

Safety Data Sheet (SDS)

According to Regulation (EC) No 1907/2006 (REACH), Annex II(COMMISSION REGULATION (EU) No 2015/830)

ELOTANT MILCOSIDE 304

Date of issue: 2010-10-01

Revision date: 2021-05-31

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Trade name/designation : ELOTANT MILCOSIDE 304

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

1.2.1. Relevant identified uses

- Cleaning/washing agents, Surface-active agents

1.2.2. Uses advised against

- Not available

1.3. Details of the supplier of the safety data sheet

Manufacturer/Supplier : LG Household & Health Care Ltd.
 Address : LG Gwanghwamun Building, 58, Saemunan-ro, Jongno-gu, Seoul, Republic of Korea
 Telephone : +82-505-305-7007
 Email : chemicals@lghnh.com

1.4. Emergency telephone number

Telephone number : +49-6196-887-170

EU-wide emergency number : 112

See section 16.6 for the list of telephone number of National Helpdesks in the European Economic Area.

1.5. UFI Code

YQ00-70AS-D004-4QJA

SECTION 2: HAZARD IDENTIFICATION

2.1. Classification of the substance/mixture

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

- Skin corrosion/irritation : Category2, H315
 - Serious eye damage/irritation : Category1, H318

2.2. Label elements

2.2.1. Labelling according to Regulation (EC) No 1272/2008 [CLP]

* Hazard Pictogram(s)



* Signal word : Danger

* Hazard statement(s)

-H315 Causes skin irritation
 -H318 Causes serious eye damage

* Precautionary statement(s)

1) Prevention
 -P264 Wash hands thoroughly after handling.
 -P280 Wear protective gloves/protective clothing/eye protection/face protection.
 2) Response
 -P302+P352 IF ON SKIN: Wash with plenty of soap and water.
 -P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 -P310 Immediately call a POISON CENTER or doctor/physician.
 -P321 Specific treatment
 -P332+P313 If skin irritation occurs: Get medical advice/attention.
 -P362 Take off contaminated clothing and wash before reuse.
 3) Storage

- Not applicable
- 4) Disposal
- Not applicable

2.3. Other hazards

- Not available

SECTION 3: Composition/information on ingredients

3.1. Substances

- Not available

3.2. Mixtures

Name	EC No.	CAS No.	REACH registration No.	% [weight]	Classification [1272/2008/EC]
Water	231-791-2	7732-18-5	-	45~49	Not classified
D-Glucose, decyl octyl ethers, oligomeric	500-220-1	68515-73-1	01-2119488530-36-0003	30.9~36.9	Eye Dam. 1, H318
D-Glucopyranoside, oligomeric, alkyl (C=10-16) glycosides	-	110615-47-9	01-2119489418-23-0002	16.1~22.1	Eye Dam. 1, H318 Skin Irrit. 2, H315

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General notes

- No general information.

Following inhalation

- Take specific treatment if needed.
- When exposed to large amounts of steam and mist, move to fresh air.
- Not available

Following skin contact

- Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- Wash contaminated clothing thoroughly before re-using.
- Go to the hospital immediately if symptoms (flare, irritate) occur.
- Wash thoroughly after handling.

Following eye contact

- Do not rub your eyes.
- Immediately flush eyes with plenty of water for at least 15 minutes and call a doctor/physician.
- Get medical attention immediately.
- Remove contact lenses if worn.

Following ingestion

- Please be advised by doctor whether induction of vomit is demanded or not.
- Rinse your mouth with water immediately.
- Not available

4.2. Most important symptoms and effects, both acute and delayed

- Not available

4.3. Indication of any immediate medical attention and special treatment needed

- Notify medical personnel of contaminated situations and have them take appropriate protective measures.
- Not available

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media

- Dry chemical, carbon dioxide, regular foam extinguishing agent, spray

Unsuitable extinguishing media

- Avoid use of water jet for extinguishing

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products

- Not available

5.3. Advice for firefighters

- Avoid inhalation of materials or combustion by-products.
- Cool containers with water until well after fire is out.
- Do not approach the tank surrounded by fire until it is extinguished.
- In case of conflagration, use automatic fire sprinkler. Major fire may require withdrawal, allowing the object itself to burn.
- Keep unauthorized personnel out.
- Move containers from fire area, if you can do without the risk.
- Notify your local firestation and inform the location of the fire and characteristics hazard.
- Use appropriate extinguishing measure suitable for surrounding fire.
- Wear appropriate protective equipment.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Emergency procedures: Not applicable
- If required, notify relevant authorities according to all applicable regulations.
- Protective equipment: Wear proper protective equipment.

6.1.2. For emergency responders

- Do not direct water at spill or source of leak.
- Do not touch spilled material. Stop leak if you can do it without risk.
- Handle the damaged containers or spilled material after wearing appropriate protective equipment
- Move container to safe area from the leak area.
- Must work against the wind, let the upwind people to evacuate.
- Remove all sources of ignition.
- Ventilate closed spaces before entering.
- Wear proper personal protective apparatus as indicated in Section 8 and avoid skin contact and inhalation.

6.2. Environmental precautions

- Avoid dispersal of spilt material and runoff and contact with waterways, drains and sewers. If large spills, advise emergency services.
- If large amounts have been spilled, inform the relevant authorities.
- Prevent runoff and contact with waterways, drains or sewers.

6.3. Methods and material for containment and cleaning up

6.3.1. For containment

- Clean up all spills immediately.
- Clear area of personnel and move up wind.
- Clear spills immediately
- Control personal contact by using protective equipment.
- Don't use a brush or compressed air for cleaning surfaces or clothing.
- No smoking, flame or ignition sources.
- Prevent, by any means available, spillage from entering drains or water course.
- Stop leak if safe to do so.

6.3.2. For cleaning up

- Appropriate container for disposal of spilled material collected.
- Dike for later disposal.
- Disposal of waste shall be in compliance with the Wastes Control Act
- Large spill : Stay upwind and keep out of low areas. Dike for later disposal.
- Notify the central and local government if the emission reach the standard threshold.
- Small leak: sand or other non-combustible material, please let use absorption.
- Wipe off the solvent.

6.3.3. Other information

- Slippery when spilt.

6.4. Reference to other sections

- See Section 13 for information on disposal.
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Avoid contact with incompatible materials.
- Avoid direct physical contact.
- Comply with all applicable laws and regulations for handling
- Dealing only with a well-ventilated place.
- Do not handle until all safety precautions have been read and understood.
- Do not inhale the steam prolonged or repeated.
- Get the manual before use.
- Operators should wear antistatic footwear and clothing.
- Refer to Engineering controls and personal protective equipment.
- Since emptied containers retain product residue(vapor, liquid, solid) follow all MSDS and label warnings even after container is emptied.
- Wash thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

- Avoid direct sunlight.
- Check regularly for leaks.
- Do not apply any physical shock to container.
- Do not apply direct heat.
- Do not use damaged containers.
- Keep in the original container.
- Keep sealed when not in use.
- No open fire.
- Please pay attention to incompatibilities materials and conditions to avoid.
- Prevent static electricity and keep away from combustible materials or heat sources.
- Save in cool, dry and well ventilated place.
- Store according to current laws and regulations

7.3. Specific end use(s)

- See Section 1 for information on 1.2 Relevant identified uses.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

8.1.1. Occupational exposure limits

European Union (EU) Commission Directive 2006/15/EC (IOELVs)

- Not available

European Union (EU) Commission Directive 2006/15/EC (IOELVs) - Skin

- Not available

Greece Occupational Exposure Limits

- Not available

Netherlands Occupational Exposure Limits

- Not available

Denmark Indicative List of Organic Solvents

- Not available

Denmark List of Limit Values for Dust

- Not available

Latvia Occupational Exposure Limit Values (OELV) for Chemical Substances in the Work Environment AtmbExcel Air &Hydraulics9

- Not available

Latvia Carcinogens and their Occupational Exposure Limit Values (OELV)

- Not available

Bulgaria Occupational Exposure Limits

- Not available

Bulgaria Limit values for the chemical agents in the air at the working environment

- Not available

Sweden Occupational Exposure Limit Values

- Not available

Sweden Occupational Exposure Limit Values and Measures against Air Contaminants

- Not available

Spain Changes Proposed for Occupational Exposure Limit Values

- Not available

Spain Occupational Exposure Limit for Chemical Agents

- Not available

Slovak Republic Highest Admissible Exposure Limits

- Not available

Slovak Republic Highest Admissible Exposure Limits - Solid aerosols predominately with fibrogenic effect

- Not available

Slovak Republic Highest Admissible Exposure Limits - Solid aerosols with possible fibrogenic effect

- Not available

Slovak Republic Highest Admissible Exposure Limits - Solid aerosols predominately with nonspecific effect

- Not available

Ireland Occupational Exposure Limits

- Not available

UK Workplace Exposure Limits (WELs)

- Not available

Austria Technical Exposure Limits (TRK Values)

- Not available

Austria Occupational Exposure Limits - Maximum Workplace Concentrations (MAK)

- Not available

Italy Occupational Exposure Limits

- Not available

Czech Republic Occupational Exposure Limits (PEL and NPK-P)

- Not available

Czech Republic Occupational Exposure Limits - Dusts predominately with fibrogenic effect

- Not available

Czech Republic Occupational Exposure Limits - Dusts with possible fibrogenic effect

- Not available

Czech Republic Occupational Exposure Limits - Dusts predominately with nonspecific effect

- Not available

Czech Republic Occupational Exposure Limits - Dusts predominately with irritating effect

- Not available

Czech Republic Occupational Exposure Limits - Mineral fibrous dusts

- Not available

Poland Workplace Maximum Allowable Concentration - Dust

- Not available

Poland Workplace Maximum Allowable Concentration

- Not available

France Threshold Limit Values for Occupational Exposure - VLE/VME

- Not available

Finland Occupational Exposure Levels - Concentrations Known to be Harmful

- Not available

Hungary Occupational Exposure Limits

- Not available

8.1.2. Recommended Monitoring Procedures

- 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.

8.1.3. DNEL/PNEC - Values

- Not available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

- Business owner is recommended to maintain below recommended exposure limits for the working place with general exhaust of gas/vapour/mist/fume.

8.2.2. Individual protection measures, such as personal protective equipment

Hand protection

- Wear appropriate glove.

Eye protection

- Provide an emergency eye wash station and quick drench shower in the immediate work area.

- Wear primary eye protection such as splash resistant safety goggles with a secondary protection face shield.

Respiratory Protection

- Any air-purifying respirator with a full facepiece and an organic vapor canister.

- Any chemical cartridge respirator with a full facepiece and organic vapor cartridge(s).

- Any chemical cartridge respirator with organic vapor cartridge(s).
- Consider warning properties before use.
- For Unknown Concentration or Immediately Dangerous to Life or Health : Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.
- Respiratory protection is ranked in order from minimum to maximum.
- Under conditions of frequent use or heavy exposure, Respiratory protection may be needed.

Skin protection

- Wear appropriate clothing.

8.2.3. Environmental exposure controls

- Do not let product enter drains. For ecological information refer to section 12.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance(State)	Liquid(Viscous liquid)
Appearance(Color)	Yellowish
Odor	Alcohol odor
Odor threshold	Not available
pH	11 - 12 (10% Sol'n)
Melting point/Freezing point	2°C
Initial boiling point and boiling range	100°C
Flash point	Not available
Evaporation rate	Not available
Flammability(solid, gas)	Non flammable
Upper/Lower Flammability or explosive limits	Not available
Vapour pressure	< 0.01 Pa at 20°C
Solubility	> 200 g/L at 20°C
Vapour density	Not available
Relative density	1.103 at 20°C
Partition coefficient of n-octanol/water	< 1.77
Autoignition temperature	Not available
Decomposition temperature	Not available
Viscosity	500 - 2,500 cps at 20°C
Explosive properties	Not available
Oxidising properties	Not available

9.2. Other information

- Not available

SECTION 10: Stability and reactivity

10.1. Reactivity

- Not available

10.2. Chemical Stability

- This material is stable under recommended storage and handling conditions.

10.3. Possibility of hazardous reactions

- Hazardous Polymerization will not occur.

10.4. Conditions to avoid

- Avoid : Accumulation of electrostatic charges, Heating, Flames and hot surfaces
- Avoid contact with incompatible materials and condition.

10.5. Incompatible materials

- Not available

10.6. Hazardous decomposition products

- May emit flammable vapour if involved in fire.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

(a) Acute toxicity

- Oral

- Product (ATEmix) : >5000mg/kg
- [Water] : LD50 > 90000 mg/kg Rat (KOSHA)
- [D-Glucopyranoside, oligomeric, alkyl (C=10-16) glycosides] : LD50 >5000 mg/kg Rat (GLP, ECHA)
- [D-Glucose, decyl octyl ethers, oligomeric] : LD50 >2000 mg/kg Rat (OECD Guideline 423)

- Dermal

- Product (ATEmix) : 2000mg/kg < ATEmix <= 5000mg/kg
- [D-Glucopyranoside, oligomeric, alkyl (C=10-16) glycosides] : LD50 >2000 mg/kg Rabbit (GLP, ECHA)
- [D-Glucose, decyl octyl ethers, oligomeric] : LD50 >2000 mg/kg Rabbit (equivalent or similar to OECD Guideline 402)

- Inhalation

Product (ATEmix) null Not available
Not available

(b) Skin corrosion/irritation

- Causes skin irritation

(c) Serious eye damage/irritation

- Causes serious eye damage

(d) Respiratory sensitization

- Not available

(e) Skin sensitization

- Not available

(f) Germ cell mutagenicity

- Not available

(g) Carcinogenicity

- IARC

- Not available

- OSHA

- Not available

- ACGIH

- Not available

- NTP

- Not available

- EU CLP

- Not available

(h) Reproductive toxicity

- Not available

(i) Specific target organ toxicity(single exposure):

- Not available

(j) Specific target organ toxicity(repeated exposure):

- Not available

(k) Aspiration hazard

- Not available

SECTION 12: Ecological information

12.1. Toxicity

12.1.1. Fish

- [D-Glucopyranoside, oligomeric, alkyl (C=10-16) glycosides] : LC50 5.9 mg/L(=2.95 mg/l active matter/L) 96 hr Danio rerio (GLP, ECHA)
- [D-Glucose, decyl octyl ethers, oligomeric] : LC50 (96 h): 100.81 mg/L Brachydanio rerio (ISO 7346/1-3), NOEC(28 d): 1.8 mg a.i./L (based on: mortality) Brachydanio rerio (OECD Guideline 204)

12.1.2. Invertebrate

- [D-Glucopyranoside, oligomeric, alkyl (C=10-16) glycosides] : EC50 7 mg/l 48 hr Daphnia magna (GLP, ECHA)
- [D-Glucose, decyl octyl ethers, oligomeric] : EC50 (48 h) >100 mg/L(based on: mobility) Daphnia magna (OECD Guideline 202), NOEC (21 d): 1 mg/L(based on: mobility) Daphnia magna (OECD Guideline 202 Part II)

12.1.3. Algae

- [D-Glucopyranoside, oligomeric, alkyl (C=10-16) glycosides] : EC50 12.5 mg/l 72 hr Desmodesmus subspicatus (GLP, ECHA)
- [D-Glucose, decyl octyl ethers, oligomeric] : EC50 (72 h): 27.22 mg/L (based on: growth rate) Scenedesmus subspicatus (DIN 38412, part 9)

12.2. Persistence and degradability

12.2.1. Persistence

- [Water] : log Kow = -1.38
- [D-Glucopyranoside, oligomeric, alkyl (C=10-16) glycosides] : ≤ 0.07 log Kow (@ 20 °C) (ECHA)

12.2.2. Degradability

- Not available

12.3. Bioaccumulative potential

12.3.1. Bioaccumulation

- [D-Glucose, decyl octyl ethers, oligomeric] : BCF 3.162 (Estimate)

12.3.2. Biodegradability

- [D-Glucopyranoside, oligomeric, alkyl (C=10-16) glycosides] : ≥ 99.4 (%) 28 day (DOC removal)(ECHA)
- [D-Glucose, decyl octyl ethers, oligomeric] : Readily biodegradable (according to the OECD criteria)(ECHA)

12.4. Mobility in soil

- [D-Glucose, decyl octyl ethers, oligomeric] : log Koc: 1.7 at 25 °C

12.5. Results of PBT and vPvB assessment

- [Water] : Not applicable
- [D-Glucopyranoside, oligomeric, alkyl (C=10-16) glycosides] : Not applicable
- [D-Glucose, decyl octyl ethers, oligomeric] : Not applicable

12.6. Endocrine disrupting properties

- Not available

12.7. Other adverse effects

- Not available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

- It shall be treated by incineration
- Oil water separation technology shall be applied as pre-waste treatment if it is applicable
- Stabilization and minimization treatment by incineration or similar method can be applied, if more than two kinds of designated wastes are in mixture state and it is impractical to separate them
- Anyone with business license number who generates industrial wastes shall treat the waste by him/herself or by entrusting to the legal entities who treat the wastes, recycle the wastes of others or install and operate the waste treatment facilities according to the Wastes Control Act
- Dispose of waste in accordance with all applicable laws and regulations.

SECTION 14: Transport information

14.1. UN No.

- Not applicable

14.2. UN proper shipping name

- Not applicable

14.3. Transport hazard class(es)

- Not applicable

14.4. Packing group

- Not applicable

14.5. Environmental hazards

- Not applicable

14.6. Special precautions for user

- Emergency Action Code
- Hazard No.(ADR)
- Local transport follows in accordance with Dangerous goods Safety Management Law.
- Package and transport follow in accordance with Department of Transportation (DOT) and other regulatory agency requirements.
- Tunnel Restriction Code
- EmS FIRE SCHEDULE : Not available
- EmS SPILLAGE SCHEDULE : Not available

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

- Not applicable

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulation / legislation specific for the substance or mixture****15.1.1. Europe regulatory****15.1.1.1. REACH Restricted substance under REACH**

- Not applicable

15.1.1.2. REACH Substances subject to authorization under REACH

- Not applicable

15.1.1.3. REACH SVHC

- Not applicable

15.1.1.4. Europe PBT

- Not applicable

15.1.1.5. European Union (EU) Transport of Dangerous Goods by Road - Dangerous Goods List

- Not applicable

15.2. Chemical Safety Assessment

- Not conducted

SECTION 16: OTHER INFORMATION**16.1. Indication of changes**

- The Safety Data Sheet has been reviewed and the data therein were revised and laid out according to the requirements of the Commission Regulation (EC) No. 453/2010

16.2. Abbreviations and acronyms

- 1272/2008 CLP : Classification, Labelling and Packaging regulation.

- REACH : Registration, Evaluation and authorisation of chemical substances.

- DNEL : Derive no effects level

- PNEC : Predicted no effect concentration

16.3. Key literature references and sources for data

- This Safety Data Sheet was compiled with data and information from the following sources: RTECS, ECOSAR, HSDB, SIDS SIAP, ChemWATCH, CESAR, Chemical DB

16.4. Classification procedure

- The mixture classification has been derived based on the classification of the individual components in accordance with the rules set out in Regulation (EC) No 1272/2008 (CLP) as well as the translation tables in Annex VII to the same regulation.

16.5. Training advice

- Not applicable

16.6. Further information

- The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

- This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only.

- It should not therefore be construed as guaranteeing any specific property of the product.

- Contact National Helpdesks, List of Telephone Numbers :

AUSTRIA (Vienna Wien) +43 1 515 61 0, BELGIUM (Brussels Bruxelles) +32 070 245 245, BULGARIA (Sofia) +359 2 9888 205, Croatia +385 1 2348 342 CZECH REPUBLIC (Prague Praha) +420 224 919 293 or +420 224 915 402, DENMARK (Copenhagen) 82 12 12 12, ESTONIA (Tallinn) 112, FINLAND (Helsinki) +358 9 471 977, FRANCE (Paris) +33 1 45 42 59 59, GERMANY (Berlin) +49 30 19240, GREECE (Athens Athinai) +30 210 77 93 777, HUNGARY (Budapest) +36 80 201 199, ICELAND (Reykjavik) +354 543 2222 or 112, IRELAND (Dublin) +353 1 8379964 or +353 1 809 2166, ITALY (Rome) +39 06 305 4343, LATVIA (Riga) 112 or +371 6704 2473, LITHUANIA (Vilnius) +370 5 236 20 52 or +370 687 53378, Luxembourg +352 70 245 245, MALTA +356 2122 4071, NETHERLANDS (Bilthoven) +31 30 274 88 88, NORWAY (Oslo) 22 591300, POLAND (Gdansk) +48 58301 65 16 or +48 58 349 2831, PORTUGAL (Lisbon Lisboa) 808 250 143, ROMANIA (Bucharest) +40 21 3183606 SLOVAKIA (Bratislava) +421 2 54 77 4166, SLOVENIA (Ljubljana) + 386 41 650 500, SPAIN +34 91 562 04 20 (spanish language) or +34 91 768 98 00 (You can request to be served in English), SWEDEN (Stockholm) 112 or +46 10 456 6700 (mon-fri 9.00-17.00), UNITED KINGDOM (London) 112 or 0845 4647 (NHS Direct).

Annex to extended safety data sheet (eSDS)**Exposure scenario****Exposure Scenario for Industrial distribution of D-glucopyranose, oligomeric, decyl octyl glycoside**

Exposure Scenario (ES) 1:

ES Annex to the e-SDS

Section 1

Title

Exposure scenario Title

Consumer use.

Systematic title based on use descriptor

SU21, SU22
ERC8A
PC39

Processes, tasks, activities covered Consumer use.

SU21 : Private Households(=general Public=consumers)
 SU22 : Public domain (administration, education, entertainment, services, craftsmen)
 ERC8A : Wide dispersive indoor use of processing aid in open systems
 PC39 : Cosmetic, personal care products

Assessment Method

Ecetoc TRA integrated model version 2

Section 2**Operational conditions and risk management measures**

Implementation of basic standards of occupational hygiene;

Avoid direct contact with product;

Wear gloves (tested to EN374) if direct hand contact with the substance is likely; wash off skin contamination immediately;

Wear protective gloves and suitable eye protection at all times when handling the substance

Avoid splashes and spills;

Avoidance of contact with contaminated tools and objects;

Clean up contamination/spills as soon as they occur;

Regular cleaning of equipment and work area;

Ensure suitable management/supervision is in place to check that the RMMs in place are being used correctly and OCs followed;

Train staff on good practice to prevent / minimise exposures and to report any eye problems that may develop;

Adopt good standards of personal hygiene.

Where activities may lead to aerosol release e.g. spraying, then additional skin and eye protection measures such as impervious suits and face shields may be required.

Section 2.1**Control of environmental exposure**

Product characteristic

Physical state

liquid

Concentration of
substance in
product

Up to 50 %

Vapour pressure of substance

Amount

Not applicable

Frequency and duration of
use/exposureFrequency of
exposure (annual)

220 days/year

Environmental factors not
influenced by risk management

River flow rate

18,000 m3/day

Release to: air:

0.02 %

Release to: water:

0.001 %

Release to soil:

0 %

Other given operational
conditions affecting
environmental exposureFraction used at
main source:

100 %

Fraction tonnage to
region:

100 %

Technical conditions and
measures at process level
(source) to prevent release

No specific technical prevention measures required

Organizational measures
related to municipal sewage
treatment plant

Do not release waste water directly into environment

Conditions and measures
related to treatment of waste

Waste incineration with the approval of the responsible local authority

Section 3**Exposure Estimation****Section 3.1****Health**

The quantitative risk characterisation for this worker exposure (long-term systemic effects) has been calculated by EasyTRA.

PROC#	Workers exposure	Exposure concentraion (EC)	DNEL	RCR
PROC3	Inhalation (mg/m3)		2.011	420 0.004787
	Dermal (mg/kg/day)		0.342857	5.95E+05 5.76E-07
	Combined (mg/kg/day)		0.630101	0.004788
PROC9	Inhalation (mg/m3)		2.011	420 0.004787

	Dermal (mg/kg/day)		6.857	5.95E+05	0.000012
	Combined (mg/kg/day)		7.144		0.004799
PROC5	Inhalation (mg/m3)		2.011	420	0.004787
	Dermal (mg/kg/day)		13.714	5.95E+05	2.30E-05
	Combined (mg/kg/day)		14.002		0.00481
PROC15	Inhalation (mg/m3)		2.011	420	0.004787
	Dermal (mg/kg/day)		0.342857	5.95E+05	5.76E-07
	Combined (mg/kg/day)		0.630101		0.004788
PROC8B	Inhalation (mg/m3)		2.011	420	0.004787
	Dermal (mg/kg/day)		6.857	5.95E+05	1.20E-05
	Combined (mg/kg/day)		7.144		0.004799
PROC#	Workers exposure	Exposure concentration (EC)		DNEL	RCR
PROC4	Inhalation (mg/m3)		2.011	420	0.004787
	Dermal (mg/kg/day)		6.857	5.95E+05	1.20E-05
	Combined (mg/kg/day)		7.144		0.004799
PROC2	Inhalation (mg/m3)		2.011	420	0.004787
	Dermal (mg/kg/day)		1.371	5.95E+05	2.30E-06
	Combined (mg/kg/day)		1.659		0.00479
PROC14	Inhalation (mg/m3)		2.011	420	0.004787
	Dermal (mg/kg/day)		3.429	5.95E+05	5.76E-06
	Combined (mg/kg/day)		3.716		0.004793
PROC1	Inhalation (mg/m3)		2.011	420	0.004787
	Dermal (mg/kg/day)		0.342857	5.95E+05	5.76E-07
	Combined (mg/kg/day)		0.371582		0.000479

Section 3.2**Environment**

The quantitative risk characterisation for this environmental exposure has been calculated by EasyTRA.

The environmental exposure calculation per compartment is based on the algorithms of the EU TGD 2003 Risk Assessment Spreadsheet Model 1.24a.

Compartments		PEC		PNEC		RCR
Aquatic	Freshwater (mg/L)			0.000832	0.100	0.008319
	Freshwater sediment (mg/kg)			0.005615	0.487	0.01153
	Marine water (mg/L)			0.000084	0.01	0.008361
	Marine water sediment (mg/kg)			0.000564	0.048	0.011758
Terrestrial	Agricultural soil (mg/kg)			0.000214	0.654	0.000328
	Grassland (mg/kg)			0.000189	0.654	0.000289
STP	Microbiological activity (mg/kg)			0.000403	560	7.20E-07
Secondary poisoning/Humans exposed via the environment	Food source	Exposure concentration (EC)		DNEL		RCR
	Fish (mg/kg)			1.83E-06	35.7	5.14E-08
	Root crop (mg/kg)			4.91E-07	35.7	1.38E-08
	Leaf crop (mg/kg)			0.000018	35.7	5.14E-07

Milk (mg/kg)	7.38E-09	35.7	2.07E-10
Meat (mg/kg)	3.96E-10	35.7	1.11E-11
Drinking water (mg/kg)	0.000023	35.7	6.33E-07
Inhalation (mg/kg)	3.05E-09	35.7	8.54E-11
Total (mg/kg)	1.21E-06	35.7	1.21E-06

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

The workers exposure and environmental emissions have been evaluated using Ecetoc TRA integrated tool version 2.

If the local environmental emission conditions deviate significantly from the used default values, please use the algorithm below to estimate the correct local emissions and RCRs:

$PEC_{corrected} = PEC_{calculated} * (\text{local emission fraction}) * (\text{local WWTP flow rate fraction}) * (\text{local river flow rate fraction}) * (\text{local STP efficiency fraction})$

Example for calculation your local freshwater PEC:

$Corrected\ freshwater\ PEC = 0.104 * (\text{your local emission [kg/day]} / 15) * (2000 / \text{your local WWTP flow rate [m3/day]}) * (18000 / \text{your local river flow rate [m3/day]}) * ((1 - \text{your local WWTP efficiency}) / 0.1)$

Annex to extended safety data sheet (eSDS)

Exposure scenario

Exposure Scenario for Industrial distribution of D-glucopyranose, oligomeric, decyl octyl glycosides

Exposure Scenario (ES) 1:

ES Annex to the e-SDS

Section 1

Exposure scenario Title

Title Formulation of Detergents/Maintenance Products: Granular Detergent

SU3 , SU21, SU22

Systematic title based on use PROC3, PROC9, PROC5, PROC15, PROC8B, PROC4, PROC2

descriptor PROC14, PROC1

ERC2

Processes, tasks, activities covered Industrial:

PROC3: Use in closed batch process (synthesis or formulation)

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

PROC5: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant con-tact)

PROC15: Use as laboratory reagent

PROC8B: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at edicated facilities

PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises

PROC2: Use in closed, continuous process with occasional controlled exposure

PROC14: Production of preparations* or articles by tableting, compression, extrusion, pelletisation

PROC1: Use in closed process, no likelihood of exposure

Assessment Method Ecetoc TRA integrated model version 2

Section 2

Operational conditions and risk management measures

Implementation of basic standards of occupational hygiene;

Avoid direct contact with product;

Wear gloves (tested to EN374) if direct hand contact with the substance is likely; wash off skin contamination immediately;

Wear protective gloves and suitable eye protection at all times when handling the substance

Avoid splashes and spills;

Avoidance of contact with contaminated tools and objects;

Clean up contamination/spills as soon as they occur;

Regular cleaning of equipment and work area;

Ensure suitable management/supervision is in place to check that the RMMs in place are being used correctly and OCs followed;

Train staff on good practice to prevent / minimise exposures and to report any eye problems that may develop;

Adopt good standards of personal hygiene.

Where activities may lead to aerosol release e.g. spraying, then additional skin and eye protection measures such as impervious suits and face shields may be required.

Section 2.1

Control of environmental exposure

Product characteristic	Physical state	liquid
	Concentration of substance in product	Up to 50 %
	Vapour pressure of substance	
Amount	Not applicable	
Frequency and duration of use/exposure	Frequency of exposure (annual)	220 days/year

Environmental factors not influenced by risk management	River flow rate	18,000 m3/day
	Release to air:	0.02 %
	Release to water:	0.001 %
Other given operational conditions affecting environmental exposure	Release to soil:	0 %
	Fraction used at main source:	100 %
	Fraction tonnage to region:	100 %
Technical conditions and measures at process level (source) to prevent release	No specific technical prevention measures required	
Organizational measures related to municipal sewage treatment plant	Do not release waste water directly into environment	
Conditions and measures related to treatment of waste	Waste incineration with the approval of the responsible local authority	

Section 3 Exposure Estimation
Section 3.1 Health

The quantitative risk characterisation for this worker exposure (long-term systemic effects) has been calculated by EasyTRA.

PROC#	Workers exposure	Exposure concentraion (EC)	DNEL	RCR
PROC3	Inhalation (mg/m3)		2.011	420 0.004787
	Dermal (mg/kg/day)		0.342857	5.95E+05 5.76E-07
	Combined (mg/kg/day)		0.630101	0.004788
PROC9	Inhalation (mg/m3)		2.011	420 0.004787
	Dermal (mg/kg/day)		6.857	5.95E+05 0.000012
	Combined (mg/kg/day)		7.144	0.004799
PROC5	Inhalation (mg/m3)		2.011	420 0.004787
	Dermal (mg/kg/day)		13.714	5.95E+05 2.30E-05
	Combined (mg/kg/day)		14.002	0.00481
PROC15	Inhalation (mg/m3)		2.011	420 0.004787
	Dermal (mg/kg/day)		0.342857	5.95E+05 5.76E-07
	Combined (mg/kg/day)		0.630101	0.004788
PROC8B	Inhalation (mg/m3)		2.011	420 0.004787
	Dermal (mg/kg/day)		6.857	5.95E+05 1.20E-05
	Combined (mg/kg/day)		7.144	0.004799
PROC#	Workers exposure	Exposure concentration (EC)	DNEL	RCR
PROC4	Inhalation (mg/m3)		2.011	420 0.004787
	Dermal (mg/kg/day)		6.857	5.95E+05 1.20E-05
	Combined (mg/kg/day)		7.144	0.004799
PROC2	Inhalation (mg/m3)		2.011	420 0.004787
	Dermal (mg/kg/day)		1.371	5.95E+05 2.30E-06
	Combined (mg/kg/day)		1.659	0.00479
PROC14	Inhalation (mg/m3)		2.011	420 0.004787
	Dermal (mg/kg/day)		3.429	5.95E+05 5.76E-06
	Combined (mg/kg/day)		3.716	0.004793

PROC1	Inhalation (mg/m3)	2.011	420	0.004787
	Dermal (mg/kg/day)	0.342857	5.95E+05	5.76E-07
	Combined (mg/kg/day)	0.371582		0.000479

Section 3.2 Environment

The quantitative risk characterisation for this environmental exposure has been calculated by EasyTRA.

The environmental exposure calculation per compartment is based on the algorithms of the EU TGD 2003 Risk Assessment Spreadsheet Model 1.24a.

Compartments		PEC	PNEC	RCR
Aquatic	Freshwater (mg/L)		0.000832	0.100 0.008319
	Freshwater sediment (mg/kg)		0.005615	0.487 0.01153
	Marine water (mg/L)		0.000084	0.01 0.008361
	Marine water sediment (mg/kg)		0.000564	0.048 0.011758
	Terrestrial	Agricultural soil (mg/kg)		0.000214
Grassland (mg/kg)			0.000189	0.654 0.000289
STP	Microbiological activity (mg/kg)		0.000403	560 7.20E-07
Secondary poisoning/Humans exposed via the environment	Food source	Exposure concentration (EC)	DNEL	RCR
	Fish (mg/kg)		1.83E-06	35.7 5.14E-08
	Root crop (mg/kg)		4.91E-07	35.7 1.38E-08
	Leaf crop (mg/kg)		0.000018	35.7 5.14E-07
	Milk (mg/kg)		7.38E-09	35.7 2.07E-10
	Meat (mg/kg)		3.96E-10	35.7 1.11E-11
	Drinking water (mg/kg)		0.000023	35.7 6.33E-07
	Inhalation (mg/kg)		3.05E-09	35.7 8.54E-11
	Total (mg/kg)		1.21E-06	35.7 1.21E-06

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

The workers exposure and environmental emissions have been evaluated using Ectoc TRA integrated tool version 2.

If the local environmental emission conditions deviate significantly from the used default values, please use the algorithm below to estimate the correct local emissions and RCRs:

$PEC_{corrected} = PEC_{calculated} * (\text{local emission fraction}) * (\text{local WWTP flow rate fraction}) * (\text{local river flow rate fraction}) * (\text{local STP efficiency fraction})$

Example for calculation your local freshwater PEC:

$Corrected\ freshwater\ PEC = 0.104 * (\text{your local emission [kg/day]} / 15) * (2000 / \text{your local WWTP flow rate [m3/day]}) * (18000 / \text{your local river flow rate [m3/day]}) * ((1 - \text{your local WWTP efficiency}) / 0.1)$

Annex to extended safety data sheet (eSDS)

Exposure scenario

Exposure Scenario for Industrial distribution of D-glucopyranose, oligomeric, alkyl (C=10-16) glycosides

Exposure Scenario (ES) 1:

ES Annex to the e-SDS

Section 1 Exposure scenario Title

Title Consumer use.

Systematic title based on use descriptor SU21, SU22
ERC8A
PC39

Processes, tasks, activities covered Consumer use.

SU21 : Private Households(=general Public=consumers)
SU22 : Public domain (administration, education, entertainment, services, craftsmen)
ERC8A : Wide dispersive indoor use of processing aid in open systems
PC39 : Cosmetic, personal care products

Assessment Method EasyTRA

Section 2 Operational conditions and risk management measures

Implementation of basic standards of occupational hygiene;
 Avoid direct contact with product;
 Wear gloves (tested to EN374) if direct hand contact with the substance is likely; wash off skin contamination immediately;
 Wear protective gloves and suitable eye protection at all times when handling the substance
 Avoid splashes and spills;
 Avoidance of contact with contaminated tools and objects;
 Clean up contamination/spills as soon as they occur;
 Regular cleaning of equipment and work area;
 Ensure suitable management/supervision is in place to check that the RMMs in place are being used correctly and OCs followed;
 Train staff on good practice to prevent / minimise exposures and to report any eye problems that may develop;
 Adopt good standards of personal hygiene.
 Where activities may lead to aerosol release e.g. spraying, then additional skin and eye protection measures such as impervious suits and face shields may be required.

Section 2.1		Control of environmental exposure	
Product characteristic	Physical state	liquid	
	Concentration of substance in product	Up to 50 %	
Amount	Vapour pressure of substance		
	2500 to per year		
Frequency and duration of use/exposure	Frequency of exposure (annual)	220 times per year	
Environmental factors not influenced by risk management	River flow rate	18000 m3/day	
Other given operational conditions affecting environmental exposure	Release to: air:	0.02 %	
	Release to: water:	0.001 %	
	Release to: soil:	0 %	
	Fraction used at main source:	100 %	
	Fraction tonnage to region:	100 %	
Technical conditions and measures at process level (source) to prevent release	No specific technical prevention measures required		
Organizational measures related to municipal sewage treatment plant	No specific organizational measures required		
Conditions and measures related to treatment of waste	No specific conditions and measures required		

Section 3

Exposure Estimation

Section 3.1

Health

The quantitative risk characterisation for this worker exposure (long-term systemic effects) has been calculated by EasyTRA.

PROC#	Workers exposure	Exposure concentraion (EC)	DNEL	RCR
PROC9	Inhalation (mg/m3)		1.754	420 0.004177
	Dermal (mg/kg/day)		6.857	5.95E+05 0.000012
	Combined (mg/kg/day)		7.108	0.004188
PROC4	Inhalation (mg/m3)		1.754	420 0.004177
	Dermal (mg/kg/day)		6.857	5.95E+05 0.000012
	Combined (mg/kg/day)		7.108	0.004188
PROC3	Inhalation (mg/m3)		1.754	420 0.004177
	Dermal (mg/kg/day)	0.342857	5.95E+05	5.76E-07
	Combined (mg/kg/day)	0.593452		0.004177
PROC5	Inhalation (mg/m3)		1.754	420 0.004177

	Dermal (mg/kg/day)		13.714	5.95E+05	0.000023
	Combined (mg/kg/day)		13.965		0.0042
PROC15	Inhalation (mg/m3)		1.754	420	0.004177
	Dermal (mg/kg/day)		0.342857	5.95E+05	5.76E-07
	Combined (mg/kg/day)		0.593452		0.004177
PROC2	Inhalation (mg/m3)		1.754	420	0.004177
	Dermal (mg/kg/day)		1.371	5.95E+05	2.30E-06
	Combined (mg/kg/day)		1.622		0.004179
PROC#	Workers exposure	Exposure concentration (EC)		DNEL	RCR
PROC8B	Inhalation (mg/m3)		1.754	420	0.004177
	Dermal (mg/kg/day)		6.857	5.95E+05	0.000012
	Combined (mg/kg/day)		7.108		0.004188
PROC14	Inhalation (mg/m3)		1.754	420	0.004177
	Dermal (mg/kg/day)		3.429	5.95E+05	5.76E-06
	Combined (mg/kg/day)		3.679		0.004182
PROC1	Inhalation (mg/m3)		0.175417	420	0.000418
	Dermal (mg/kg/day)		0.342857	5.95E+05	5.76E-07
	Combined (mg/kg/day)		0.367917		0.000418
Section 3.2	Environment				

The quantitative risk characterisation for this environmental exposure has been calculated by EasyTRA.

The environmental exposure calculation per compartment is based on the algorithms of the EU TGD 2003 Risk Assessment Spreadsheet Model 1.24a.

Compartments		PEC		PNEC	RCR
Aquatic	Freshwater (mg/L)			0.001723	0.100 0.01723
	Freshwater sediment (mg/kg)			0.007862	0.487 0.016143
	Marine water (mg/L)			0.000179	0.005 0.035768
	Marine water sediment (mg/kg)			0.000816	0.048 0.017
Terrestrial	Agricultural soil (mg/kg)			0.000249	0.654 0.000381
	Grassland (mg/kg)			0.000245	0.654 0.000375
STP	Microbiological activity (mg/kg)			0.000178	5000 3.56E-08
Secondary poisoning/Humans exposed via the environment	Food source	Exposure concentration (EC)		DNEL	RCR
	Fish (mg/kg)			3.95E-06	35.7 1.11E-07
	Root crop (mg/kg)			1.46E-06	35.7 4.08E-08
	Leaf crop (mg/kg)			0.00002	35.7 5.61E-07
	Milk (mg/kg)			1.10E-08	35.7 3.08E-10
	Meat (mg/kg)			5.90E-10	35.7 1.65E-11
	Drinking water (mg/kg)			0.000049	35.7 1.36E-06
	Inhalation (mg/kg)			3.02E-09	35.7 8.45E-11
	Total (mg/kg)			2.08E-06	35.7 2.08E-06
Section 4	Guidance to DU to evaluate whether he works inside the boundaries set by the ES				

The workers exposure and environmental emissions have been evaluated using Ecetoc TRA integrated tool version 2.

If the local environmental emission conditions deviate significantly from the used default values, please use the algorithm below to estimate the correct local emissions and RCRs:

$PEC_{corrected} = PEC_{calculated} * (\text{local emission fraction}) * (\text{local WWTP flow rate fraction}) * (\text{local river flow rate fraction}) * (\text{local STP efficiency fraction})$

Example for calculation your local freshwater PEC:

$Corrected\ freshwater\ PEC = 0.104 * (\text{your local emission [kg/day]} / 15) * (2000 / \text{your local WWTP flow rate [m}^3\text{/day]}) * (18000 / \text{your local river flow rate [m}^3\text{/day]}) * ((1 - \text{your local WWTP efficiency}) / 0.1)$

Annex to extended safety data sheet (eSDS)

Exposure scenario

Exposure Scenario for Industrial distribution of D-glucopyranose, oligomeric, alkyl (C=10-16) glycosides

Exposure Scenario (ES) 1:

ES Annex to the e-SDS

Section 1

Exposure scenario Title

Title Formulation of Detergents/Maintenance Products: Granular Detergent

SU3 , SU21, SU22

Systematic title based on use descriptor PROC9, PROC4, PROC3, PROC5, PROC15, PROC2, PROC8B, PROC14, PROC1

ERC2

Processes, tasks, activities covered Industrial:

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

Industrial setting

PROC4: Use in batch and other process(synthesis) where opportunity for exposure arises; Industrial setting

PROC3: Use in closed batch process (synthesis or formulation); Industrial setting

PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) Industrial setting

PROC15: Use a laboratory reagent; Non-industrial setting

PROC2: Use in closed, continuous process with occasional controlled exposure (e.g. sampling); Industrial setting

PROC8B: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

PROC14: Production of preparations or articles by tableting, compression, extrusion, pelettisation; Industrial setting

PROC1: Use in closed process, no likelihood of exposure; Industrial setting

Assessment Method

EasyTRA

Section 2

Operational conditions and risk management measures

Implementation of basic standards of occupational hygiene;

Avoid direct contact with product;

Wear gloves (tested to EN374) if direct hand contact with the substance is likely; wash off skin contamination immediately;

Wear protective gloves and suitable eye protection at all times when handling the substance

Avoid splashes and spills;

Avoidance of contact with contaminated tools and objects;

Clean up contamination/spills as soon as they occur;

Regular cleaning of equipment and work area;

Ensure suitable management/supervision is in place to check that the RMMs in place are being used correctly and OCs followed;

Train staff on good practice to prevent / minimise exposures and to report any eye problems that may develop;

Adopt good standards of personal hygiene.

Where activities may lead to aerosol release e.g. spraying, then additional skin and eye protection measures such as impervious suits and face shields may be required.

Section 2.1

Control of environmental exposure

Product characteristic	Physical state	liquid
	Concentration of substance in product	Up to 50 %
	Vapour pressure of substance	
Amount	2500 to per year	
Frequency and duration of use/exposure	Frequency of exposure (annual)	220 times per year
Environmental factors not influenced by risk management	River flow rate	18000 m ³ /day
	Release to air:	0.02 %
	Release to water:	0.001 %
Other given operational	Release to soil:	0 %

conditions affecting environmental exposure	Fraction used at main source:	100 %
	Fraction tonnage to region:	100 %
Technical conditions and measures at process level (source) to prevent release	No specific technical prevention measures required	
Organizational measures related to municipal sewage treatment plant	No specific organizational measures required	
Conditions and measures related to treatment of waste	No specific conditions and measures required	

Section 3 Exposure Estimation

Section 3.1 Health

The quantitative risk characterisation for this worker exposure (long-term systemic effects) has been calculated by EasyTRA.

PROC#	Workers exposure	Exposure concentraion (EC)	DNEL	RCR
PROC9	Inhalation (mg/m3)		1.754	420 0.004177
	Dermal (mg/kg/day)		6.857	5.95E+05 0.000012
	Combined (mg/kg/day)		7.108	0.004188
PROC4	Inhalation (mg/m3)		1.754	420 0.004177
	Dermal (mg/kg/day)		6.857	5.95E+05 0.000012
	Combined (mg/kg/day)		7.108	0.004188
PROC3	Inhalation (mg/m3)		1.754	420 0.004177
	Dermal (mg/kg/day)		0.342857	5.95E+05 5.76E-07
	Combined (mg/kg/day)		0.593452	0.004177
PROC5	Inhalation (mg/m3)		1.754	420 0.004177
	Dermal (mg/kg/day)		13.714	5.95E+05 0.000023
	Combined (mg/kg/day)		13.965	0.0042
PROC15	Inhalation (mg/m3)		1.754	420 0.004177
	Dermal (mg/kg/day)		0.342857	5.95E+05 5.76E-07
	Combined (mg/kg/day)		0.593452	0.004177
PROC2	Inhalation (mg/m3)		1.754	420 0.004177
	Dermal (mg/kg/day)		1.371	5.95E+05 2.30E-06
	Combined (mg/kg/day)		1.622	0.004179
PROC#	Workers exposure	Exposure concentration (EC)	DNEL	RCR
PROC8B	Inhalation (mg/m3)		1.754	420 0.004177
	Dermal (mg/kg/day)		6.857	5.95E+05 0.000012
	Combined (mg/kg/day)		7.108	0.004188
PROC14	Inhalation (mg/m3)		1.754	420 0.004177
	Dermal (mg/kg/day)		3.429	5.95E+05 5.76E-06
	Combined (mg/kg/day)		3.679	0.004182
PROC1	Inhalation (mg/m3)		0.175417	420 0.000418
	Dermal (mg/kg/day)		0.342857	5.95E+05 5.76E-07
	Combined (mg/kg/day)		0.367917	0.000418

Section 3.2 Environment

The quantitative risk characterisation for this environmental exposure has been calculated by EasyTRA.

The environmental exposure calculation per compartment is based on the algorithms of the EU TGD 2003 Risk Assessment Spreadsheet Model 1.24a.

Compartments	PEC	PNEC	RCR
Aquatic	Freshwater (mg/L)	0.001723	0.100 0.01723
	Freshwater sediment (mg/kg)	0.007862	0.487 0.016143
	Marine water (mg/L)	0.000179	0.005 0.035768
	Marine water sediment (mg/kg)	0.000816	0.048 0.017
	Agricultural soil (mg/kg)	0.000249	0.654 0.000381
Terrestrial	Grassland (mg/kg)	0.000245	0.654 0.000375
	Microbiological activity (mg/kg)	0.000178	5000 3.56E-08
Secondary poisoning/Humans exposed via the environment	Exposure concentration (EC)	DNEL	RCR
	Fish (mg/kg)	3.95E-06	35.7 1.11E-07
	Root crop (mg/kg)	1.46E-06	35.7 4.08E-08
	Leaf crop (mg/kg)	0.00002	35.7 5.61E-07
	Milk (mg/kg)	1.10E-08	35.7 3.08E-10
	Meat (mg/kg)	5.90E-10	35.7 1.65E-11
	Drinking water (mg/kg)	0.000049	35.7 1.36E-06
	Inhalation (mg/kg)	3.02E-09	35.7 8.45E-11
	Total (mg/kg)	2.08E-06	35.7 2.08E-06

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

The workers exposure and environmental emissions have been evaluated using Ecectoc TRA integrated tool version 2.

If the local environmental emission conditions deviate significantly from the used default values, please use the algorithm below to estimate the correct local emissions and RCRs:

$PEC_{corrected} = PEC_{calculated} * (\text{local emission fraction}) * (\text{local WWTP flow rate fraction}) * (\text{local river flow rate fraction}) * (\text{local STP efficiency fraction})$

Example for calculation your local freshwater PEC:

Corrected freshwater PEC = 0.104 * (your local emission [kg/day] / 15) * (2000 / your local WWTP flow rate [m³/day]) * (18000 / your local river flow rate [m³/day]) * ((1 - your local WWTP efficiency) / 0.1)