

# SAFETY DATA SHEET

## SIMULSOL SL 11 W

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

#### 1.1 Product identifier

**Product trade name** : SIMULSOL SL 11 W  
**Product code** : 38445N

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


**Material uses** : Non ionic surfactant.

##### Identified uses

Manufacture of D-Glucopyranose, oligomeric, undecyl glycoside  
 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  
 Use at industrial sites of D-Glucopyranose, oligomeric, undecyl glycoside - Professional end use  
 Widespread use by professional workers of D-Glucopyranose, oligomeric, undecyl glycoside - Professional use as processing aid plant protection  
 Consumer use - Consumer end use of D-Glucopyranose, oligomeric, undecyl glycoside  
 Consumer use - Consumer end use of D-Glucopyranose, oligomeric, undecyl glycoside

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

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**SECTION 2: Hazards identification****Precautionary statements**


- Prevention** :  Wear suitable gloves. Wear eye or face protection. Wash hands thoroughly after handling.
- 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
- INCI Name:** : UNDECYL GLUCOSIDE

Product/ingredient name	Identifiers	%	Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]	Type
 -Glucopyranose, oligomeric, undecyl glycoside	REACH #: 01-2120234293-63 EC: 308-766-0	40 - 60	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	<b>EH40/2005 WELs (United Kingdom (UK), 12/2011).</b> TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Particulate TWA: 474 mg/m <sup>3</sup> 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
-Glucopyranose, oligomeric, undecyl glycoside	DNEL	Long term Inhalation	70.53 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Dermal	100000 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	17.4 mg/m <sup>3</sup>	Consumers	Systemic
	DNEL	Long term Dermal	50000 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Oral	5 mg/kg bw/day	Workers	Systemic

**PNECs**

Product/ingredient name	Compartment Detail	Value	Method Detail
-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

**8.2 Exposure controls**

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**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.
- Colour** : Clear. , Yellow.
- Odour** : Slight , Characteristic.
- pH** : 4 to 7
- Initial boiling point and boiling range** : 100°C
- Flash point** : Closed cup: >100°C [NFT 60 103.]
- Flammability of the product** : None available.
- Density** : 1,12 g/cm<sup>3</sup> to 20 °C
- Solubility** : Easily soluble in the following materials: cold water.
- Partition coefficient: n-octanol/ water** : 2.15

**9.2 Other information**

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

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**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** : Hazardous reactions or instability may occur under certain conditions of storage or use.
- 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** : Irritating to skin.**Eyes** : Causes serious eye damage.**Sensitisation****Conclusion/Summary** :**Skin** : Non-sensitiser to skin.**Mutagenicity**

Product/ingredient name	Test	Experiment	Result
β-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

**Carcinogenicity****Conclusion/Summary** : Not available.**Reproductive toxicity****Conclusion/Summary** : Not available.**Teratogenicity****Conclusion/Summary** : Not available.**Specific target organ toxicity (single exposure)**

Not available.

**Specific target organ toxicity (repeated exposure)**

Not available.

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**SECTION 11: Toxicological information****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**

- Conclusion/Summary** : Not available.
- 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****Conclusion/Summary** : Not available.**12.2 Persistence and degradability****Conclusion/Summary** : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
SIMULSOL SL 11 W	-	-	Readily

**12.3 Bioaccumulative potential**

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
SIMULSOL SL 11 W	2,15	-	low

**12.4 Mobility in soil****Soil/water partition coefficient (K<sub>oc</sub>)** : 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.

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**SECTION 13: Disposal considerations**

- 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
<b>14.1 UN number</b>	Not regulated.	Not regulated.	Not regulated.	Not regulated.
<b>14.2 UN proper shipping name</b>	-	-	-	-
<b>14.3 Transport hazard class(es)</b>	-	-	-	-
<b>14.4 Packing group</b>	-	-	-	-
<b>14.5 Environmental hazards</b>	No.	No.	No.	No.
<b>14.6 Special precautions for user</b>	<b>Transport within user's premises:</b> 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.			
<b>Additional information</b>	-	-	-	-

**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** : All components are listed or exempted.

**EC number** : 308-766-0

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**SECTION 15: Regulatory information**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
<input checked="" type="checkbox"/> 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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**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](http://www.seppic.com) )

## Identification of the substance or mixture

Product definition : Mixture

## Section 1 - Title

Number of the ES	: 1
For substance	: D-Glucopyranose, oligomeric, undecyl glycoside
Further information	: Processes, tasks, activities covered : 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 D-Glucopyranose, oligomeric, undecyl glycoside  
**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:** ERC01  
**Market sector by type of chemical product:** Not applicable.  
**Article category related to subsequent service life:** Not applicable.

**Environmental contributing scenarios** : **Manufacture of substances - ERC01**

**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**

<b>Amounts used</b>	: Daily amount per site : ≤ 10 t Annual amount per site : ≤ 999 t
<b>Environment factors not influenced by risk management</b>	: Waste water pretreatment: 500 m <sup>3</sup> /d (On-site). Waste water treatment: Municipal STP. BOD5: 5 700 kg/day COD: 11 400 kg/day
<b>Other given operational conditions affecting environmental exposure</b>	: Release fraction to air from process (initial release prior to RMM) : 5 %. Release to soil from process : 0%. Release fraction to wastewater from process (initial release prior to RMM) : 6 %.
<b>Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil</b>	: Process wastewater is treated in a biological onsite wastewater treatment plant. (Efficiency of at least 95 %)
<b>Organisational measures to prevent/limit release from site</b>	: 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**

- : Municipal STP : 20 000 m<sup>3</sup>/day
- Flow rate of receiving surface water (m<sup>3</sup>/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 : 3E-12 %
- Waste water pretreatment: 12.5 %
- 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.  
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<sup>2</sup>

**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 cm<sup>2</sup>

**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 cm<sup>2</sup>

**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 cm<sup>2</sup>

**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

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<b>Other given operational conditions affecting workers exposure</b>	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene. Industrial applications
<b>Area of use:</b>	: Indoor use.
<b>Ventilation control measures</b>	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).
<b>Conditions and measures related to personal protection and hygiene</b>	
<b>Advice on general occupational hygiene</b>	: Exposed skin surface assumed :480 cm <sup>2</sup>
<b>Personal protection</b>	: Hand protection not applicable. Chemical splash goggles or face shield.
<b>Respiratory protection</b>	: None

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

<b>Concentration of substance in mixture or article</b>	: Covers percentage substance in the product up to 100%
<b>Physical state</b>	: Solid
<b>Dust</b>	: Solid, low dustiness
<b>Frequency and duration of use</b>	: Use duration (h/d): <= 8 hours per day
<b>Other given operational conditions affecting workers exposure</b>	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene. Industrial applications
<b>Area of use:</b>	: Indoor use.
<b>Ventilation control measures</b>	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).
<b>Conditions and measures related to personal protection and hygiene</b>	
<b>Advice on general occupational hygiene</b>	: Exposed skin surface assumed :960 cm <sup>2</sup>
<b>Personal protection</b>	: Hand protection not applicable. Chemical splash goggles or face shield.
<b>Respiratory protection</b>	: None

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

<b>Concentration of substance in mixture or article</b>	: Covers percentage substance in the product up to 100%
<b>Physical state</b>	: Solid
<b>Dust</b>	: Solid, low dustiness
<b>Frequency and duration of use</b>	: Use duration (h/d): <= 8 hours per day
<b>Other given operational conditions affecting workers exposure</b>	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene. Industrial applications
<b>Area of use:</b>	: Indoor use.
<b>Ventilation control measures</b>	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).
<b>Conditions and measures related to personal protection and hygiene</b>	
<b>Advice on general occupational hygiene</b>	: Exposed skin surface assumed :960 cm <sup>2</sup>
<b>Personal protection</b>	: Hand protection not applicable. Chemical splash goggles or face shield.
<b>Respiratory protection</b>	: None

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

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

**Conditions and measures related to personal protection and hygiene**

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

**Contributing scenario : Use a laboratory reagent ( Workers: )**

<b>Concentration of substance in mixture or article</b>	: Covers percentage substance in the product up to 100%
<b>Physical state</b>	: Solid
<b>Dust</b>	: Solid, low dustiness
<b>Frequency and duration of use</b>	: Use duration (h/d): <= 8 hours per day
<b>Other given operational conditions affecting workers exposure</b>	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene. Industrial applications
<b>Area of use:</b>	: Indoor use.
<b>Ventilation control measures</b>	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).

**Conditions and measures related to personal protection and hygiene**

<b>Advice on general occupational hygiene</b>	: Exposed skin surface assumed :240 cm <sup>2</sup>
<b>Personal protection</b>	: Hand protection not applicable. Chemical splash goggles or face shield.
<b>Respiratory protection</b>	: None

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

<b>Exposure assessment (human):</b>	: A tier approach is used under Easy-TRA for the RCR calculation. All the use descriptors enumerated above results in safe uses.
<b>Exposure estimation</b>	: 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 : Manufacture of substances - 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**

<b>Environment</b>	: 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.
<b>Health</b>	: 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	: 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

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

<b>Organisational measures to prevent/limit release from site</b>	: 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.
<b>Conditions and measures related to municipal sewage treatment plant</b>	: Municipal STP : 20 000 m <sup>3</sup> /day Flow rate of receiving surface water (m <sup>3</sup> /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.

<b>Contributing scenario : Use in closed process, no likelihood of exposure ( Workers: )</b>	
<b>Concentration of substance in mixture or article</b>	: Covers percentage substance in the product up to 100%
<b>Physical state</b>	: Solid
<b>Dust</b>	: Solid, low dustiness
<b>Frequency and duration of use</b>	: Use duration (h/d): <= 8 hours per day
<b>Other given operational conditions affecting workers exposure</b>	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene.
<b>Area of use:</b>	: Indoor use.
<b>Technical conditions and measures at process level (source) to prevent release</b>	: Use in closed process, no likelihood of exposure
<b>Ventilation control measures</b>	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).
<b>Conditions and measures related to personal protection and hygiene</b>	
<b>Advice on general occupational hygiene</b>	: Exposed skin surface assumed :240 cm <sup>2</sup>
<b>Personal protection</b>	: Hand protection not applicable. Chemical splash goggles or face shield.
<b>Respiratory protection</b>	: None

<b>Contributing scenario : Use in closed, continuous process with occasional controlled exposure ( Workers: )</b>	
<b>Concentration of substance in mixture or article</b>	: Covers percentage substance in the product up to 100%
<b>Physical state</b>	: Solid
<b>Dust</b>	: Solid, low dustiness
<b>Frequency and duration of use</b>	: Use duration (h/d): <= 8 hours per day
<b>Other given operational conditions affecting workers exposure</b>	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene.
<b>Area of use:</b>	: Indoor use.
<b>Technical conditions and measures at process level (source) to prevent release</b>	: 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<sup>2</sup>

**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<sup>2</sup>

**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<sup>2</sup>

**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<sup>2</sup>

**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 cm<sup>2</sup>

**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**

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

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

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

**Conditions and measures related to personal protection and hygiene**

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

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

<b>Concentration of substance in mixture or article</b>	: Covers percentage substance in the product up to 100%
<b>Physical state</b>	: Solid
<b>Dust</b>	: Solid, low dustiness
<b>Frequency and duration of use</b>	: Use duration (h/d): <= 8 hours per day
<b>Other given operational conditions affecting workers exposure</b>	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene.
<b>Area of use:</b>	: Indoor use.
<b>Ventilation control measures</b>	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).

**Conditions and measures related to personal protection and hygiene**

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

**Contributing scenario : Use a laboratory reagent ( Workers: )**

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

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<b>Other given operational conditions affecting workers exposure</b>	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene.
<b>Area of use:</b>	: Indoor use.
<b>Ventilation control measures</b>	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).
<b>Conditions and measures related to personal protection and hygiene</b>	
<b>Advice on general occupational hygiene</b>	: Exposed skin surface assumed :240 cm <sup>2</sup>
<b>Personal protection</b>	: Hand protection not applicable. Chemical splash goggles or face shield.
<b>Respiratory protection</b>	: None

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

<b>Exposure assessment (human):</b>	: A tier approach is used under Easy-TRA for the RCR calculation. All the use descriptors enumerated above results in safe uses.
<b>Exposure estimation</b>	: 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:**

<b>Exposure assessment (environment):</b>	: Used EUSES model.
<b>Exposure estimation</b>	: 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**

<b>Environment</b>	: 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.
<b>Health</b>	: 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

<b>Amounts used</b>	: Daily amount per site : ≤0.5t Annual amount per site : ≤5t
<b>Environment factors not influenced by risk management</b>	: Municipal STP. 2000 m <sup>3</sup> /d (standard town)
<b>Other given operational conditions affecting environmental exposure</b>	: Release to air from process : 0.25 %. Release to soil from process : 0.01%. Release to waste water from process : 0.5 %.
<b>Conditions and measures related to municipal sewage treatment plant</b>	: 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: )**

<b>Concentration of substance in mixture or article</b>	: Covers percentage substance in the product up to 100%
<b>Physical state</b>	: Solid
<b>Dust</b>	: Solid, low dustiness
<b>Frequency and duration of use</b>	: Use duration (h/d): <= 8 hours per day
<b>Other given operational conditions affecting workers exposure</b>	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene.
<b>Area of use:</b>	: Indoor use.
<b>Technical conditions and measures at process level (source) to prevent release</b>	: Use in closed process, no likelihood of exposure
<b>Ventilation control measures</b>	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).
<b>Conditions and measures related to personal protection and hygiene</b>	
<b>Advice on general occupational hygiene</b>	: Exposed skin surface assumed :240 cm <sup>2</sup>
<b>Personal protection</b>	: Hand protection not applicable. Chemical splash goggles or face shield.
<b>Respiratory protection</b>	: None

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

<b>Concentration of substance in mixture or article</b>	: Covers percentage substance in the product up to 100%
<b>Physical state</b>	: Solid
<b>Dust</b>	: Solid, low dustiness
<b>Frequency and duration of use</b>	: Use duration (h/d): <= 8 hours per day
<b>Other given operational conditions affecting workers exposure</b>	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene.
<b>Area of use:</b>	: Indoor use.
<b>Technical conditions and measures at process level (source) to prevent release</b>	: Use in closed, continuous process with occasional controlled exposure
<b>Ventilation control measures</b>	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).
<b>Conditions and measures related to personal protection and hygiene</b>	
<b>Advice on general occupational hygiene</b>	: Exposed skin surface assumed :480 cm <sup>2</sup>
<b>Personal protection</b>	: Hand protection not applicable. Chemical splash goggles or face shield.
<b>Respiratory protection</b>	: None

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

<b>Concentration of substance in mixture or article</b>	: Covers percentage substance in the product up to 100%
<b>Physical state</b>	: Solid
<b>Dust</b>	: Solid, low dustiness
<b>Frequency and duration of use</b>	: Use duration (h/d): <= 8 hours per day
<b>Other given operational conditions affecting workers exposure</b>	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene.
<b>Area of use:</b>	: Indoor use.

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**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<sup>2</sup>

**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<sup>2</sup>

**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<sup>2</sup>

**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 cm<sup>2</sup>

**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<sup>2</sup>

**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**

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

**Contributing scenario : Use a laboratory reagent ( Workers: )**

<b>Concentration of substance in mixture or article</b>	: Covers percentage substance in the product up to 100%
<b>Physical state</b>	: Solid
<b>Dust</b>	: Solid, low dustiness
<b>Frequency and duration of use</b>	: Use duration (h/d): <= 8 hours per day
<b>Other given operational conditions affecting workers exposure</b>	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene.
<b>Area of use:</b>	: Indoor use.
<b>Ventilation control measures</b>	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).

**Conditions and measures related to personal protection and hygiene**

<b>Advice on general occupational hygiene</b>	: Exposed skin surface assumed :240 cm <sup>2</sup>
<b>Personal protection</b>	: Hand protection not applicable. Chemical splash goggles or face shield.
<b>Respiratory protection</b>	: None

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

<b>Exposure assessment (human):</b>	: A tier approach is used under Easy-TRA for the RCR calculation. All the use descriptors enumerated above results in safe uses.
<b>Exposure estimation</b>	: 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:**

<b>Exposure assessment (environment):</b>	: Used EUSES model.
<b>Exposure estimation</b>	: 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**

<b>Environment</b>	: 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.
<b>Health</b>	: 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

<b>Amounts used</b>	: Daily amount per site : ≤0.5 t Annual amount per site : ≤5 t
<b>Environment factors not influenced by risk management</b>	: Waste water treatment: Municipal STP
<b>Other given operational conditions affecting environmental exposure</b>	: Receiving surface water flow :18 000 m <sup>3</sup> /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 %
<b>Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil</b>	: Process wastewater is treated in a biological onsite wastewater treatment plant.
<b>Conditions and measures related to municipal sewage treatment plant</b>	: Municipal STP: ≥ 2000 m <sup>3</sup> /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.

<b>Amounts used</b>	: Daily amount per site : $\leq 0.014$ t Annual amount per site : $\leq 5$ t
<b>Environment factors not influenced by risk management</b>	: Waste water treatment: Municipal STP
<b>Other given operational conditions affecting environmental exposure</b>	: Receiving surface water flow :18 000 m <sup>3</sup> /d Release to waste water from process :3. 357 % Release to air from process :100 % Release to soil from process :5 %
<b>Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil</b>	: Process wastewater is treated in a biological onsite wastewater treatment plant.
<b>Conditions and measures related to municipal sewage treatment plant</b>	: Municipal STP: $\geq 2000$ m <sup>3</sup> /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.

<b>Amounts used</b>	: Daily amount per site : $\leq 0.25$ t Annual amount per site : $\leq 5$ t
<b>Environment factors not influenced by risk management</b>	: Waste water treatment: Municipal STP
<b>Other given operational conditions affecting environmental exposure</b>	: Receiving surface water flow :18 000 m <sup>3</sup> /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 %
<b>Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil</b>	: Process wastewater is treated in a biological onsite wastewater treatment plant.
<b>Conditions and measures related to municipal sewage treatment plant</b>	: Municipal STP: $\geq 2000$ m <sup>3</sup> /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.

<b>Amounts used</b>	: Daily amount per site : $\leq 0.022$ t Annual amount per site : $\leq 5$ t
<b>Environment factors not influenced by risk management</b>	: Waste water treatment: Municipal STP
<b>Other given operational conditions affecting environmental exposure</b>	: Release to waste water from process :0 % Release to air from process :2 % Release to soil from process :0 %
<b>Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil</b>	: Process wastewater is treated in a biological onsite wastewater treatment plant.
<b>Conditions and measures related to municipal sewage treatment plant</b>	: Municipal STP: $\geq 2000$ m <sup>3</sup> /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.

<b>Amounts used</b>	: Daily amount per site : $\leq 0.023$ t Annual amount per site : $\leq 5$ t
<b>Environment factors not influenced by risk management</b>	: Waste water treatment: Municipal STP
<b>Other given operational conditions affecting environmental exposure</b>	: Receiving surface water flow :18 000 m <sup>3</sup> /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 %



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**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:  $\geq 2000 \text{ m}^3/\text{day}$   
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 :  $\leq 0.023 \text{ t}$   
Annual amount per site :  $\leq 5 \text{ t}$

**Environment factors not influenced by risk management** : Waste water treatment: Municipal STP

**Other given operational conditions affecting environmental exposure** : Receiving surface water flow :  $18\,000 \text{ m}^3/\text{d}$   
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:  $\geq 2000 \text{ m}^3/\text{day}$   
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 :  $\leq 0.25 \text{ t}$   
Annual amount per site :  $\leq 5 \text{ t}$

**Environment factors not influenced by risk management** : Waste water treatment: Municipal STP

**Other given operational conditions affecting environmental exposure** : Receiving surface water flow :  $18\,000 \text{ m}^3/\text{d}$   
Release fraction to wastewater from process (initial release prior to RMM) :  $5\text{E}-3 \%$   
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:  $\geq 2000 \text{ m}^3/\text{day}$   
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 :  $\leq 0.25 \text{ t}$   
Annual amount per site :  $\leq 5 \text{ t}$

**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:  $\geq 2000 \text{ m}^3/\text{day}$   
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.

<b>Amounts used</b>	: Daily amount per site : ≤0.25 t Annual amount per site : ≤5 t
<b>Environment factors not influenced by risk management</b>	: Waste water treatment: Municipal STP
<b>Other given operational conditions affecting environmental exposure</b>	: Release to waste water from process :1E-3 % Release to air from process :0.5 % Release to soil from process :0 %
<b>Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil</b>	: Process wastewater is treated in a biological onsite wastewater treatment plant.
<b>Conditions and measures related to municipal sewage treatment plant</b>	: Municipal STP: ≥ 2000 m <sup>3</sup> /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: )**

<b>Concentration of substance in mixture or article</b>	: Covers percentage substance in the product up to 100%
<b>Physical state</b>	: Solid
<b>Dust</b>	: Solid, low dustiness
<b>Frequency and duration of use</b>	: Use duration (h/d):≤ 8 hours per day.
<b>Other given operational conditions affecting workers exposure</b>	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene. Industrial applications
<b>Area of use:</b>	: Indoor use.
<b>Technical conditions and measures at process level (source) to prevent release</b>	: Use in closed process, no likelihood of exposure
<b>Ventilation control measures</b>	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).
<b>Conditions and measures related to personal protection and hygiene</b>	
<b>Advice on general occupational hygiene</b>	: Exposed skin surface assumed :240 cm <sup>2</sup>
<b>Personal protection</b>	: Hand protection not applicable. Chemical splash goggles or face shield.
<b>Respiratory protection</b>	: None

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

<b>Concentration of substance in mixture or article</b>	: Covers percentage substance in the product up to 100%
<b>Physical state</b>	: Solid
<b>Dust</b>	: Solid, low dustiness
<b>Frequency and duration of use</b>	: Use duration (h/d):≤ 8 hours per day.
<b>Other given operational conditions affecting workers exposure</b>	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene. Industrial applications
<b>Area of use:</b>	: Indoor use.
<b>Technical conditions and measures at process level (source) to prevent release</b>	: Use in closed, continuous process with occasional controlled exposure
<b>Ventilation control measures</b>	: 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<sup>2</sup>
- 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 cm<sup>2</sup>
- 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 cm<sup>2</sup>
- 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: )**

<b>Concentration of substance in mixture or article</b>	: Covers percentage substance in the product up to 100%
<b>Physical state</b>	: Solid
<b>Dust</b>	: Solid, low dustiness
<b>Frequency and duration of use</b>	: Use duration (h/d):<= 8 hours per day.
<b>Other given operational conditions affecting workers exposure</b>	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene. Industrial applications
<b>Area of use:</b>	: Indoor use.
<b>Ventilation control measures</b>	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).

**Conditions and measures related to personal protection and hygiene**

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

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

<b>Concentration of substance in mixture or article</b>	: Covers percentage substance in the product up to 100%
<b>Physical state</b>	: Solid
<b>Dust</b>	: Solid, low dustiness
<b>Frequency and duration of use</b>	: Use duration (h/d):<= 8 hours per day.
<b>Other given operational conditions affecting workers exposure</b>	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene. Industrial applications
<b>Area of use:</b>	: Indoor use.
<b>Ventilation control measures</b>	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).

**Conditions and measures related to personal protection and hygiene**

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

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

<b>Concentration of substance in mixture or article</b>	: Covers percentage substance in the product up to 100%
<b>Physical state</b>	: Solid
<b>Dust</b>	: Solid, low dustiness
<b>Frequency and duration of use</b>	: Use duration (h/d):<= 8 hours per day.
<b>Other given operational conditions affecting workers exposure</b>	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene. Industrial applications
<b>Area of use:</b>	: Indoor use.

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**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<sup>2</sup>

**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 cm<sup>2</sup>

**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 cm<sup>2</sup>

**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: )**

<b>Concentration of substance in mixture or article</b>	: Covers percentage substance in the product up to 100%
<b>Physical state</b>	: Solid
<b>Dust</b>	: Solid, low dustiness
<b>Frequency and duration of use</b>	: Use duration (h/d):<= 8 hours per day.
<b>Other given operational conditions affecting workers exposure</b>	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene. Industrial applications
<b>Area of use:</b>	: Indoor use.
<b>Ventilation control measures</b>	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).

**Conditions and measures related to personal protection and hygiene**

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

**Contributing scenario : Use a laboratory reagent ( Workers: )**

<b>Concentration of substance in mixture or article</b>	: Covers percentage substance in the product up to 100%
<b>Physical state</b>	: Solid
<b>Dust</b>	: Solid, low dustiness
<b>Frequency and duration of use</b>	: Use duration (h/d):<= 8 hours per day.
<b>Other given operational conditions affecting workers exposure</b>	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene. Industrial applications
<b>Area of use:</b>	: Indoor use.
<b>Ventilation control measures</b>	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).

**Conditions and measures related to personal protection and hygiene**

<b>Advice on general occupational hygiene</b>	: Exposed skin surface assumed :240 cm <sup>2</sup>
<b>Personal protection</b>	: Hand protection not applicable. Chemical splash goggles or face shield.
<b>Respiratory protection</b>	: None

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

<b>Exposure assessment (human):</b>	: A tier approach is used under Easy-TRA for the RCR calculation. All the use descriptors enumerated above results in safe uses.
<b>Exposure estimation</b>	: 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.

## Identification of the substance or mixture

Product definition : Mixture

## Section 1 - Title

Number of the ES	: 5
For substance	: D-Glucopyranose, oligomeric, undecyl glycoside

**List of use descriptors** : **Identified use name:** Use at industrial sites of D-Glucopyranose, oligomeric, undecyl glycoside - Professional end use  
**Process Category:** PROC01, PROC02, PROC03, PROC04, PROC05, PROC06, PROC08a, PROC08b, PROC09, PROC10, PROC13, PROC14, PROC15, PROC17, PROC19, PROC20  
**Subsequent service life relevant for that use:** No.  
**Environmental Release Category:** ERC08a, ERC08d  
**Market sector by type of chemical product:** PC01, PC02, PC03, PC04, PC09a, PC09b, PC09c, PC12, PC13, PC14, PC15, PC18, PC23, PC25, PC26, PC31, PC34, PC35

**Environmental contributing scenarios** : **SEPPIC Professional end use** - ERC08a, ERC08d

**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  
**Calendering operations** - PROC06  
**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  
**Production of preparations or articles by tableting, compression, extrusion, pelletisation** - PROC14  
**Use a laboratory reagent** - PROC15  
**Lubrication at high energy conditions and in partly open process** - PROC17  
**Hand-mixing with intimate contact and only PPE available** - PROC19  
**Heat and pressure transfer fluids in dispersive use but closed systems** - PROC20

<b>Amounts used</b>	: Daily amount for wide dispersive uses: <= 0.000055 t / days .
<b>Environment factors not influenced by risk management</b>	: Waste water treatment: Municipal STP
<b>Other given operational conditions affecting environmental exposure</b>	: Release fraction to air from process (initial release prior to RMM): 100% Release fraction to wastewater from process (initial release prior to RMM): 100% Release to soil from process: 20%

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

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

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<b>Other given operational conditions affecting workers exposure</b>	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene. Industrial applications
<b>Area of use:</b>	: Indoor use.
<b>Technical conditions and measures at process level (source) to prevent release</b>	: Use in closed process, no likelihood of exposure
<b>Ventilation control measures</b>	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).
<b>Conditions and measures related to personal protection and hygiene</b>	
<b>Advice on general occupational hygiene</b>	: Exposed skin surface assumed :240 cm <sup>2</sup>
<b>Personal protection</b>	: Hand protection not applicable. Chemical splash goggles or face shield.
<b>Respiratory protection</b>	: None

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

<b>Concentration of substance in mixture or article</b>	: Covers percentage substance in the product up to 100%
<b>Physical state</b>	: Solid
<b>Dust</b>	: Solid, low dustiness
<b>Frequency and duration of use</b>	: Use duration (h/d):<= 8 hours per day.
<b>Other given operational conditions affecting workers exposure</b>	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene. Industrial applications
<b>Area of use:</b>	: Indoor use.
<b>Technical conditions and measures at process level (source) to prevent release</b>	: Use in closed, continuous process with occasional controlled exposure
<b>Ventilation control measures</b>	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).
<b>Conditions and measures related to personal protection and hygiene</b>	
<b>Advice on general occupational hygiene</b>	: Exposed skin surface assumed :480 cm <sup>2</sup>
<b>Personal protection</b>	: Hand protection not applicable. Chemical splash goggles or face shield.
<b>Respiratory protection</b>	: None

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

<b>Concentration of substance in mixture or article</b>	: Covers percentage substance in the product up to 100%
<b>Physical state</b>	: Solid
<b>Dust</b>	: Solid, low dustiness
<b>Frequency and duration of use</b>	: Use duration (h/d):<= 8 hours per day.
<b>Other given operational conditions affecting workers exposure</b>	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene. Industrial applications
<b>Area of use:</b>	: Indoor use.
<b>Technical conditions and measures at process level (source) to prevent release</b>	: Use in closed, continuous process with occasional controlled exposure
<b>Ventilation control measures</b>	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).
<b>Conditions and measures related to personal protection and hygiene</b>	

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- Advice on general occupational hygiene** : Exposed skin surface assumed :240 cm<sup>2</sup>
- 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 cm<sup>2</sup>
- 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 cm<sup>2</sup>
- Personal protection** : Hand protection not applicable. Chemical splash goggles or face shield.
- Respiratory protection** : None

**Contributing scenario : Calendering operations ( 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.

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<b>Other given operational conditions affecting workers exposure</b>	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene. Industrial applications
<b>Area of use:</b>	: Indoor use.
<b>Ventilation control measures</b>	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).
<b>Conditions and measures related to personal protection and hygiene</b>	
<b>Advice on general occupational hygiene</b>	: Exposed skin surface assumed :960 cm <sup>2</sup>
<b>Personal protection</b>	: Hand protection not applicable. Chemical splash goggles or face shield.
<b>Respiratory protection</b>	: None

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

<b>Concentration of substance in mixture or article</b>	: Covers percentage substance in the product up to 100%
<b>Physical state</b>	: Solid
<b>Dust</b>	: Solid, low dustiness
<b>Frequency and duration of use</b>	: Use duration (h/d):<= 8 hours per day.
<b>Other given operational conditions affecting workers exposure</b>	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene. Industrial applications
<b>Area of use:</b>	: Indoor use.
<b>Ventilation control measures</b>	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).
<b>Conditions and measures related to personal protection and hygiene</b>	
<b>Advice on general occupational hygiene</b>	: Exposed skin surface assumed :960 cm <sup>2</sup>
<b>Personal protection</b>	: Hand protection not applicable. Chemical splash goggles or face shield.
<b>Respiratory protection</b>	: None

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

<b>Concentration of substance in mixture or article</b>	: Covers percentage substance in the product up to 100%
<b>Physical state</b>	: Solid
<b>Dust</b>	: Solid, low dustiness
<b>Frequency and duration of use</b>	: Use duration (h/d):<= 8 hours per day.
<b>Other given operational conditions affecting workers exposure</b>	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene. Industrial applications
<b>Area of use:</b>	: Indoor use.
<b>Ventilation control measures</b>	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).
<b>Conditions and measures related to personal protection and hygiene</b>	
<b>Advice on general occupational hygiene</b>	: Exposed skin surface assumed :960 cm <sup>2</sup>
<b>Personal protection</b>	: Hand protection not applicable. Chemical splash goggles or face shield.
<b>Respiratory protection</b>	: None

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

<b>Concentration of substance in mixture or article</b>	: Covers percentage substance in the product up to 100%
<b>Physical state</b>	: Solid
<b>Dust</b>	: Solid, low dustiness
<b>Frequency and duration of use</b>	: Use duration (h/d):<= 8 hours per day.
<b>Other given operational conditions affecting workers exposure</b>	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene. Industrial applications
<b>Area of use:</b>	: Indoor use.
<b>Ventilation control measures</b>	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).

**Conditions and measures related to personal protection and hygiene**

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

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

<b>Concentration of substance in mixture or article</b>	: Covers percentage substance in the product up to 100%
<b>Physical state</b>	: Solid
<b>Dust</b>	: Solid, low dustiness
<b>Frequency and duration of use</b>	: Use duration (h/d):<= 8 hours per day.
<b>Other given operational conditions affecting workers exposure</b>	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene. Industrial applications
<b>Area of use:</b>	: Indoor use.
<b>Ventilation control measures</b>	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).

**Conditions and measures related to personal protection and hygiene**

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

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

<b>Concentration of substance in mixture or article</b>	: Covers percentage substance in the product up to 100%
<b>Physical state</b>	: Solid
<b>Dust</b>	: Solid, low dustiness
<b>Frequency and duration of use</b>	: Use duration (h/d):<= 8 hours per day.
<b>Other given operational conditions affecting workers exposure</b>	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene. Industrial applications
<b>Area of use:</b>	: Indoor use.
<b>Ventilation control measures</b>	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).

**Conditions and measures related to personal protection and hygiene**

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

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

<b>Concentration of substance in mixture or article</b>	: Covers percentage substance in the product up to 100%
<b>Physical state</b>	: Solid
<b>Dust</b>	: Solid, low dustiness
<b>Frequency and duration of use</b>	: Use duration (h/d):<= 8 hours per day.
<b>Other given operational conditions affecting workers exposure</b>	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene. Industrial applications
<b>Area of use:</b>	: Indoor use.
<b>Ventilation control measures</b>	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).

**Conditions and measures related to personal protection and hygiene**

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

**Contributing scenario : Use a laboratory reagent ( Workers: )**

<b>Concentration of substance in mixture or article</b>	: Covers percentage substance in the product up to 100%
<b>Physical state</b>	: Solid
<b>Dust</b>	: Solid, low dustiness
<b>Frequency and duration of use</b>	: Use duration (h/d):<= 8 hours per day.
<b>Other given operational conditions affecting workers exposure</b>	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene. Industrial applications
<b>Area of use:</b>	: Indoor use.
<b>Ventilation control measures</b>	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).

**Conditions and measures related to personal protection and hygiene**

<b>Advice on general occupational hygiene</b>	: Exposed skin surface assumed :240 cm <sup>2</sup>
<b>Personal protection</b>	: Hand protection not applicable. Chemical splash goggles or face shield.
<b>Respiratory protection</b>	: None

**Contributing scenario : Lubrication at high energy conditions and in partly open process ( Workers: )**

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



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<b>Other given operational conditions affecting workers exposure</b>	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene. Industrial applications
<b>Area of use:</b>	: Indoor use.
<b>Ventilation control measures</b>	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).
<b>Conditions and measures related to personal protection and hygiene</b>	
<b>Advice on general occupational hygiene</b>	: Exposed skin surface assumed :960 cm <sup>2</sup>
<b>Personal protection</b>	: Hand protection not applicable. Chemical splash goggles or face shield.
<b>Respiratory protection</b>	: None

**Contributing scenario : Hand-mixing with intimate contact and only PPE available ( Workers: )**

<b>Concentration of substance in mixture or article</b>	: Covers percentage substance in the product up to 100%
<b>Physical state</b>	: Solid
<b>Dust</b>	: Solid, low dustiness
<b>Frequency and duration of use</b>	: Use duration (h/d):<= 8 hours per day.
<b>Other given operational conditions affecting workers exposure</b>	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene. Industrial applications
<b>Area of use:</b>	: Indoor use.
<b>Ventilation control measures</b>	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).
<b>Conditions and measures related to personal protection and hygiene</b>	
<b>Advice on general occupational hygiene</b>	: Exposed skin surface assumed :1980 cm <sup>2</sup>
<b>Personal protection</b>	: Hand protection not applicable. Chemical splash goggles or face shield.
<b>Respiratory protection</b>	: None

**Contributing scenario : Heat and pressure transfer fluids in dispersive use but closed systems ( Workers: )**

<b>Concentration of substance in mixture or article</b>	: Covers percentage substance in the product up to 100%
<b>Physical state</b>	: Solid
<b>Dust</b>	: Solid, low dustiness
<b>Frequency and duration of use</b>	: Use duration (h/d):<= 8 hours per day.
<b>Other given operational conditions affecting workers exposure</b>	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Ensure good industrial hygiene. Industrial applications
<b>Area of use:</b>	: Indoor use.
<b>Ventilation control measures</b>	: Provide a basic standard of general ventilation (1 to 3 air changes per hour).
<b>Conditions and measures related to personal protection and hygiene</b>	
<b>Advice on general occupational hygiene</b>	: Exposed skin surface assumed :480 cm <sup>2</sup>
<b>Personal protection</b>	: Hand protection not applicable. Chemical splash goggles or face shield.
<b>Respiratory protection</b>	: 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 : SEPPIC Professional end use - 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	: 6
For substance	: D-Glucopyranose, oligomeric, undecyl glycoside

**List of use descriptors** : **Identified use name:** Widespread use by professional workers of D-Glucopyranose, oligomeric, undecyl glycoside - Professional use as processing aid plant protection  
**Process Category:** PROC08a, PROC08b  
**Sector of end use:** SU01  
**Subsequent service life relevant for that use:** No.  
**Environmental Release Category:** ERC08a, ERC08d  
**Market sector by type of chemical product:** PC27

**Environmental contributing scenarios** : **Wide dispersive outdoor use of processing aids in open systems** - ERC08a, ERC08d

**Health Contributing scenarios** : **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  
**SEPPIC Delivery and dispersion of agrochemical plant protection products** - PROC08a

<b>Product characteristics</b>	: Direct application of plant protection products (e.g. granules or treated seeds) to soil
<b>Concentration of substance in mixture or article</b>	: Limit release rate to soil to : 4.24E-01 kg/ha/ days 1 application per day
<b>Other given operational conditions affecting environmental exposure</b>	: Release to waste water from process :0 % Release to air from process :0 % Release to soil from process :100 %
<b>Conditions and measures related to municipal sewage treatment plant</b>	: Municipal STP : Not applicable.

The transfer of treated seed and granular PPPs which occurs during loading of tractor mounted broadcast spreaders, and the loading of mechanical equipment with solid and liquid PPPs for the treatment of seeds.

<b>Product characteristics</b>	: Liquid, powder, Granular solid.
<b>Concentration of substance in mixture or article</b>	: Covers percentage substance in the product up to 100%
<b>Amounts used</b>	: loading for seed treatment : 10 kg/day , 8 hours per day loading for tractor delivery / dispersal : 400 kg/day, 8 hours per day loading for manual delivery/dispersal : 20 kg/day, 8 hours per day
<b>Area of use:</b>	: Indoor and outdoor use.
<b>Ventilation control measures</b>	: Natural ventilation.
<b>Personal protection</b>	: Wear suitable working clothes.

Transfer of treated seeds from batch treater into bags

<b>Concentration of substance in mixture or article</b>	: Concentration of substance in product : 50 %
<b>Physical state</b>	: Solid
<b>Dust</b>	: Solid, high dustiness
<b>Amounts used</b>	: 10.0 kg/day, 8 hours per day
<b>Area of use:</b>	: Indoor and outdoor use.

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<b>Technical conditions and measures to control dispersion from source towards the worker</b>	: Local exhaust ventilation should be provided. Efficiency of at least 95 %.
<b>Ventilation control measures</b>	: Natural ventilation.
<b>Personal protection</b>	: None.
<b>Respiratory protection</b>	: None
Delivery and dispersion of granular plant protection products or treated seeds by open-cab solid broadcast spreaders, push type rotary spreaders, belly grinders, or by hand.	
<b>Concentration of substance in mixture or article</b>	: Covers percentage substance in the product up to 100%
<b>Amounts used</b>	: Tractor delivery/dispersal : 20.0 kg/ha = 400.0 kg/day ; Area of application : 20 ha ; 8 hours per day . Manual delivery/dispersal : 20.0 kg /ha = 20.0 kg/day ; Area of application : 1 ha ; 8 hours per day .
<b>Area of use:</b>	: Indoor and outdoor use.
<b>Ventilation control measures</b>	: Natural ventilation.
<b>Personal protection</b>	: Wear suitable working clothes.
<b>Respiratory protection</b>	: None

**Section 3 - Exposure estimation and reference to its source**

<b>Contributing scenario : -Exposure estimation and reference to its source -Workers:</b>	
<b>Exposure assessment (human):</b>	: A tier approach is used under Easy-TRA for the RCR calculation. All the use descriptors enumerated above results in safe uses.
<b>Exposure estimation</b>	: 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.

<b>Contributing scenario : Wide dispersive outdoor use of processing aids in open systems - Exposure estimation and reference to its source -Environment:</b>	
<b>Exposure assessment (environment):</b>	: Used EUSES model.
<b>Exposure estimation</b>	: 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**

<b>Environment</b>	: 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.
<b>Health</b>	: 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	: 7
For substance	: D-Glucopyranose, oligomeric, undecyl glycoside

**List of use descriptors** : **Identified use name:** Consumer use - Consumer end use of D-Glucopyranose, oligomeric, undecyl glycoside  
**Subsequent service life relevant for that use:** No.  
**Environmental Release Category:** ERC08a, ERC08b, ERC08d, ERC08e, ERC08f, ERC09a, ERC09b  
**Market sector by type of chemical product:** PC12, PC31, PC35

**Environmental contributing scenarios** : **Wide dispersive use of processing aids in open systems** - ERC08a, ERC08d  
**Wide dispersive use of reactive substance in open systems** - ERC08b, ERC08e  
**Wide dispersive outdoor use resulting in inclusion into or onto a matrix** - ERC08f  
**SEPPIC Wide dispersive use of substances in closed systems** - ERC09a, ERC09b

**Health Contributing scenarios** : **Lawn and garden preparations**  
**Polishes, wax/cream (floor, furniture, shoes)**  
**Laundry and dish-washing products**  
**Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners)**

<b>Amounts used</b>	: Daily amount for wide dispersive uses : $\leq 0.000055$ t / days .
<b>Environment factors not influenced by risk management</b>	: Biological treatment by: STP.
<b>Other given operational conditions affecting environmental exposure</b>	: Release fraction to wastewater from process (initial release prior to RMM) :2 % Release fraction to air from process (initial release prior to RMM) :0.1 % Release to soil from process :1 %
<b>Amounts used</b>	: Daily amount for wide dispersive uses : $\leq 0.000055$ t / days .
<b>Environment factors not influenced by risk management</b>	: Biological treatment by: STP.
<b>Amounts used</b>	: Daily amount for wide dispersive uses : $\leq 0.000055$ t / days .
<b>Environment factors not influenced by risk management</b>	: Biological treatment by: STP.
<b>Other given operational conditions affecting environmental exposure</b>	: Release fraction to wastewater from process (initial release prior to RMM) :1 % Release fraction to air from process (initial release prior to RMM) :15 % Release to soil from process :0.5 %
<b>Amounts used</b>	: Daily amount for wide dispersive uses : $\leq 0.000055$ t / days .
<b>Environment factors not influenced by risk management</b>	: Biological treatment by: STP.
<b>Other given operational conditions affecting environmental exposure</b>	: Release fraction to wastewater from process (initial release prior to RMM) :5 % Release fraction to air from process (initial release prior to RMM) :5 % Release to soil from process :5 %

**Contributing scenario : Lawn and garden preparations ( Workers: )**

Fertilizers

**Concentration of substance in mixture or article** : Concentration of the substance in the mixture: ≤10 %

**Physical state** : Liquid.

**Frequency and duration of use** : Frequency : 1 application per day

**Other given operational conditions affecting workers exposure** : Dermal exposure .  
Exposed skin surface assumed : hands.  
Oral exposure. (0.3 cm<sup>3</sup>)  
Inhalation exposure is considered to be not relevant.

**Contributing scenario : Polishes, wax/cream (floor, furniture, shoes) ( Workers: )**

Polishes and wax blends

**Concentration of substance in mixture or article** : Concentration of substance in product : ≤ 50 %

**Physical state** : Liquid.

**Amounts used** : Amount per use : 550 g/event.

**Frequency and duration of use** : Duration and frequency of use : 4 hour; 1 application per day.

**Other given operational conditions affecting workers exposure** : Dermal exposure.  
Exposed skin surface assumed : hands.  
Oral exposure is considered to be not relevant.  
Inhalation exposure.

**Area of use:** : Indoor.

**Contributing scenario : Laundry and dish-washing products ( Workers: )**

Washing and cleaning products (including solvent based products)

**Concentration of substance in mixture or article** : Concentration of substance in product : ≤ 60 %

**Physical state** : Liquid.

**Amounts used** : Amount per use : 50.0 g/event.

**Frequency and duration of use** : Duration and frequency of use: 1 hour, 1 application per day.

**Other given operational conditions affecting workers exposure** : Dermal exposure.  
Exposed skin surface assumed : hands.  
Oral exposure is considered to be not relevant.  
Inhalation exposure.

**Area of use:** : Indoor

**Contributing scenario : Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners) ( Workers: )**

Washing and cleaning products (including solvent based products)

**Concentration of substance in mixture or article** : Concentration of substance in product : ≤ 50 %

**Physical state** : Liquid.

**Amounts used** : Amount per use : 250 g/event.

**Frequency and duration of use** : Duration and frequency of use : 0.33 hour, 1 application per day.

**Other given operational conditions affecting workers exposure** : Dermal exposure.  
Exposed skin surface assumed : hands.  
Oral exposure is considered to be not relevant.

**Area of use:** : Indoor

### Section 3 - Exposure estimation and reference to its source

<b>Contributing scenario : -Exposure estimation and reference to its source -Workers:</b>	
<b>Exposure assessment (human):</b>	: A tier approach is used under Easy-TRA for the RCR calculation. All the use descriptors enumerated above results in safe uses.
<b>Exposure estimation</b>	: 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.

<b>Contributing scenario : Wide dispersive use of processing aids in open systems - Exposure estimation and reference to its source -Environment:</b>	
<b>Exposure assessment (environment):</b>	: Used EUSES model.
<b>Exposure estimation</b>	: Exposures are low and do not exceed limit values. Risk characterisation ratio (PEC/PNEC): < 1.

<b>Contributing scenario : Wide dispersive use of reactive substance in open systems - Exposure estimation and reference to its source -Environment:</b>	
<b>Exposure assessment (environment):</b>	: Used EUSES model.
<b>Exposure estimation</b>	: Exposures are low and do not exceed limit values. Risk characterisation ratio (PEC/PNEC): < 1.

<b>Contributing scenario : Wide dispersive outdoor use resulting in inclusion into or onto a matrix - Exposure estimation and reference to its source -Environment:</b>	
<b>Exposure assessment (environment):</b>	: Used EUSES model.
<b>Exposure estimation</b>	: Exposures are low and do not exceed limit values. Risk characterisation ratio (PEC/PNEC): < 1.

<b>Contributing scenario : SEPPIC Wide dispersive use of substances in closed systems - Exposure estimation and reference to its source -Environment:</b>	
<b>Exposure assessment (environment):</b>	: Used EUSES model.
<b>Exposure estimation</b>	: 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

<b>Environment</b>	: 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.
<b>Health</b>	: 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

For substance :

**List of use descriptors** : **Identified use name:** Consumer use - Consumer end use of D-Glucopyranose, oligomeric, undecyl glycoside  
**Subsequent service life relevant for that use:** No.  
**Environmental Release Category:** ERC08a, ERC08d  
**Market sector by type of chemical product:** PC27

**Environmental contributing scenarios** : **Wide dispersive use of processing aids in open systems** - ERC08a, ERC08d

**Health Contributing scenarios** : **Plant protection products**

**Product characteristics** : Direct application of plant protection products (e.g. granules or treated seeds) to soil  
**Concentration of substance in mixture or article** : Limit release rate to soil to: 4.24E-01 kg/ha/days  
 1 application per day  
**Other given operational conditions affecting environmental exposure** : Release to waste water from process : 0 %  
 Release to air from process : 0 %  
 Release to soil from process : 0 %

Delivery and dispersion of granular plant protection products or treated seeds by open-cab solid broadcast spreaders, push type rotary spreaders, belly grinders, or by hand.

**Product characteristics** : Granules or treated seeds  
**Concentration of substance in mixture or article** : Covers percentage substance in the product up to 100%  
**Amounts used** : Amount per use : 20.0 kg/ha = 400.0 g/days ; Area of application : 200 m<sup>2</sup>  
 1 application per day  
**Area of use:** : Indoor and outdoor use.  
**Ventilation control measures** : Natural ventilation.