

SAFETY DATA SHEET

SIMULSOL SL 82

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

1.1 Product identifier

Product trade name : SIMULSOL SL 82
 Product code : 38440H

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

Material uses : Surfactant. Detergent. Oil industry.

Identified uses

Formulation or re-packing of D-Glucopyranose, oligomeric, undecyl glycoside - Distribution and formulation at production site
 Formulation or re-packing of D-Glucopyranose, oligomeric, undecyl glycoside - Distribution and formulation
 Use at industrial sites of D-Glucopyranose, oligomeric, undecyl glycoside - Industrial end use

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]

Skin Irrit. 2, H315
 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. Causes skin irritation.

Contains : D-Glucopyranose, oligomeric, undecyl glycoside

Precautionary statements

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

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SECTION 2: Hazards identification

Response : IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical attention. 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.

2.3 Other hazards

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

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]	Type
D-Glucopyranose, oligomeric, undecyl glycoside	REACH #: 01-2120234293-63 EC: 308-766-0	40 - 60	Skin Irrit. 2, H315 Eye Dam. 1, H318	[1]
D-Glucopyranose, oligomeric, C10-16 (even numbered)-alkyl glycosides	REACH #: 01-2119489418-23 EC: 600-975-8	10 - 20	Skin Irrit. 2, H315 Eye Dam. 1, H318	[1]
propane-1,2-diol	REACH #: 01-2119456809-23 EC: 200-338-0	1 - 5	Not classified. See Section 16 for the full text of the H statements declared above.	[2]

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** : Causes skin irritation.
- 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

5.3 Advice for firefighters

- 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.

SECTION 5: Firefighting measures

- 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.

7.2 Conditions for safe storage, including any incompatibilities

- : 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.

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SECTION 7: Handling and storage**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**

Product/ingredient name	Exposure limit values
propane-1,2-diol	EH40/2005 WELs (United Kingdom (UK), 12/2011). TWA: 10 mg/m ³ 8 hours. Form: Particulate TWA: 474 mg/m ³ 8 hours. Form: Sum of vapour and particulates TWA: 150 ppm 8 hours. Form: Sum of vapour and particulates

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
D-Glucopyranose, oligomeric, undecyl glycoside	DNEL	Long term Inhalation	70.53 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	100000 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	17.4 mg/m ³	Consumers	Systemic
	DNEL	Long term Dermal	50000 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Oral	5 mg/kg bw/day	Workers	Systemic
D-Glucopyranose, oligomeric, C10-16 (even numbered)-alkyl glycosides	DNEL	Long term Dermal	357000 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Inhalation	124 mg/m ³	Consumers	Systemic
	DNEL	Long term Oral	35.7 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Dermal	595000 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	420 mg/m ³	Workers	Systemic

PNECs

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SECTION 8: Exposure controls/personal protection

Product/ingredient name	Compartment Detail	Value	Method Detail
D-Glucopyranose, oligomeric, undecyl glycoside	Marine water	0.176 mg/l	Assessment Factors
	Marine water	0.018 mg/l	Assessment Factors
	Fresh water sediment	0.902 mg/kg dwt	Assessment Factors
	Marine water sediment	0.09 mg/kg dwt	Assessment Factors
	Sewage Treatment Plant	10.2 mg/l	Assessment Factors
	Soil	0.654 mg/kg dwt	Assessment Factors
D-Glucopyranose, oligomeric, C10-16 (even numbered)-alkyl glycosides	Fresh water	0.1 mg/l	Assessment Factors
	Marine	0.005 mg/l	Assessment Factors
	Fresh water sediment	0.487 mg/kg dwt	Assessment Factors
	Marine water sediment	0.048 mg/kg dwt	Assessment Factors

8.2 Exposure controls

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.
Colour	: Yellow. [Dark]
Odour	: Characteristic.
pH	: 4 to 7
Flash point	: Closed cup: >100°C [Estimated.]
Flammability of the product	: None available.
Density	: 1,1 to 1,12 g/cm ³ to 25 °C
Solubility	: Soluble in the following materials: cold water.
Viscosity	: Dynamic: 300 to 800 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**

Product/ingredient name	Result	Test	Dose	Exposure
D-Glucopyranose, oligomeric, C10-16 (even numbered)-alkyl glycosides	LD50 Dermal	OCDE 402	>2000 mg/kg	-
	LD50 Oral	OCDE 401	>5000 mg/kg	-

Conclusion/Summary : Not classified as dangerous

Irritation/Corrosion

Conclusion/Summary :
Skin : Causes skin irritation.
Eyes : Causes serious eye damage.

Sensitisation

Conclusion/Summary :
Skin : Not categorised.

Mutagenicity

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SECTION 11: Toxicological information

Product/ingredient name	Test	Experiment	Result
D-Glucopyranose, oligomeric, undecyl glycoside	OECD 471	Experiment: In vitro Subject: Bacteria Cell: Germ Metabolic activation: without	Negative
	OECD 473	Experiment: In vitro Subject: Mammalian-Animal Metabolic activation: with and without	Negative
	OECD 476	Experiment: In vitro Subject: Mammalian-Animal Metabolic activation: with and without	Negative
D-Glucopyranose, oligomeric, C10-16 (even numbered)-alkyl glycosides	OCDE 471	Experiment: In vitro Subject: Bacteria	Negative
	OCDE 476	Experiment: In vitro Subject: Mammalian-Animal	Negative
	OCDE 473	Experiment: In vitro Subject: Mammalian-Animal	Negative

Carcinogenicity**Conclusion/Summary** : Not available.**Reproductive toxicity**

Product/ingredient name	Maternal toxicity	Fertility	Developmental toxin	Test	Dose	Exposure
D-Glucopyranose, oligomeric, C10-16 (even numbered)-alkyl glycosides	Negative	Negative	Negative	OCDE 414	Oral: 1000 mg/kg bw/day	-

Teratogenicity**Conclusion/Summary** : Not available.**Specific 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 exposure**Short term exposure****Long term exposure****Potential chronic health effects****Chronic toxicity**

Product/ingredient name	Result	Test	Dose	Exposure
D-Glucopyranose, oligomeric, C10-16 (even numbered)-alkyl glycosides	Sub-chronic NOAEL Oral	-	1000 mg/kg bw/day	90 days

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.

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SECTION 11: Toxicological information**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
D-Glucopyranose, oligomeric, C10-16 (even numbered)-alkyl glycosides	Acute EC50 5 to 38 mg/l Fresh water	-	Algae - Desmodesmus subspicatus	72 hours
	Acute LC50 7 to 14 mg/l Fresh water	OCDE 202	Crustaceans - Daphnia magna	48 hours
	Acute LC50 2.95 to 5.9 mg/l Fresh water	OCDE 203	Fish - Danio rerio	96 hours
	Chronic NOEC 1 to 4 mg/l Fresh water	OCDE 202	Crustaceans - Daphnia magna	21 days

Conclusion/Summary : Not classified as dangerous**12.2 Persistence and degradability**

Product/ingredient name	Test	Result	Dose	Inoculum
D-Glucopyranose, oligomeric, C10-16 (even numbered)-alkyl glycosides	OCDE 301D	88 % - Readily - 28 days	-	-

Conclusion/Summary : The single components are easily biodegradable.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
D-Glucopyranose, oligomeric, C10-16 (even numbered)-alkyl glycosides	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
D-Glucopyranose, oligomeric, C10-16 (even numbered)-alkyl glycosides	≤-0.07	-	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.**Date of issue/Date of revision** : 10/01/2018

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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.

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.

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SECTION 15: Regulatory information

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 : All components are listed or exempted.

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
Skin Irrit. 2, H315 Eye Dam. 1, H318	Calculation method Calculation method

Full text of abbreviated H statements : H315 Causes skin irritation.
 H318 Causes serious eye damage.

Full text of classifications [CLP/GHS] : Eye Dam. 1, H318 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
 Skin Irrit. 2, H315 SKIN CORROSION/IRRITATION - Category 2

History

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Version : 1

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	: 2
For substance	: D-Glucopyranose, oligomeric, undecyl glycoside
Further information	: Processes, tasks, activities covered : 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 or re-packing of D-Glucopyranose, oligomeric, undecyl glycoside - Distribution and formulation at production site
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC15
Substance supplied to that use in form of: As such
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC02
Market sector by type of chemical product: Not applicable.
Article category related to subsequent service life: Not applicable.

Environmental contributing scenarios : Formulation of preparations - ERC02

Health Contributing scenarios : Use in closed process, no likelihood of exposure - PROC01
 Use in closed, continuous process with occasional controlled exposure - PROC02
 Use in closed batch process (synthesis or formulation) - PROC03
 Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
 Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) - PROC05
 Transfer of substance or preparation (charging/discharging) from/to vessels/ large containers at non-dedicated facilities - PROC08a
 Transfer of substance or preparation (charging/discharging) from/to vessels/ large containers at dedicated facilities - PROC08b
 Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
 Production of preparations or articles by tableting, compression, extrusion, pelletisation - PROC14
 Use a laboratory reagent - PROC15

Amounts used	: Daily amount per site : ≤ 10 t Annual amount per site : ≤ 999 t
Environment factors not influenced by risk management	: Waste water pretreatment: 500 m ³ /d (On-site). Waste water treatment: Municipal STP. BOD5: 5 700 kg/day COD: 11 400 kg/day
Other given operational conditions affecting environmental exposure	: Release fraction to air from process (initial release prior to RMM) : 2.5 %. Release to soil from process : 0%. Release fraction to wastewater from process (initial release prior to RMM) : 2 %.
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: Process wastewater is treated in a biological onsite wastewater treatment plant. (Efficiency of at least 95 %)

Organisational measures to prevent/limit release from site	<ul style="list-style-type: none"> : 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.
Conditions and measures related to municipal sewage treatment plant	<ul style="list-style-type: none"> : Municipal STP : 20 000 m³/day Flow rate of receiving surface water (m³/d): 3.456 x 10E5 Receiving Water Dilution (fresh or marine) <= 17.2 The Simple Treat model implemented in the EUSES modelling tool predicts the following fate of the substance in the standard biological sewage treatment plant: Air : 3.17E-12 % Waste water pretreatment: 12.49 % Sewage sludge : 1.467 % Degraded by micro-organisms : 86.04 % Sewage sludge may be used for application on agricultural soil. External treatment and disposal of waste should comply with applicable local and/or national regulations.

Contributing scenario : Use in closed process, no likelihood of exposure (Workers:)

Concentration of substance in mixture or article	: Covers percentage substance in the product up to 100%
Physical state	: Solid
Dust	: Solid, low dustiness
Frequency and duration of use	: Use duration (h/d): <= 8 hours per day
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.
Area of use:	: Indoor use.
Technical conditions and measures at process level (source) to prevent release	: Use in closed process, no likelihood of exposure
Ventilation control measures	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).
Conditions and measures related to personal protection and hygiene	
Advice on general occupational hygiene	: Exposed skin surface assumed :240 cm ²
Personal protection	: Hand protection not applicable. Chemical splash goggles or face shield.
Respiratory protection	: None

Contributing scenario : Use in closed, continuous process with occasional controlled exposure (Workers:)

Concentration of substance in mixture or article	: Covers percentage substance in the product up to 100%
Physical state	: Solid
Dust	: Solid, low dustiness
Frequency and duration of use	: Use duration (h/d): <= 8 hours per day
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.
Area of use:	: Indoor use.
Technical conditions and measures at process level (source) to prevent release	: Use in closed, continuous process with occasional controlled exposure

Ventilation control measures : Provide a basic standard of general ventilation (1 to 3 air changes per hour).

Conditions and measures related to personal protection and hygiene

Advice on general occupational hygiene : Exposed skin surface assumed :480 cm²

Personal protection : Hand protection not applicable. Chemical splash goggles or face shield.

Respiratory protection : None

Contributing scenario : Use in closed batch process (synthesis or formulation) (Workers:)

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100%

Physical state : Solid

Dust : Solid, low dustiness

Frequency and duration of use : Use duration (h/d): <= 8 hours per day

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.

Area of use: : Indoor use.

Technical conditions and measures at process level (source) to prevent release : Use in closed, continuous process with occasional controlled exposure

Ventilation control measures : Provide a basic standard of general ventilation (1 to 3 air changes per hour).

Conditions and measures related to personal protection and hygiene

Advice on general occupational hygiene : Exposed skin surface assumed :240 cm²

Personal protection : Hand protection not applicable. Chemical splash goggles or face shield.

Respiratory protection : None

Contributing scenario : Use in batch and other process (synthesis) where opportunity for exposure arises (Workers:)

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100%

Physical state : Solid

Dust : Solid, low dustiness

Frequency and duration of use : Use duration (h/d): <= 8 hours per day

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.

Area of use: : Indoor use.

Ventilation control measures : Provide a basic standard of general ventilation (1 to 3 air changes per hour).

Conditions and measures related to personal protection and hygiene

Advice on general occupational hygiene : Exposed skin surface assumed :480 cm²

Personal protection : Hand protection not applicable. Chemical splash goggles or face shield.

Respiratory protection : None

Contributing scenario : Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) (Workers:)

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100%

Physical state : Solid

Dust : Solid, low dustiness

Frequency and duration of use : Use duration (h/d): <= 8 hours per day

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.

Area of use: : Indoor use.

Ventilation control measures : Provide a basic standard of general ventilation (1 to 3 air changes per hour).

Conditions and measures related to personal protection and hygiene

Advice on general occupational hygiene : Exposed skin surface assumed :480 cm²

Personal protection : Hand protection not applicable. Chemical splash goggles or face shield.

Respiratory protection : None

Contributing scenario : Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities (Workers:)

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100%

Physical state : Solid

Dust : Solid, low dustiness

Frequency and duration of use : Use duration (h/d): <= 8 hours per day

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.

Area of use: : Indoor use.

Ventilation control measures : Provide a basic standard of general ventilation (1 to 3 air changes per hour).

Conditions and measures related to personal protection and hygiene

Advice on general occupational hygiene : Exposed skin surface assumed :960 cm²

Personal protection : Hand protection not applicable. Chemical splash goggles or face shield.

Respiratory protection : None

Contributing scenario : Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities (Workers:)

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100%

Physical state : Solid

Dust : Solid, low dustiness

Frequency and duration of use : Use duration (h/d): <= 8 hours per day

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.

Area of use: : Indoor use.

Ventilation control measures : Provide a basic standard of general ventilation (1 to 3 air changes per hour).

Conditions and measures related to personal protection and hygiene

Advice on general occupational hygiene	: Exposed skin surface assumed :960 cm ²
Personal protection	: Hand protection not applicable. Chemical splash goggles or face shield.
Respiratory protection	: None

Contributing scenario : Transfer of substance or preparation into small containers (dedicated filling line, including weighing) (Workers:)

Concentration of substance in mixture or article	: Covers percentage substance in the product up to 100%
Physical state	: Solid
Dust	: Solid, low dustiness
Frequency and duration of use	: Use duration (h/d): <= 8 hours per day
Other given operational conditions affecting workers exposure	: Ensure good industrial hygiene.
Area of use:	: Indoor use.
Ventilation control measures	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).

Conditions and measures related to personal protection and hygiene

Advice on general occupational hygiene	: Exposed skin surface assumed :480 cm ²
Personal protection	: Hand protection not applicable. Chemical splash goggles or face shield.
Respiratory protection	: None

Contributing scenario : Production of preparations or articles by tableting, compression, extrusion, pelletisation (Workers:)

Concentration of substance in mixture or article	: Covers percentage substance in the product up to 100%
Physical state	: Solid
Dust	: Solid, low dustiness
Frequency and duration of use	: Use duration (h/d): <= 8 hours per day
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.
Area of use:	: Indoor use.
Ventilation control measures	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).

Conditions and measures related to personal protection and hygiene

Advice on general occupational hygiene	: Exposed skin surface assumed :480 cm ²
Personal protection	: Hand protection not applicable. Chemical splash goggles or face shield.
Respiratory protection	: None

Contributing scenario : Use a laboratory reagent (Workers:)

Concentration of substance in mixture or article	: Covers percentage substance in the product up to 100%
Physical state	: Solid
Dust	: Solid, low dustiness
Frequency and duration of use	: Use duration (h/d): <= 8 hours per day

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.
Area of use:	: Indoor use.
Ventilation control measures	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).
Conditions and measures related to personal protection and hygiene	
Advice on general occupational hygiene	: Exposed skin surface assumed :240 cm ²
Personal protection	: Hand protection not applicable. Chemical splash goggles or face shield.
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):	: A tier approach is used under Easy-TRA for the RCR calculation. All the use descriptors enumerated above results in safe uses.
Exposure estimation	: Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Risk characterisation ratio : <1.

Contributing scenario : Formulation of preparations - Exposure estimation and reference to its source - Environment:	
Exposure assessment (environment):	: Used EUSES model.
Exposure estimation	: Exposures are low and do not exceed limit values. Risk characterisation ratio (PEC/PNEC): <1.

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. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.
Health	: Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Identification of the substance or mixture

Product definition : Mixture

Section 1 - Title

Number of the ES	: 3
For substance	: D-Glucopyranose, oligomeric, undecyl glycoside
Further information	: Processes, tasks, activities covered : 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 or re-packing of D-Glucopyranose, oligomeric, undecyl glycoside - Distribution and formulation
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC15
Substance supplied to that use in form of: As such
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC02
Market sector by type of chemical product: Not applicable.
Article category related to subsequent service life: Not applicable.

Environmental contributing scenarios : Formulation of preparations - ERC02

Health Contributing scenarios : **Use in closed process, no likelihood of exposure** - PROC01
Use in closed, continuous process with occasional controlled exposure - PROC02
Use in closed batch process (synthesis or formulation) - PROC03
Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) - PROC05
Transfer of substance or preparation (charging/discharging) from/to vessels/ large containers at non-dedicated facilities - PROC08a
Transfer of substance or preparation (charging/discharging) from/to vessels/ large containers at dedicated facilities - PROC08b
Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
Use a laboratory reagent - PROC15

Amounts used	: Daily amount per site : ≤0.5t Annual amount per site : ≤5t
Environment factors not influenced by risk management	: Municipal STP. 2000 m ³ /d (standard town)
Other given operational conditions affecting environmental exposure	: Release to air from process : 0.25 %. Release to soil from process : 0.01%. Release to waste water from process : 0.5 %.
Conditions and measures related to municipal sewage treatment plant	: Sewage sludge may be used for application on agricultural soil. External treatment and disposal of waste should comply with applicable local and/or national regulations.

Contributing scenario : Use in closed process, no likelihood of exposure (Workers:)

Concentration of substance in mixture or article	: Covers percentage substance in the product up to 100%
Physical state	: Solid
Dust	: Solid, low dustiness
Frequency and duration of use	: Use duration (h/d): <= 8 hours per day
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.
Area of use:	: Indoor use.
Technical conditions and measures at process level (source) to prevent release	: Use in closed process, no likelihood of exposure
Ventilation control measures	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).
Conditions and measures related to personal protection and hygiene	
Advice on general occupational hygiene	: Exposed skin surface assumed :240 cm ²
Personal protection	: Hand protection not applicable. Chemical splash goggles or face shield.
Respiratory protection	: None

Contributing scenario : Use in closed, continuous process with occasional controlled exposure (Workers:)

Concentration of substance in mixture or article	: Covers percentage substance in the product up to 100%
Physical state	: Solid
Dust	: Solid, low dustiness
Frequency and duration of use	: Use duration (h/d): <= 8 hours per day
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.
Area of use:	: Indoor use.
Technical conditions and measures at process level (source) to prevent release	: Use in closed, continuous process with occasional controlled exposure
Ventilation control measures	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).
Conditions and measures related to personal protection and hygiene	
Advice on general occupational hygiene	: Exposed skin surface assumed :480 cm ²
Personal protection	: Hand protection not applicable. Chemical splash goggles or face shield.
Respiratory protection	: None

Contributing scenario : Use in closed batch process (synthesis or formulation) (Workers:)

Concentration of substance in mixture or article	: Covers percentage substance in the product up to 100%
Physical state	: Solid
Dust	: Solid, low dustiness
Frequency and duration of use	: Use duration (h/d): <= 8 hours per day
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.
Area of use:	: Indoor use.

Technical conditions and measures at process level (source) to prevent release	: Use in closed, continuous process with occasional controlled exposure
Ventilation control measures	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).
Conditions and measures related to personal protection and hygiene	
Advice on general occupational hygiene	: Exposed skin surface assumed :240 cm ²
Personal protection	: Hand protection not applicable. Chemical splash goggles or face shield.
Respiratory protection	: None

Contributing scenario : Use in batch and other process (synthesis) where opportunity for exposure arises (Workers:)

Concentration of substance in mixture or article	: Covers percentage substance in the product up to 100%
Physical state	: Solid
Dust	: Solid, low dustiness
Frequency and duration of use	: Use duration (h/d): <= 8 hours per day
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.
Area of use:	: Indoor use.
Ventilation control measures	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).
Conditions and measures related to personal protection and hygiene	
Advice on general occupational hygiene	: Exposed skin surface assumed :480 cm ²
Personal protection	: Hand protection not applicable. Chemical splash goggles or face shield.
Respiratory protection	: None

Contributing scenario : Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) (Workers:)

Concentration of substance in mixture or article	: Covers percentage substance in the product up to 100%
Physical state	: Solid
Dust	: Solid, low dustiness
Frequency and duration of use	: Use duration (h/d): <= 8 hours per day
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.
Area of use:	: Indoor use.
Ventilation control measures	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).
Conditions and measures related to personal protection and hygiene	
Advice on general occupational hygiene	: Exposed skin surface assumed :480 cm ²
Personal protection	: Hand protection not applicable. Chemical splash goggles or face shield.
Respiratory protection	: None

Contributing scenario : Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities (Workers:)

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100%

Physical state : Solid

Dust : Solid, low dustiness

Frequency and duration of use : Use duration (h/d): <= 8 hours per day

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.

Area of use: : Indoor use.

Ventilation control measures : Provide a basic standard of general ventilation (1 to 3 air changes per hour).

Conditions and measures related to personal protection and hygiene

Advice on general occupational hygiene : Exposed skin surface assumed :960 cm²

Personal protection : Hand protection not applicable. Chemical splash goggles or face shield.

Respiratory protection : None

Contributing scenario : Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities (Workers:)

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100%

Physical state : Solid

Dust : Solid, low dustiness

Frequency and duration of use : Use duration (h/d): <= 8 hours per day

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.

Area of use: : Indoor use.

Ventilation control measures : Provide a basic standard of general ventilation (1 to 3 air changes per hour).

Conditions and measures related to personal protection and hygiene

Advice on general occupational hygiene : Exposed skin surface assumed :960 cm²

Personal protection : Hand protection not applicable. Chemical splash goggles or face shield.

Respiratory protection : None

Contributing scenario : Transfer of substance or preparation into small containers (dedicated filling line, including weighing) (Workers:)

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100%

Physical state : Solid

Dust : Solid, low dustiness

Frequency and duration of use : Use duration (h/d): <= 8 hours per day

Other given operational conditions affecting workers exposure : Ensure good industrial hygiene.

Area of use: : Indoor use.

Ventilation control measures : Provide a basic standard of general ventilation (1 to 3 air changes per hour).

Conditions and measures related to personal protection and hygiene

Advice on general occupational hygiene	: Exposed skin surface assumed :480 cm ²
Personal protection	: Hand protection not applicable. Chemical splash goggles or face shield.
Respiratory protection	: None

Contributing scenario : Use a laboratory reagent (Workers:)

Concentration of substance in mixture or article	: Covers percentage substance in the product up to 100%
Physical state	: Solid
Dust	: Solid, low dustiness
Frequency and duration of use	: Use duration (h/d): <= 8 hours per day
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.
Area of use:	: Indoor use.
Ventilation control measures	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).

Conditions and measures related to personal protection and hygiene

Advice on general occupational hygiene	: Exposed skin surface assumed :240 cm ²
Personal protection	: Hand protection not applicable. Chemical splash goggles or face shield.
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):	: A tier approach is used under Easy-TRA for the RCR calculation. All the use descriptors enumerated above results in safe uses.
Exposure estimation	: Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Risk characterisation ratio : <1.

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

Exposure assessment (environment):	: Used EUSES model.
Exposure estimation	: Exposures are low and do not exceed limit values. Risk characterisation ratio (PEC/ PNEC): <1.

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. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.
Health	: Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Identification of the substance or mixture

Product definition : Mixture

Section 1 - Title

Number of the ES	: 4
For substance	: D-Glucopyranose, oligomeric, undecyl glycoside

List of use descriptors : **Identified use name:** Use at industrial sites of D-Glucopyranose, oligomeric, undecyl glycoside - Industrial end use
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC10, PROC13, PROC15
Sector of end use: SU08, SU09
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04, ERC05, ERC06b, ERC06d, ERC07
Market sector by type of chemical product: PC12, PC13, PC14, PC15, PC23, PC24, PC25, PC26, PC27, PC31, PC34, PC35

Environmental contributing scenarios : **Industrial use as processing aid (cleaning agent)** - ERC04
Industrial use as processing aid (oilfield) - ERC04
Industrial use of metal treatment products - ERC04
SEPPIC Industrial use as processing aid (coatings, inks) - ERC05
SEPPIC Industrial use leading to inclusion into/onto article (textile dyeing) - ERC05
SEPPIC Industrial use as reactive processing aid (textile processing) - ERC06b
Process regulators - ERC06d
Functional fluids - ERC07
Use as a fuel - ERC07

Health Contributing scenarios : **Use in closed process, no likelihood of exposure** - PROC01
Use in closed, continuous process with occasional controlled exposure - PROC02
Use in closed batch process (synthesis or formulation) - PROC03
Use in batch and other process (synthesis) where opportunity for exposure arises - PROC04
Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) - PROC05
Transfer of substance or preparation (charging/discharging) from/to vessels/ large containers at non-dedicated facilities - PROC08a
Transfer of substance or preparation (charging/discharging) from/to vessels/ large containers at dedicated facilities - PROC08b
Transfer of substance or preparation into small containers (dedicated filling line, including weighing) - PROC09
Roller application or brushing of adhesive and other coating - PROC10
Treatment of articles by dipping and pouring - PROC13
Use a laboratory reagent - PROC15

Amounts used	: Daily amount per site : ≤0.5 t Annual amount per site : ≤5 t
Environment factors not influenced by risk management	: Waste water treatment: Municipal STP
Other given operational conditions affecting environmental exposure	: Receiving surface water flow :18 000 m ³ /d Release fraction to wastewater from process (initial release prior to RMM) :0.01 % Release fraction to air from process (initial release prior to RMM) :100 % Release to soil from process :0 %
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: Process wastewater is treated in a biological onsite wastewater treatment plant.
Conditions and measures related to municipal sewage treatment plant	: Municipal STP: ≥ 2000 m ³ /day Sewage sludge may be used for application on agricultural soil. External treatment and disposal of waste should comply with applicable local and/or national regulations.

Amounts used	: Daily amount per site : ≤ 0.014 t Annual amount per site : ≤ 5 t
Environment factors not influenced by risk management	: Waste water treatment: Municipal STP
Other given operational conditions affecting environmental exposure	: Receiving surface water flow :18 000 m ³ /d Release to waste water from process :3. 357 % Release to air from process :100 % Release to soil from process :5 %
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: Process wastewater is treated in a biological onsite wastewater treatment plant.
Conditions and measures related to municipal sewage treatment plant	: Municipal STP: ≥ 2000 m ³ /day Sewage sludge may be used for application on agricultural soil. External treatment and disposal of waste should comply with applicable local and/or national regulations.

Amounts used	: Daily amount per site : ≤ 0.25 t Annual amount per site : ≤ 5 t
Environment factors not influenced by risk management	: Waste water treatment: Municipal STP
Other given operational conditions affecting environmental exposure	: Receiving surface water flow :18 000 m ³ /d Release fraction to wastewater from process (initial release prior to RMM) :2E-9 % Release fraction to air from process (initial release prior to RMM) :5E-3 % Release to soil from process :0 %
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: Process wastewater is treated in a biological onsite wastewater treatment plant.
Conditions and measures related to municipal sewage treatment plant	: Municipal STP: ≥ 2000 m ³ /day Sewage sludge may be used for application on agricultural soil. External treatment and disposal of waste should comply with applicable local and/or national regulations.

Amounts used	: Daily amount per site : ≤ 0.022 t Annual amount per site : ≤ 5 t
Environment factors not influenced by risk management	: Waste water treatment: Municipal STP
Other given operational conditions affecting environmental exposure	: Release to waste water from process :0 % Release to air from process :2 % Release to soil from process :0 %
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: Process wastewater is treated in a biological onsite wastewater treatment plant.
Conditions and measures related to municipal sewage treatment plant	: Municipal STP: ≥ 2000 m ³ /day Sewage sludge may be used for application on agricultural soil. External treatment and disposal of waste should comply with applicable local and/or national regulations.

Amounts used	: Daily amount per site : ≤ 0.023 t Annual amount per site : ≤ 5 t
Environment factors not influenced by risk management	: Waste water treatment: Municipal STP
Other given operational conditions affecting environmental exposure	: Receiving surface water flow :18 000 m ³ /d Release fraction to wastewater from process (initial release prior to RMM) :5 % Release fraction to air from process (initial release prior to RMM) :0 % Release to soil from process :0 %

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: Process wastewater is treated in a biological onsite wastewater treatment plant.
Conditions and measures related to municipal sewage treatment plant	: Municipal STP: ≥ 2000 m ³ /day Sewage sludge may be used for application on agricultural soil. External treatment and disposal of waste should comply with applicable local and/or national regulations.
Amounts used	: Daily amount per site : ≤ 0.023 t Annual amount per site : ≤ 5 t
Environment factors not influenced by risk management	: Waste water treatment: Municipal STP
Other given operational conditions affecting environmental exposure	: Receiving surface water flow :18 000 m ³ /d Release fraction to wastewater from process (initial release prior to RMM) :2 % Release fraction to air from process (initial release prior to RMM) :0 % Release to soil from process :0 %
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: Process wastewater is treated in a biological onsite wastewater treatment plant.
Conditions and measures related to municipal sewage treatment plant	: Municipal STP: ≥ 2000 m ³ /day Sewage sludge may be used for application on agricultural soil. External treatment and disposal of waste should comply with applicable local and/or national regulations.
Amounts used	: Daily amount per site : ≤ 0.25 t Annual amount per site : ≤ 5 t
Environment factors not influenced by risk management	: Waste water treatment: Municipal STP
Other given operational conditions affecting environmental exposure	: Receiving surface water flow :18 000 m ³ /d Release fraction to wastewater from process (initial release prior to RMM) :5E-3 % Release fraction to air from process (initial release prior to RMM) :35 % Release to soil from process :0.025 %
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: Process wastewater is treated in a biological onsite wastewater treatment plant.
Conditions and measures related to municipal sewage treatment plant	: Municipal STP: ≥ 2000 m ³ /day Sewage sludge may be used for application on agricultural soil. External treatment and disposal of waste should comply with applicable local and/or national regulations.
Amounts used	: Daily amount per site : ≤ 0.25 t Annual amount per site : ≤ 5 t
Environment factors not influenced by risk management	: Waste water treatment: Municipal STP
Other given operational conditions affecting environmental exposure	: Release to waste water from process :0.1 % Release to air from process :0.01 % Release to soil from process :0.1 %
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: Process wastewater is treated in a biological onsite wastewater treatment plant.
Conditions and measures related to municipal sewage treatment plant	: Municipal STP: ≥ 2000 m ³ /day Sewage sludge may be used for application on agricultural soil. External treatment and disposal of waste should comply with applicable local and/or national regulations.

Amounts used	: Daily amount per site : ≤ 0.25 t Annual amount per site : ≤ 5 t
Environment factors not influenced by risk management	: Waste water treatment: Municipal STP
Other given operational conditions affecting environmental exposure	: Release to waste water from process : $1E-3$ % Release to air from process : 0.5 % Release to soil from process : 0 %
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: Process wastewater is treated in a biological onsite wastewater treatment plant.
Conditions and measures related to municipal sewage treatment plant	: Municipal STP: ≥ 2000 m ³ /day Sewage sludge may be used for application on agricultural soil. External treatment and disposal of waste should comply with applicable local and/or national regulations.

Contributing scenario : Use in closed process, no likelihood of exposure (Workers:)

Concentration of substance in mixture or article	: Covers percentage substance in the product up to 100%
Physical state	: Solid
Dust	: Solid, low dustiness
Frequency and duration of use	: Use duration (h/d): ≤ 8 hours per day.
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
Area of use:	: Indoor use.
Technical conditions and measures at process level (source) to prevent release	: Use in closed process, no likelihood of exposure
Ventilation control measures	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).
Conditions and measures related to personal protection and hygiene	
Advice on general occupational hygiene	: Exposed skin surface assumed : 240 cm ²
Personal protection	: Hand protection not applicable. Chemical splash goggles or face shield.
Respiratory protection	: None

Contributing scenario : Use in closed, continuous process with occasional controlled exposure (Workers:)

Concentration of substance in mixture or article	: Covers percentage substance in the product up to 100%
Physical state	: Solid
Dust	: Solid, low dustiness
Frequency and duration of use	: Use duration (h/d): ≤ 8 hours per day.
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
Area of use:	: Indoor use.
Technical conditions and measures at process level (source) to prevent release	: Use in closed, continuous process with occasional controlled exposure
Ventilation control measures	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).

Conditions and measures related to personal protection and hygiene

- Advice on general occupational hygiene** : Exposed skin surface assumed :480 cm²
- Personal protection** : Hand protection not applicable. Chemical splash goggles or face shield.
- Respiratory protection** : None

Contributing scenario : Use in closed batch process (synthesis or formulation) (Workers:)

- Concentration of substance in mixture or article** : Covers percentage substance in the product up to 100%
- Physical state** : Solid
- Dust** : Solid, low dustiness
- Frequency and duration of use** : Use duration (h/d):<= 8 hours per day.
- 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
- Area of use:** : Indoor use.
- Technical conditions and measures at process level (source) to prevent release** : Use in closed, continuous process with occasional controlled exposure
- Ventilation control measures** : Provide a basic standard of general ventilation (1 to 3 air changes per hour).

Conditions and measures related to personal protection and hygiene

- Advice on general occupational hygiene** : Exposed skin surface assumed :240 cm²
- Personal protection** : Hand protection not applicable. Chemical splash goggles or face shield.
- Respiratory protection** : None

Contributing scenario : Use in batch and other process (synthesis) where opportunity for exposure arises (Workers:)

- Concentration of substance in mixture or article** : Covers percentage substance in the product up to 100%
- Physical state** : Solid
- Dust** : Solid, low dustiness
- Frequency and duration of use** : Use duration (h/d):<= 8 hours per day.
- 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
- Area of use:** : Indoor use.
- Ventilation control measures** : Provide a basic standard of general ventilation (1 to 3 air changes per hour).

Conditions and measures related to personal protection and hygiene

- Advice on general occupational hygiene** : Exposed skin surface assumed :480 cm²
- Personal protection** : Hand protection not applicable. Chemical splash goggles or face shield.
- Respiratory protection** : None

Contributing scenario : Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) (Workers:)

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100%

Physical state : Solid

Dust : Solid, low dustiness

Frequency and duration of use : Use duration (h/d):<= 8 hours per day.

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

Area of use: : Indoor use.

Ventilation control measures : Provide a basic standard of general ventilation (1 to 3 air changes per hour).

Conditions and measures related to personal protection and hygiene

Advice on general occupational hygiene : Exposed skin surface assumed :480 cm²

Personal protection : Hand protection not applicable. Chemical splash goggles or face shield.

Respiratory protection : None

Contributing scenario : Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities (Workers:)

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100%

Physical state : Solid

Dust : Solid, low dustiness

Frequency and duration of use : Use duration (h/d):<= 8 hours per day.

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

Area of use: : Indoor use.

Ventilation control measures : Provide a basic standard of general ventilation (1 to 3 air changes per hour).

Conditions and measures related to personal protection and hygiene

Advice on general occupational hygiene : Exposed skin surface assumed :960 cm²

Personal protection : Hand protection not applicable. Chemical splash goggles or face shield.

Respiratory protection : None

Contributing scenario : Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities (Workers:)

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100%

Physical state : Solid

Dust : Solid, low dustiness

Frequency and duration of use : Use duration (h/d):<= 8 hours per day.

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

Area of use: : Indoor use.

Ventilation control measures : Provide a basic standard of general ventilation (1 to 3 air changes per hour).

Conditions and measures related to personal protection and hygiene

Advice on general occupational hygiene : Exposed skin surface assumed :960 cm²

Personal protection : Hand protection not applicable. Chemical splash goggles or face shield.

Respiratory protection : None

Contributing scenario : Transfer of substance or preparation into small containers (dedicated filling line, including weighing) (Workers:)

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100%

Physical state : Solid

Dust : Solid, low dustiness

Frequency and duration of use : Use duration (h/d):<= 8 hours per day.

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

Area of use: : Indoor use.

Ventilation control measures : Provide a basic standard of general ventilation (1 to 3 air changes per hour).

Conditions and measures related to personal protection and hygiene

Advice on general occupational hygiene : Exposed skin surface assumed :480 cm²

Personal protection : Hand protection not applicable. Chemical splash goggles or face shield.

Respiratory protection : None

Contributing scenario : Roller application or brushing of adhesive and other coating (Workers:)

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100%

Physical state : Solid

Dust : Solid, low dustiness

Frequency and duration of use : Use duration (h/d):<= 8 hours per day.

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

Area of use: : Indoor use.

Ventilation control measures : Provide a basic standard of general ventilation (1 to 3 air changes per hour).

Conditions and measures related to personal protection and hygiene

Advice on general occupational hygiene : Exposed skin surface assumed :960 cm²

Personal protection : Hand protection not applicable. Chemical splash goggles or face shield.

Respiratory protection : None

Contributing scenario : Treatment of articles by dipping and pouring (Workers:)

Concentration of substance in mixture or article	: Covers percentage substance in the product up to 100%
Physical state	: Solid
Dust	: Solid, low dustiness
Frequency and duration of use	: Use duration (h/d):<= 8 hours per day.
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
Area of use:	: Indoor use.
Ventilation control measures	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).

Conditions and measures related to personal protection and hygiene

Advice on general occupational hygiene	: Exposed skin surface assumed :480 cm ²
Personal protection	: Hand protection not applicable. Chemical splash goggles or face shield.
Respiratory protection	: None

Contributing scenario : Use a laboratory reagent (Workers:)

Concentration of substance in mixture or article	: Covers percentage substance in the product up to 100%
Physical state	: Solid
Dust	: Solid, low dustiness
Frequency and duration of use	: Use duration (h/d):<= 8 hours per day.
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
Area of use:	: Indoor use.
Ventilation control measures	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).

Conditions and measures related to personal protection and hygiene

Advice on general occupational hygiene	: Exposed skin surface assumed :240 cm ²
Personal protection	: Hand protection not applicable. Chemical splash goggles or face shield.
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):	: A tier approach is used under Easy-TRA for the RCR calculation. All the use descriptors enumerated above results in safe uses.
Exposure estimation	: Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Risk characterisation ratio: <1.

Contributing scenario : Industrial use as processing aid (cleaning agent) - Exposure estimation and reference to its source -Environment:

Exposure assessment (environment): : Used EUSES model.

Exposure estimation : Exposures are low and do not exceed limit values. Risk characterisation ratio (PEC/PNEC): <1.

Contributing scenario : Industrial use as processing aid (oilfield) - Exposure estimation and reference to its source -Environment:

Exposure assessment (environment): : Used EUSES model.

Exposure estimation : Exposures are low and do not exceed limit values. Risk characterisation ratio (PEC/PNEC): <1.

Contributing scenario : Industrial use of metal treatment products - Exposure estimation and reference to its source -Environment:

Exposure assessment (environment): : Used EUSES model.

Exposure estimation : Exposures are low and do not exceed limit values. Risk characterisation ratio (PEC/PNEC): <1.

Contributing scenario : SEPPIC Industrial use as processing aid (coatings, inks) - Exposure estimation and reference to its source -Environment:

Exposure assessment (environment): : Used EUSES model.

Exposure estimation : Exposures are low and do not exceed limit values. Risk characterisation ratio (PEC/PNEC): <1.

Contributing scenario : SEPPIC Industrial use leading to inclusion into/onto article (textile dyeing) - Exposure estimation and reference to its source -Environment:

Exposure assessment (environment): : Used EUSES model.

Exposure estimation : Exposures are low and do not exceed limit values. Risk characterisation ratio (PEC/PNEC): <1.

Contributing scenario : SEPPIC Industrial use as reactive processing aid (textile processing) - Exposure estimation and reference to its source -Environment:

Exposure assessment (environment): : Used EUSES model.

Exposure estimation : Exposures are low and do not exceed limit values. Risk characterisation ratio (PEC/PNEC): <1.

Contributing scenario : Process regulators - Exposure estimation and reference to its source -Environment:

Exposure assessment (environment): : Used EUSES model.

Exposure estimation : Exposures are low and do not exceed limit values. Risk characterisation ratio (PEC/PNEC): <1.

Contributing scenario : Functional fluids - Exposure estimation and reference to its source -Environment:

Exposure assessment (environment): : Used EUSES model.

Exposure estimation : Exposures are low and do not exceed limit values. Risk characterisation ratio (PEC/PNEC): <1.

Contributing scenario : Use as a fuel - Exposure estimation and reference to its source -Environment:

Exposure assessment (environment): : Used EUSES model.

Exposure estimation : Exposures are low and do not exceed limit values. Risk characterisation ratio (PEC/PNEC): <1.

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. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Health

: Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.