentration limits**
Eye Dam. 1; H318: $C \geq 20 \%$
Eye Irrit. 2; H319: $10 \% \leq C < 20 \%$

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
Involve doctor immediately.
- **After inhalation:**
In case of unconsciousness place patient stably in side position for transportation.
If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- **After skin contact:**
Call a doctor immediately.
Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
make victim drink water (maximum of 2 drinking glasses)
Seek medical treatment.
Call a doctor immediately.
- **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:** Use fire extinguishing methods suitable to surrounding conditions.
- **5.2 Special hazards arising from the substance or mixture**
In case of fire, the following can be released:
Carbon monoxide and carbon dioxide
Sulphur oxides (SO_x)
Metal oxides
Forms explosive mixtures with air on intense heating.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
- **Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Avoid formation of dust.
Wear protective equipment. Keep unprotected persons away.
Avoid substance contact.
Ensure adequate ventilation
- **6.2 Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Pick up mechanically.

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- Avoid formation of dust.
- 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** Any unavoidable deposit of dust must be regularly removed.
- **Information about fire - and explosion protection:**
- Keep ignition sources away - Do not smoke.
- Protect from heat.
- Protect against electrostatic charges.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
- Keep receptacles tightly sealed.
- Store only in the original receptacle.
- Store in a cool location.
- Prevent any seepage into the ground.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
- Keep away from open flames, hot surfaces and sources of ignition.
- Keep container tightly sealed.
- Store in cool, dry conditions in well sealed receptacles.
- Protect from heat and direct sunlight.
- Open receptacle only under localised extractor facilities.
- Store receptacle in a well ventilated area.
- Store under lock and key and with access restricted to technical experts or their assistants only.
- **Recommended storage temperature:** Room Temperature
- **Storage class:** 4.1 B
- **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:** Not required.

· **DNELs**

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
Inhalative	Long-term - systemic effects, worker	285 mg/m3
	Long-term - systemic effects, general population	85 mg/m3

· **PNECs**

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

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- **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.
Vacuum clean contaminated clothing. Do not blow or brush off contamination.
Avoid contact with the eyes and skin.
- **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
Required when dusts are generated.
- **Recommended filter device for short term use:** Filter P2
- **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.
- **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: ≥ 0.11 mm
Value for the permeation: Level ≥ 480 min
- **As protection from splashes gloves made of the following materials are suitable:**
Nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.11 mm
Value for the permeation: Level ≥ 480 min
- **Eye/face protection**



Gauze goggles

- **Body protection:** Use protective suit.

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **General Information**
- **Physical state** Solid
- **Colour:** Cream coloured
- **Odour:** Characteristic
- **Odour threshold:** Not determined.
- **Melting point/freezing point:** 205 °C
- **Boiling point or initial boiling point and boiling range** Undetermined.

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· Flammability	Highly flammable.
· Lower and upper explosion limit	
· Lower:	Not determined.
· Upper:	Not determined.
· Flash point:	170 °C
· Decomposition temperature:	380 °C
· pH	7.5-9
· Viscosity:	
· Kinematic viscosity	Not applicable.
· Dynamic:	Not applicable.
· Solubility	
· water at 20 °C:	150 g/l
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure:	Not applicable.
· Density and/or relative density	
· Density:	Not determined.
· Relative density	Not determined.
· Bulk density:	600 kg/m ³
· Vapour density	Not applicable.
· Particle characteristics	See item 3.

· **9.2 Other information**

· Appearance:	
· Form:	Solid in various forms
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Not determined.
· Explosive properties:	Not determined.
· Molecular weight	288.38 g/mol
· Change in condition	
· Evaporation rate	Not applicable.

· **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	Flammable solid.
· Self-reactive substances and mixtures	Void
· 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.

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- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** Heating
- **10.3 Possibility of hazardous reactions** Reacts with strong oxidising agents.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:**
strong oxidants
strong acids
strong bases
- **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:**
Quantitative data on the toxicological effect of this product are not available.

Components	Type	Value	Species
Oral	LD50	1,280 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** Substance is not listed.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.

Type of test	Effective concentration	Method	Assessment
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** The product is easily biodegradable.
- **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**
- **Remark:** Harmful to fish

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- **Additional ecological information:**
- **General notes:**
Do not allow product to reach ground water, water course or sewage system.
Water hazard class 2 (German Regulation) (Assessment by list): hazardous for water
Danger to drinking water if even small quantities leak into the ground.
Harmful to aquatic organisms

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

- **14.1 UN number or ID number**
· **ADR, IMDG, IATA** UN1325
- **14.2 UN proper shipping name**
· **ADR, IMDG, IATA** FLAMMABLE SOLID, ORGANIC, N.O.S. (sodium dodecyl sulfate)
- **14.3 Transport hazard class(es)**
- **ADR**

- **Class** 4.1 (F1) Flammable solids, self-reactive substances, polymerizing substances and solid desensitized explosives
- **Label** 4.1
- **IMDG, IATA**

- **Class** 4.1 Flammable solids, self-reactive substances, polymerizing substances and solid desensitized explosives
- **Label** 4.1
- **14.4 Packing group**
· **ADR, IMDG, IATA** II
- **14.5 Environmental hazards:** Not applicable.
- **14.6 Special precautions for user** Warning: Flammable solids, self-reactive substances, polymerizing substances and solid desensitized explosives
- **Hazard identification number (Kemler code):** 40
- **EMS Number:** F-A,S-G

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· Stowage Category	B
· Segregation Code	SG72 See 7.2.6.3.2.
· 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	1 kg
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· Transport category	2
· Tunnel restriction code	E
· IMDG	
· Limited quantities (LQ)	1 kg
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· UN "Model Regulation":	UN 1325 FLAMMABLE SOLID, ORGANIC, N.O.S. (SODIUM DODECYL SULFATE), 4.1, II

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** Substance is not listed.
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 40
- **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**
Substance is not listed.
- **REGULATION (EU) 2019/1148**
- **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**
Substance is not listed.
- **Annex II - REPORTABLE EXPLOSIVES PRECURSORS** Substance is not listed.
- **Regulation (EC) No 273/2004 on drug precursors** Substance is not listed.
- **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**
Substance is not listed.
- **National regulations:**
- **Other regulations, limitations and prohibitive regulations**
- **Substances of very high concern (SVHC) according to REACH, Article 57** Substance is not listed.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has 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.

- **Department issuing SDS:** Dept. Compliance
- **Date of previous version:** 22.04.2021
- **Version number of previous version:** 13.01

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· **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
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. 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.**

Annex: Exposure scenario

· **Short title of the exposure scenario** Formulation and packing/repacking of substances and mixtures

· **Sector of Use**

SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
SU9 Manufacture of fine chemicals
SU10 Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
SU10 Formulation [mixing] of preparations and/or re-packaging (excluding alloys)

· **Process category**

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
PROC4 Chemical production where opportunity for exposure arises
PROC5 Mixing or blending in batch processes
PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
PROC13 Treatment of articles by dipping and pouring
PROC14 Tableting, compression, extrusion, pelletisation, granulation
PROC15 Use as laboratory reagent

· **Environmental release category** ERC2 Formulation into mixture

· **Description of the activities / processes covered in the Exposure Scenario**

See section 1 of the annex to the Safety Data Sheet.

· **Conditions of use**

· **Duration and frequency** 5 workdays/week.

· **Physical parameters**

· **Physical state** Solid

· **Concentration of the substance in the mixture** Raw material.

· **Used amount per time or activity** ≤ 1 tons per day

· **Other operational conditions**

· **Other operational conditions affecting environmental exposure**

No special measures required.

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- Use only on hard ground.
- **Other operational conditions affecting worker exposure**
 - Avoid contact with eyes.
 - Avoid contact with the skin.
 - Avoid breathing particles.
 - Take precautionary measures against static discharge.
 - Keep away from sources of ignition - No smoking.
- **Other operational conditions affecting consumer exposure** No special measures required.
- **Other operational conditions affecting consumer exposure during the use of the product**
Not applicable.
- **Risk management measures**
- **Worker protection**
- **Organisational protective measures** No special measures required.
- **Technical protective measures**
 - Provide explosion-proof electrical equipment.
 - Ensure that suitable extractors are available on processing machines
 - Use product only in enclosed systems.
- **Personal protective measures**
 - Do not inhale dust / smoke / mist.
 - Avoid contact with the skin.
 - Avoid contact with the eyes.
 - Tightly sealed goggles
 - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
 - Required when dusts are generated.
 - 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
- **Measures for consumer protection** Ensure adequate labelling.
- **Environmental protection measures**
- **Water**
 - No special measures required.
 - Do not allow to reach sewage system.
- **Soil** Prevent contamination of soil.
- **Disposal measures** Ensure that waste is collected and contained.
- **Disposal procedures**
 - Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Waste type** Partially emptied and uncleaned packaging
- **Exposure estimation**
- **Worker (dermal)**
 - The exposure estimation was carried out in accordance with ECETOC TRA.
 - The calculated value is smaller than the DNEL.
- **Worker (inhalation)**
 - The exposure estimation was carried out in accordance with ECETOC TRA.
 - The calculated value is smaller than the DNEL.
- **Consumer** Not relevant for this Exposure Scenario.
- **Guidance for downstream users** No further relevant information available.