

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

1.1 Product identifier

Product trade name : SIMULSOL AS 48
Product code : 38322E

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

Material uses : Non ionic surfactant. Detergent.

Identified uses
Manufacture of substance 2-ethylhexylglucoside Formulation, Distribution of substance 2-ethylhexylglucoside Professional use, End use 2-ethylhexylglucoside

See Annex to the Safety data sheet for additional information in the Exposure Scenario(s).

1.3 Details of the supplier of the safety data sheet

Supplier : SEPPIC S.A.
22 Terrasse Bellini - Paris La Défense
92806 Puteaux CEDEX - France
Phone: +33(0)1 42 91 40 00
Fax: +33(0)1 42 91 41 41
e-mail address of person responsible for this SDS : MSDSinfo.SEPPIC@airliquide.com

1.4 Emergency telephone number

National advisory body/Poison Centre : UNITED KINGDOM :
999

Supplier : SEPPIC
Tél.: +33 (0)5 63 72 69 69

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

Eye Dam. 1, H318

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : Causes serious eye damage.

Contains : Reaction mass of 2-ethylhexyl mono-D-glucopyranoside, 2-ethylhexyl di-D-glucopyranoside

Precautionary statements

Prevention : Wear eye or face protection. Wash hands thoroughly after handling.

Response : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

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SECTION 2: Hazards identification**2.3 Other hazards**

Other hazards which do not result in classification : None known.

ADDITIONAL INFORMATION

Handling : IF CRISTALLISATION OCCURS, HEAT AT 60°C AND REHOMOGENISE BEFORE USE.

Storage : PROTECT FROM FROST.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product description : Glucoside.

INCI Name: : 2-ETHYLHEXYL GLUCOSIDE

Product/ingredient name	Identifiers	%	Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]	Type
Reaction mass of 2-ethylhexyl mono-D-glucopyranoside, 2-ethylhexyl di-D-glucopyranoside	REACH #: 01-2119987144-31 EC: 414-420-0	40 - 60	Eye Dam. 1, H318 See Section 16 for the full text of the H statements declared above.	[1]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

- [1] Substance classified with a health or environmental hazard
 [2] Substance with a workplace exposure limit
 [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
 [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
 [5] Substance of equivalent concern

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures**4.1 Description of first aid measures**

Eye contact : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

Inhalation : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

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SECTION 4: First aid measures

- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed**Potential acute health effects**

- Eye contact** : Causes serious eye damage.
- Inhalation** : ☒ No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : May cause burns to mouth, throat and stomach.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
- Ingestion** : Adverse symptoms may include the following:
stomach pains

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.

SECTION 5: Firefighting measures**5.1 Extinguishing media**

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Hazardous thermal decomposition products** : ☒ Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

5.3 Advice for firefighters

SECTION 5: Firefighting measures

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

- : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and material for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

6.4 Reference to other sections

- : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- IF CRISTALLISATION OCCURS, HEAT AT 60°C AND REHOMOGENISE BEFORE USE.

SECTION 7: Handling and storage**7.2 Conditions for safe storage, including any incompatibilities**

: Do not store above the following temperature: 50°C (122°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

PROTECT FROM FROST.

7.3 Specific end use(s)**Recommendations**

: Not available.

Industrial sector specific solutions

: Not available.

SECTION 8: Exposure controls/personal protection**8.1 Control parameters****Occupational exposure limits**

No exposure limit value known.

Recommended monitoring procedures

: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
Reaction mass of 2-ethylhexyl mono-D-glucopyranoside, 2-ethylhexyl di-D-glucopyranoside	DNEL	Long term Dermal	1.5 mg/kg	Workers	Systemic
	DNEL	Long term Inhalation	10.6 mg/m ³	Workers	Systemic
	DNEL	Long term Inhalation	2.6 mg/m ³	Consumers	Systemic
	DNEL	Long term Dermal	0.75 mg/kg	Consumers	Systemic
	DNEL	Long term Oral	0.75 mg/kg bw/day	Consumers	Systemic

PNECs

Product/ingredient name	Compartment Detail	Value	Method Detail
Reaction mass of 2-ethylhexyl mono-D-glucopyranoside, 2-ethylhexyl di-D-glucopyranoside	Fresh water	0.098 mg/l	Assessment Factors
	Marine water	0.0098 mg/l	Assessment Factors
	Fresh water sediment	980 mg/kg dwt	Equilibrium Partitioning
	Marine water sediment	98 mg/kg dwt	Equilibrium Partitioning

8.2 Exposure controls

SECTION 8: Exposure controls/personal protection

- Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Individual protection measures**
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
- 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.
Recommended : butyl rubber . fluor rubber . nitrile rubber . PVC
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : 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.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties****Appearance**

- Physical state** : Liquid. [Content (%) solid :60-70]
- Colour** : Clear.
- pH** : 6 to 8
- Initial boiling point and boiling range** : 100°C
- Flash point** : Closed cup: >100°C [NFT 60 103.]
- Flammability of the product** : None available.
- Solubility** : Soluble in the following materials: cold water.
- Viscosity** : Dynamic: 300 to 500 mPa·s
- Temperature of viscosity measurement:** : 25 °C

9.2 Other information

The information presented in this section does not serve as specifications.

SECTION 10: Stability and reactivity

- 10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- 10.2 Chemical stability** : The product is stable.
- Conditions of instability** : Keep away from oxidizing agents.
- 10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- 10.4 Conditions to avoid** : No specific data.
- 10.5 Incompatible materials** : No specific data.
- 10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information**11.1 Information on toxicological effects**Acute toxicity

Conclusion/Summary : Not classified as dangerous

Irritation/Corrosion

Conclusion/Summary :

Skin : Non-irritating to the skin.

Eyes : Risk of serious damage to eyes.

Sensitisation

Product/ingredient name	Route of exposure	Test	Result
Reaction mass of 2-ethylhexyl mono-D-glucopyranoside, 2-ethylhexyl di-D-glucopyranoside	skin	-	Not sensitizing

Conclusion/Summary :

Skin : Skin sensitiser : Negative

Mutagenicity

Product/ingredient name	Test	Experiment	Result
Reaction mass of 2-ethylhexyl mono-D-glucopyranoside, 2-ethylhexyl di-D-glucopyranoside	AMES Test	Experiment: In vitro Subject: Bacteria	Negative
	OCDE 476	Experiment: In vitro Subject: Mammalian-Animal	Negative
	B.10 / OCDE 473	Experiment: In vitro Subject: Mammalian-Human	Negative

Conclusion/Summary : No mutagenic effect.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

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SECTION 11: Toxicological informationSpecific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.


Delayed and immediate effects and also chronic effects from short and long term exposureShort term exposureLong term exposurePotential chronic health effectsChronic toxicity

Product/ingredient name	Result	Test	Dose	Exposure
Reaction mass of 2-ethylhexyl mono-D-glucopyranoside, 2-ethylhexyl di-D-glucopyranoside	Sub-chronic NOAEL Oral	OCDE 408	150 mg/kg	90 days
	Sub-acute NOEL Oral	OCDE 414	250 mg/kg (Maternal toxicity)	-

General : No known significant effects or critical hazards.**Carcinogenicity** : No known significant effects or critical hazards.**Mutagenicity** : No known significant effects or critical hazards.**Teratogenicity** : No known significant effects or critical hazards.**Developmental effects** : No known significant effects or critical hazards.**Fertility effects** : No known significant effects or critical hazards.**Other information** : Not available.**SECTION 12: Ecological information****12.1 Toxicity**


Product/ingredient name	Result	Test	Species	Exposure
Reaction mass of 2-ethylhexyl mono-D-glucopyranoside, 2-ethylhexyl di-D-glucopyranoside	Acute EC50 98 mg/l	C.3	Algae - Pseudokirchnerella subcapitata	72 hours
	Acute EC50 >100 mg/l	C.2	Daphnia	48 hours
	Acute LC50 >310 mg/l	C.1	Fish - Oncorhynchus mykiss	96 hours

12.2 Persistence and degradability


Product/ingredient name	Test	Result	Dose	Inoculum
 SIMULSOL AS 48	OECD 306 Biodegradability in Seawater	67 % - Readily - 28 days	-	-
Reaction mass of 2-ethylhexyl mono-D-glucopyranoside, 2-ethylhexyl di-D-	-	90 % - Readily - 28 days	-	-

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SIMULSOL AS 48**SECTION 12: Ecological information**

glucopyranoside				
Conclusion/Summary : The single components are easily biodegradable. (Literature :T. MADSEN and all, JACOBS, Vol73, N°7, 929-933, 1996)				
Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability	
 SIMULSOL AS 48 Reaction mass of 2-ethylhexyl mono-D-glucopyranoside, 2-ethylhexyl di-D-glucopyranoside	-	-	Readily	
	-	-	Readily	

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
 Reaction mass of 2-ethylhexyl mono-D-glucopyranoside, 2-ethylhexyl di-D-glucopyranoside	1,1	-	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.
vPvB : Not applicable.

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations**13.1 Waste treatment methods****Product**

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 91/689/EEC.

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

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SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-	-
14.3 Transport hazard class(es)	-	-	-	-
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.
14.6 Special precautions for user	Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.			
Additional information	-	-	-	-

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****EU Regulation (EC) No. 1907/2006 (REACH)****Annex XIV - List of substances subject to authorisation****Annex XIV**

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Other EU regulations**Europe inventory**

: ☒ At least one component is not listed in EINECS but all such components are listed in ELINCS.
Please contact your supplier for information on the inventory status of this material.

15.2 Chemical Safety Assessment : Complete.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
 DNEL = Derived No Effect Level
 EUH statement = CLP-specific Hazard statement
 PNEC = Predicted No Effect Concentration
 RRN = REACH Registration Number

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Eye Dam. 1, H318	Calculation method

Full text of abbreviated H statements : H318 Causes serious eye damage.

Full text of classifications [CLP/GHS] : Eye Dam. 1, H318 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1

History

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Notice to reader

The information contained in this document is provided as a guideline; it is based on the extent of SEPPIC's knowledge regarding the product on the date indicated above. It applies to the product as is, in conformity with the specifications provided by SEPPIC*.

Should the product undergo chemical transformation or be combined or mixed with other substances, it is the sole responsibility of the user to ensure that no new danger appear. Given that the use of this information is beyond the control of SEPPIC*, SEPPIC* provides no warranty, whether express or implied, and assumes no responsibility, regarding the use of this information and of the user's product.

SEPPIC* being SEPPIC SA and its subsidiaries (addresses available on www.seppic.com)

Identification of the substance or mixture

Product definition : Mixture

Section 1 - Title

Number of the ES	: 1
For substance	: 2-ethylhexylglucoside
Further information	: Manufacture of the substance or use as a process chemical or extraction agent. Includes recycling/recovery, material transfers, storage, maintenance and loading (including marine vessel/barge, road/rail car and bulk container), sampling and associated laboratory activities.

List of use descriptors : **Identified use name:** Manufacture of substance 2-ethylhexylglucoside
Process Category: PROC03, PROC09, PROC15
Substance supplied to that use in form of: In a mixture
Sector of end use: SU03, SU09
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC01
Article category related to subsequent service life: Not applicable.

Environmental contributing scenarios : **Manufacture of substances**

Health Contributing scenarios : **General exposures (PROC 3)**
Bulk transfers (PROC 9)
Laboratory activities (PROC 15)
Equipment cleaning and maintenance
Storage

Section 2 - Exposure controls

Contributing scenario : Manufacture of substances (Environment)

Amounts used	: <1000 Tonnes/year
Frequency and duration of use	: Exposure duration per year: 300 Covers frequency up to: daily, yearly use
Environment factors not influenced by risk management	: Waste water pretreatment: 400 m³/d (On-site) Waste water treatment: Municipal STP River flow rate: 1.8x10 ⁷ L/day (Value Default)
Other given operational conditions affecting environmental exposure	: Common practices vary across sites thus conservative process release estimates used. Release to air from process : 0% (low Vapour pressure) Release to waste water from process : 6% Release to soil from process: 0% (Readily biodegradable, Municipal waste incineration) Local freshwater dilution factor 1:10
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels. Neutralisation is normally necessary before waste water is discharged into water treatment plants. Precipitation, Sedimentation Site should have a spill plan to ensure that adequate safeguards are in place to minimise the impact of episodic releases. A leak prevention plan is needed to prevent low level continual releases. A storm water management plan is needed to ensure that the wastewater treatment plant is not overloaded with uncontaminated water. minimise water use and curtail all unnecessary waste water generation. Maximise waste water reuse. Good housekeeping - e.g. inspection procedures will ensure that there are no leaks to soil. Bund storage facilities to prevent soil and water pollution in the event of spillage. Prevent leaks and prevent soil/water pollution caused by leaks. All contaminated waste water must be processed in an industrial or municipal wastewater treatment plant that incorporates both primary and secondary treatments. Sludge should be incinerated, contained or reclaimed. Use of closed transfers of liquids from storage to production equipment (e.g. metered piped or pumped additions). Use of closed production equipment, with no extraction, except when opening vessels for additions/sampling. Use of closed filling equipment. Store finished products in closed containers (e.g., bulk tanks, drums, cans).

Contributing scenario : General exposures (PROC 3) (Workers:)

Concentration of substance in mixture or article	: Covers percentage substance in the product up to 100% (unless stated differently).
Frequency and duration of use	: > 4 h (half shift). 330 days
Other given operational conditions affecting workers exposure	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene. Industrial applications
Technical conditions and measures at process level (source) to prevent release	: Avoid splashing. Use a sampling system designed to control exposure. Transfer via enclosed lines. Provide enhanced general ventilation by mechanical means. Fill containers/cans at dedicated fill points supplied with local extract ventilation.
Personal protection	: Wear suitable gloves (tested to EN374), coverall and eye protection. (Minima: type EN166) Wear work clothing with long sleeves.
Respiratory protection	: None

Contributing scenario : Bulk transfers (PROC 9) (Workers:)

Concentration of substance in mixture or article	: Covers percentage substance in the product up to 100% (unless stated differently).
Frequency and duration of use	: 1 - 4 hours. 220 days
Other given operational conditions affecting workers exposure	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene. Provide extract ventilation to points where emissions occur. Industrial applications. Transfer via enclosed lines.
Personal protection	: Wear chemical-resistant gloves (tested to EN374) in combination with specific activity training. Wear suitable gloves (tested to EN374), coverall and eye protection.
Respiratory protection	: None

Contributing scenario : Laboratory activities (PROC 15) (Workers:)

Concentration of substance in mixture or article	: Covers percentage substance in the product up to 100% (unless stated differently).
Frequency and duration of use	: 15 min - 1 hour. 330 days
Other given operational conditions affecting workers exposure	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene. Industrial applications
Technical conditions and measures to control dispersion from source towards the worker	: Avoid splashing. General ventilation
Personal protection	: Wear suitable gloves (tested to EN374), coverall and eye protection.
Respiratory protection	: None

Contributing scenario : Equipment cleaning and maintenance (Workers:)

Concentration of substance in mixture or article	: Covers percentage substance in the product up to 100% (unless stated differently).
Frequency and duration of use	: > 4 h (half shift). 330 days
Other given operational conditions affecting workers exposure	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene. Industrial applications Drain down system prior to equipment break-in or maintenance. Drain down and flush system prior to equipment break-in or maintenance. Retain drain-downs in sealed storage pending disposal or for subsequent recycle.
Personal protection	: Wear work clothing with long sleeves. Wear eye protection. Wear suitable gloves.
Respiratory protection	: None

Contributing scenario : Storage (Workers:)

Concentration of substance in mixture or article	: Covers percentage substance in the product up to 100% (unless stated differently).
Frequency and duration of use	: 1 - 4 hours. 330 days
Other given operational conditions affecting workers exposure	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene. Industrial applications
Technical conditions and measures at process level (source) to prevent release	: Use dedicated equipment. (Keep away from heat. Keep in a well-ventilated place.)
Ventilation control measures	: Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan. Natural ventilation.
Respiratory protection	: None

Section 3 - Exposure estimation and reference to its source**Contributing scenario : -Exposure estimation and reference to its source -Workers:**

Exposure assessment (human):	: Qualitative approach used to conclude safe use.
Exposure estimation	: Risk management measures are based on qualitative risk characterisation.

Contributing scenario : Manufacture of substances - Exposure estimation and reference to its source - Environment:

Exposure estimation	: As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.
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Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment	: Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
Health	: Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Identification of the substance or mixture

Product definition : Mixture

Section 1 - Title

Number of the ES	: 2
For substance	: 2-ethylhexylglucoside
Further information	: Formulation, packing and re-packing of the substance and its mixtures in batch or continuous operations, including storage, materials transfers, mixing, tableting, compression, pelletisation, extrusion, large and small scale packing, sampling, maintenance and associated laboratory activities.

List of use descriptors : **Identified use name:** Formulation, Distribution of substance 2-ethylhexylglucoside
Process Category: PROC01, PROC03, PROC05, PROC09
Substance supplied to that use in form of: In a mixture
Sector of end use: SU03, SU10
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC02
Article category related to subsequent service life: Not applicable.

Environmental contributing scenarios : Formulation of preparations

Health Contributing scenarios : General exposures (PROC 1, 3, 5)
Bulk transfers (PROC 9)
Equipment cleaning and maintenance
Storage

Section 2 - Exposure controls

Contributing scenario : Formulation of preparations (Environment)

Amounts used	: <1000 Tonnes/year
Frequency and duration of use	: Exposure duration per year: 220 Covers frequency up to: daily, yearly use
Environment factors not influenced by risk management	: Waste water pretreatment: 400 m³/d (On-site) Waste water treatment: Municipal STP River flow rate: 1.8x10 ⁷ L/day (Value Default)
Other given operational conditions affecting environmental exposure	: Release to air from process : 2.5% Release to waste water from process : 2% Release to soil from process: 0.01% Local freshwater dilution factor: 10
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels. Neutralisation is normally necessary before waste water is discharged into water treatment plants. Precipitation, Sedimentation Site should have a spill plan to ensure that adequate safeguards are in place to minimise the impact of episodic releases. A leak prevention plan is needed to prevent low level continual releases. A storm water management plan is needed to ensure that the wastewater treatment plant is not overloaded with uncontaminated water. minimise water use and curtail all unnecessary waste water generation. Maximise waste water reuse. Good housekeeping - e.g. inspection procedures will ensure that there are no leaks to soil. Bund storage facilities to prevent soil and water pollution in the event of spillage. Prevent leaks and prevent soil/water pollution caused by leaks. All contaminated waste water must be processed in an industrial or municipal wastewater treatment plant that incorporates both primary and secondary treatments. Sludge should be incinerated, contained or reclaimed. Use of closed transfers of liquids from storage to production equipment (e.g. metered piped or pumped additions). Use of closed production equipment, with no extraction, except when opening vessels for additions/sampling. Use of closed filling equipment. Store finished products in closed containers (e.g., bulk tanks, drums, cans). Formulation activity is assumed to be a predominantly enclosed process.

Contributing scenario : General exposures (PROC 1, 3, 5) (Workers:)

Concentration of substance in mixture or article	: Covers percentage substance in the product up to 100% (unless stated differently).
Frequency and duration of use	: > 4 h (half shift). 330 days
Other given operational conditions affecting workers exposure	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene. Industrial applications
Technical conditions and measures to control dispersion from source towards the worker	: Avoid splashing. Use a sampling system designed to control exposure. Transfer via enclosed lines. Provide enhanced general ventilation by mechanical means. Fill containers/cans at dedicated fill points supplied with local extract ventilation.
Personal protection	: Wear suitable gloves (tested to EN374), coverall and eye protection. [PPE23] Use suitable eye protection. (Minima: type EN166). Wear work clothing with long sleeves.
Respiratory protection	: None

Contributing scenario : Bulk transfers (PROC 9) (Workers:)

Concentration of substance in mixture or article	: Covers percentage substance in the product up to 100% (unless stated differently).
Frequency and duration of use	: 1 - 4 hours. 220 days
Other given operational conditions affecting workers exposure	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene. Provide extract ventilation to points where emissions occur. Industrial applications. Transfer via enclosed lines.
Personal protection	: Wear suitable gloves (tested to EN374), coverall and eye protection.
Respiratory protection	: None

Contributing scenario : Equipment cleaning and maintenance (Workers:)

Concentration of substance in mixture or article	: Covers percentage substance in the product up to 100% (unless stated differently).
Frequency and duration of use	: > 4 h (half shift). 330 days
Other given operational conditions affecting workers exposure	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene. Industrial applications Drain down system prior to equipment break-in or maintenance. Drain down and flush system prior to equipment break-in or maintenance. Retain drain-downs in sealed storage pending disposal or for subsequent recycle.
Personal protection	: Wear work clothing with long sleeves. Wear eye protection. Wear suitable gloves.
Respiratory protection	: None

Contributing scenario : Storage (Workers:)

Concentration of substance in mixture or article	: Covers percentage substance in the product up to 100% (unless stated differently).
Frequency and duration of use	: 1 - 4 hours. 330 days
Other given operational conditions affecting workers exposure	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene. Industrial applications
Technical conditions and measures at process level (source) to prevent release	: Use dedicated equipment. (Keep away from heat. Keep in a well-ventilated place.)
Ventilation control measures	: Natural ventilation.
Respiratory protection	: None

Section 3 - Exposure estimation and reference to its source

Contributing scenario : -Exposure estimation and reference to its source -Workers:

Exposure assessment (human): : Qualitative approach used to conclude safe use.

Exposure estimation : Risk management measures are based on qualitative risk characterisation.

Contributing scenario : Formulation of preparations - Exposure estimation and reference to its source - Environment:

Exposure estimation : As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Health : Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Identification of the substance or mixture

Product definition : Mixture

Section 1 - Title

Number of the ES	: 3
For substance	: 2-ethylhexylglucoside
Further information	: Covers the use as a component of cleaning products including pouring/unloading from drums or containers; and exposures during mixing/diluting in the preparatory phase and cleaning activities (including spraying, brushing, dipping, wiping automated and by hand).

List of use descriptors : **Identified use name:** Professional use, End use 2-ethylhexylglucoside
Process Category: PROC10, PROC11, PROC13, PROC19
Substance supplied to that use in form of: In a mixture
Sector of end use: SU21, SU22
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08d
Market sector by type of chemical product: PC35
Article category related to subsequent service life: Not applicable.

Environmental contributing scenarios : **Wide dispersive indoor use of processing aids in open systems**
Wide dispersive outdoor use of processing aids in open systems

Health Contributing scenarios : **PROC10, PROC11, PROC13, PROC19**

Section 2 - Exposure controls

Contributing scenario : Wide dispersive indoor use of processing aids in open systems (Environment)

Amounts used	: <1000 Tonnes/year
Frequency and duration of use	: Exposure duration per year: 365 days
Environment factors not influenced by risk management	: Waste water treatment: Municipal STP River flow rate: 1.8x10 ⁷ L/day (Default Value)
Other given operational conditions affecting environmental exposure	: Release fraction to air from process: 100% Release fraction to wastewater from process: 100% Release fraction to soil from process: 0% Fraction of Regional tonnage used locally 100%
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: minimise water use and curtail all unnecessary waste water generation. Store finished products in closed containers (e.g., bulk tanks, drums, cans).

Contributing scenario : Wide dispersive outdoor use of processing aids in open systems (Environment)

Amounts used	: <1000 Tonnes/year (Professional use)
Frequency and duration of use	: Exposure duration per year: 365 days
Environment factors not influenced by risk management	: Waste water treatment: Municipal STP River flow rate: 1.8x10 ⁷ L/day (Default Value)
Other given operational conditions affecting environmental exposure	: Release fraction to air from process: 100% Release fraction to wastewater from process: 100% Release fraction to soil from process: 20% Fraction of Regional tonnage used locally 100%
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: minimise water use and curtail all unnecessary waste water generation. Store finished products in closed containers (e.g., bulk tanks, drums, cans).

Contributing scenario : PROC10, PROC11, PROC13, PROC19 (Workers:)

Frequency and duration of use : > 4h/day. Exposure duration per year: 220 days

Other given operational conditions affecting workers exposure : Outdoor (Use in room with a volume of minimum 20)
The saturated vapour concentration is far below the DNEL. Hence, the risk is considered negligible via the inhalation route.
Good hygiene practices and housekeeping measures

Conditions and measures related to personal protection and hygiene

Advice on general occupational hygiene : Regular training in workplace hygiene practice and proper use of personal protective equipment are required.

Personal protection : Gloves. Eye protection equipment (i.e. goggles or visors) must be worn, unless potential contact with eye can be excluded by the nature and type of application (e.g. closed process). Unless otherwise stated below, wear standard working clothes and shoes.

Respiratory protection : None

Section 3 - Exposure estimation and reference to its source**Contributing scenario : -Exposure estimation and reference to its source -Workers:**

Exposure assessment (human): : Qualitative approach used to conclude safe use.

Exposure estimation : Risk management measures are based on qualitative risk characterisation.

Contributing scenario : Wide dispersive indoor use of processing aids in open systems - Exposure estimation and reference to its source -Environment:

Exposure estimation : As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

Contributing scenario : Wide dispersive outdoor use of processing aids in open systems - Exposure estimation and reference to its source -Environment:

Exposure estimation : As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.