

Kristalin Bio**Section: 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****1.1 Product identifier**

Product name : Kristalin Bio

Product code : 110841E

Use of the Substance/Mixture : Sanitary cleaner

Substance type: : Mixture

For professional users only.

Product dilution information : 10.0 %

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

Identified uses : Sanitary cleaner. Manual process

Recommended restrictions on use : Reserved for industrial and professional use.

1.3 Details of the supplier of the safety data sheet

Company : Ecolab Ltd.
PO Box 11; Winnington Avenue
Northwich, Cheshire, United Kingdom CW8 4DX
+ 44 (0)1606 74488
ccs@ecolab.com

1.4 Emergency telephone number

Emergency telephone number : +441618841235
+32-(0)3-575-5555 Trans-European

Poison Information Centre telephone number : For medical professionals only: 0344 892 0111

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Section: 2. HAZARDS IDENTIFICATION**2.1 Classification of the substance or mixture**

Classification (REGULATION (EC) No 1272/2008)

Product AS SOLD

Eye irritation, Category 2

H319

Product AT USE DILUTION

Kristalin Bio

Not a hazardous substance or mixture.

2.2 Label elements**Labelling (REGULATION (EC) No 1272/2008)****Product AS SOLD**

Hazard pictograms

:



Signal Word

: Warning

Hazard Statements

: H319

Causes serious eye irritation.

Precautionary Statements

: **Prevention:**
P280e

Wear eye protection/face protection.

Product AT USE DILUTION

Not a hazardous substance or mixture.

Additional Labelling:**Product AS SOLD**Special labelling of certain
mixtures: Contains: 1,2-benzisothiazol-3(2H)-one, solvents /additives, Eugenol,
May produce an allergic reaction.**2.3 Other hazards****Product AS SOLD**

None known.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS**3.2 Mixtures****Product AS SOLD****Hazardous components**

Chemical Name	CAS-No. EC-No. REACH No.	Classification REGULATION (EC) No 1272/2008	Concentration : [%]
Alcohols, C6-12, ethoxylated	68439-45-2	Skin irritation Category 2; H315 Serious eye damage Category 1; H318	>= 1 - < 2.5
2-butoxyethanol	111-76-2 203-905-0 01-2119475108-36	Acute toxicity Category 4; H302 Acute toxicity Category 3; H331 Skin irritation Category 2; H315 Eye irritation Category 2; H319	>= 1 - < 2.5
sodium dodecylbenzene sulfonate	25155-30-0 246-680-4 01-2120088038-51	Acute toxicity Category 4; H302 Skin irritation Category 2; H315 Serious eye damage Category 1; H318	>= 1 - < 2.5
solvents /additives	8006-64-2	Flammable liquids Category 3; H226	>= 0.1 - <

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	232-350-7 01-2119502456-45	Acute toxicity Category 4; H302 Acute toxicity Category 4; H332 Acute toxicity Category 4; H312 Skin irritation Category 2; H315 Eye irritation Category 2; H319 Skin sensitization Category 1; H317 Aspiration hazard Category 1; H304 Chronic aquatic toxicity Category 2; H411	0.25
Eugenol	97-53-0 202-589-1 01-2119971802-33	Eye irritation Category 2; H319 Skin sensitization Sub-category 1B; H317	$\geq 0.1 - < 0.25$
1,2-benzisothiazol-3(2H)-one	2634-33-5 220-120-9 01-2120761540-60	Acute toxicity Category 4; H302 Skin irritation Category 2; H315 Serious eye damage Category 1; H318 Skin sensitization Category 1; H317 Acute aquatic toxicity Category 1; H400 Chronic aquatic toxicity Category 1; H410 Skin sensitization Category 1 H317 ≥ 0.05 %	< 0.05

**Product AT USE DILUTION
Hazardous components**

Chemical Name	CAS-No. EC-No. REACH No.	Classification REGULATION (EC) No 1272/2008	Concentration : [%]
Substances with a workplace exposure limit :			
2-butoxyethanol	111-76-2 203-905-0 01-2119475108-36	Acute toxicity Category 4; H302 Acute toxicity Category 3; H331 Skin irritation Category 2; H315 Eye irritation Category 2; H319	$\geq 0.1 - < 0.25$

For the full text of the H-Statements mentioned in this Section, see Section 16.

Section: 4. FIRST AID MEASURES**4.1 Description of first aid measures****Product AS SOLD**

- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention.
- In case of skin contact : Rinse with plenty of water.
- If swallowed : Rinse mouth. Get medical attention if symptoms occur.
- If inhaled : Get medical attention if symptoms occur.

Product AT USE DILUTION

- In case of eye contact : Rinse with plenty of water.
- In case of skin contact : Rinse with plenty of water.
- If swallowed : Rinse mouth. Get medical attention if symptoms occur.

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If inhaled : Get medical attention if symptoms occur.

4.2 Most important symptoms and effects, both acute and delayed

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

4.3 Indication of immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

Section: 5. FIREFIGHTING MEASURES

Product AS SOLD

5.1 Extinguishing media

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : Not flammable or combustible.

Hazardous combustion products : Depending on combustion properties, decomposition products may include following materials:
Carbon oxides
nitrogen oxides (NOx)
Sulphur oxides
Oxides of phosphorus

5.3 Advice for firefighters

Special protective equipment for firefighters : Use personal protective equipment.

Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

Section: 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Product AS SOLD

Advice for non-emergency personnel : Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.

Advice 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.

Product AT USE DILUTION

Advice for non-emergency personnel : Refer to protective measures listed in sections 7 and 8.

Advice for emergency : If specialised clothing is required to deal with the spillage, take

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responders	note of any information in Section 8 on suitable and unsuitable materials.
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6.2 Environmental precautions

Product AS SOLD

Environmental precautions : Do not allow contact with soil, surface or ground water.

Product AT USE DILUTION

Environmental precautions : No special environmental precautions required.

6.3 Methods and materials for containment and cleaning up

Product AS SOLD

Methods for cleaning up : Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Flush away traces with water. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

Product AT USE DILUTION

Methods for cleaning up : Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Flush away traces with water. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

6.4 Reference to other sections

See Section 1 for emergency contact information.
For personal protection see section 8.
See Section 13 for additional waste treatment information.

Section: 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Product AS SOLD

Advice on safe handling : Avoid contact with skin and eyes. Use only with adequate ventilation. Wash hands thoroughly after handling.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling.

Product AT USE DILUTION

Advice on safe handling : Wash hands after handling. For personal protection see section 8.

Hygiene measures : Wash hands before breaks and immediately after handling the product.

7.2 Conditions for safe storage, including any incompatibilities

Product AS SOLD

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Requirements for storage areas and containers : Keep out of reach of children. Keep container tightly closed. Store in suitable labeled containers.

Storage temperature : 5 °C to 45 °C

Product AT USE DILUTION

Requirements for storage areas and containers : Keep out of reach of children. Keep container tightly closed. Store in suitable labeled containers.

7.3 Specific end uses**Product AS SOLD**

Specific use(s) : Sanitary cleaner. Manual process

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1 Control parameters****Product AS SOLD****Occupational Exposure Limits**

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
2-butoxyethanol	111-76-2	TWA	25 ppm 123 mg/m ³	UKCOSSTD
Further information	Sk	Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.		
		STEL	50 ppm 246 mg/m ³	UKCOSSTD
Further information	Sk	Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.		
		TWA	20 ppm 98 mg/m ³	2000/39/EC
Further information	skin	Identifies the possibility of significant uptake through the skin		
		Indicative		
		STEL	50 ppm 246 mg/m ³	2000/39/EC
Further information	skin	Identifies the possibility of significant uptake through the skin		
		Indicative		
solvents /additives	8006-64-2	STEL	150 ppm 850 mg/m ³	UKCOSSTD
		TWA	100 ppm 566 mg/m ³	UKCOSSTD

Biological occupational exposure limits

Substance name	CAS-No.	Control parameters	Sampling time	Basis
2-butoxyethanol	111-76-2	butoxyacetic acid: 240 Millimoles per mole Creatinine (Urine)	After shift	GB EH40 BAT
2-butoxyethanol	:			
2-butoxyethanol	:			

8.2 Exposure controls**Product AS SOLD****Appropriate engineering controls**

Engineering measures : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

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Individual protection measures

- | | | |
|--|---|---|
| Hygiene measures | : | Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. |
| Eye/face protection (EN 166) | : | Safety glasses with side-shields |
| Hand protection (EN 374) | : | No special protective equipment required. |
| Skin and body protection (EN 14605) | : | No special protective equipment required. |
| Respiratory protection (EN 143, 14387) | : | None required if airborne concentrations are maintained below the exposure limit listed in Exposure Limit Information. Use certified respiratory protection equipment meeting EU requirements(89/656/EEC, (EU) 2016/425), or equivalent, when respiratory risks cannot be avoided or sufficiently limited by technical means of collective protection or by measures, methods or procedures of work organization. |

Product AT USE DILUTION

Appropriate engineering controls

- | | | |
|----------------------|---|--|
| Engineering measures | : | Good general ventilation should be sufficient to control worker exposure to airborne contaminants. |
|----------------------|---|--|

Individual protection measures

- | | | |
|--|---|---|
| Hygiene measures | : | Wash hands before breaks and immediately after handling the product. |
| Eye/face protection (EN 166) | : | No special protective equipment required. |
| Hand protection (EN 374) | : | No special protective equipment required. |
| Skin and body protection (EN 14605) | : | No special protective equipment required. |
| Respiratory protection (EN 143, 14387) | : | None required if airborne concentrations are maintained below the exposure limit listed in Exposure Limit Information. Use certified respiratory protection equipment meeting EU requirements(89/656/EEC, (EU) 2016/425), or equivalent, when respiratory risks cannot be avoided or sufficiently limited by technical means of collective protection or by measures, methods or procedures of work organization. |

Environmental exposure controls

- | | | |
|----------------|---|---|
| General advice | : | Consider the provision of containment around storage vessels. |
|----------------|---|---|

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Product AS SOLD

Product AT USE DILUTION

Kristalin Bio

Appearance	: liquid	liquid
Colour	: white	off-white
Odour	: citrus	citrus
pH	: 7.0 - 9.0, 100 %	7.0 - 8.0
Flash point	: Not applicable., Does not sustain combustion.	
Odour Threshold	: Not applicable and/or not determined for the mixture	
Melting point/freezing point	: Not applicable and/or not determined for the mixture	
Initial boiling point and boiling range	: 100 °C	
Evaporation rate	: Not applicable and/or not determined for the mixture	
Flammability (solid, gas)	: Not applicable and/or not determined for the mixture	
Upper explosion limit	: Not applicable and/or not determined for the mixture	
Lower explosion limit	: Not applicable and/or not determined for the mixture	
Vapour pressure	: Not applicable and/or not determined for the mixture	
Relative vapour density	: Not applicable and/or not determined for the mixture	
Relative density	: 1.0 - 1.01	
Water solubility	: soluble	
Solubility in other solvents	: Not applicable and/or not determined for the mixture	
Partition coefficient: n-octanol/water	: Not applicable and/or not determined for the mixture	
Auto-ignition temperature	: Not applicable and/or not determined for the mixture	
Thermal decomposition	: Not applicable and/or not determined for the mixture	
Viscosity, kinematic	: Not applicable and/or not determined for the mixture	
Explosive properties	: Not applicable and/or not determined for the mixture	
Oxidizing properties	: The substance or mixture is not classified as oxidizing.	

9.2 Other information

VOC	: 1.1 %VOC content excluding water 1.1 %VOC content valid only for coating materials used on wood surfaces
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Section: 10. STABILITY AND REACTIVITY**Product AS SOLD****10.1 Reactivity**

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

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No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

None known.

10.5 Incompatible materials

None known.

10.6 Hazardous decomposition products

Depending on combustion properties, decomposition products may include following materials:

Carbon oxides
nitrogen oxides (NO_x)
Sulphur oxides
Oxides of phosphorus

Section: 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Product AS SOLD

Information on likely routes of exposure : Inhalation, Eye contact, Skin contact

Product

Acute oral toxicity	: Acute toxicity estimate : > 2,000 mg/kg
Acute inhalation toxicity	: 4 h Acute toxicity estimate : > 20 mg/l Test atmosphere: vapour
Acute dermal toxicity	: Acute toxicity estimate : > 2,000 mg/kg
Skin corrosion/irritation	: There is no data available for this product.
Serious eye damage/eye irritation	: There is no data available for this product.
Respiratory or skin sensitization	: There is no data available for this product.
Carcinogenicity	: There is no data available for this product.
Reproductive effects	: There is no data available for this product.
Germ cell mutagenicity	: There is no data available for this product.
Teratogenicity	: There is no data available for this product.
STOT - single exposure	: There is no data available for this product.
STOT - repeated exposure	: There is no data available for this product.
Aspiration toxicity	: There is no data available for this product.

Components

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Acute oral toxicity : Alcohols, C6-12, ethoxylated LD50 rat: 7,000 mg/kg
 2-butoxyethanol LD50 rat: 1,500 mg/kg
 sodium dodecylbenzene sulfonate LD50 rat: 1,086 mg/kg
 solvents /additives LD50 rat: 2,090 mg/kg
 Eugenol LD50 rat: > 2,000 mg/kg
 1,2-benzisothiazol-3(2H)-one LD50 rat: 670 mg/kg

Components

Acute inhalation toxicity : solvents /additives 4 h LC50 rat: 13.7 mg/l
 Test atmosphere: vapour

Components

Acute dermal toxicity : Alcohols, C6-12, ethoxylated LD50 rabbit: > 2,000 mg/kg

Potential Health Effects**Product AS SOLD**

Eyes : Causes serious eye irritation.
 Skin : Health injuries are not known or expected under normal use.
 Ingestion : Health injuries are not known or expected under normal use.
 Inhalation : Health injuries are not known or expected under normal use.
 Chronic Exposure : Health injuries are not known or expected under normal use.

Product AT USE DILUTION

Eyes : Health injuries are not known or expected under normal use.
 Skin : Health injuries are not known or expected under normal use.
 Ingestion : Health injuries are not known or expected under normal use.
 Inhalation : Health injuries are not known or expected under normal use.
 Chronic Exposure : Health injuries are not known or expected under normal use.

Experience with human exposure**Product AS SOLD**

Eye contact : Redness, Pain, Irritation
 Skin contact : No symptoms known or expected.
 Ingestion : No symptoms known or expected.
 Inhalation : No symptoms known or expected.

Product AT USE DILUTION

Eye contact : No symptoms known or expected.
 Skin contact : No symptoms known or expected.

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Ingestion : No symptoms known or expected.
Inhalation : No symptoms known or expected.

Section: 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Product AS SOLD

Environmental Effects : This product has no known ecotoxicological effects.

Product AT USE DILUTION

Environmental Effects : This product has no known ecotoxicological effects.

Product AS SOLD

Product

Toxicity to fish : no data available

Toxicity to daphnia and other aquatic invertebrates : no data available

Toxicity to algae : no data available

Components

Toxicity to fish : Alcohols, C6-12, ethoxylated96 h LC50 Fish: 1.5 mg/l
2-butoxyethanol96 h LC50 Fish: > 100 mg/l
sodium dodecylbenzene sulfonate96 h LC50 Fish: 3.2 mg/l
solvents /additives96 h LC50 Fish: 19.9 mg/l
Eugenol96 h LC50 Danio rerio (zebra fish): 13 mg/l
1,2-benzisothiazol-3(2H)-one96 h LC50 Oncorhynchus mykiss (rainbow trout): 2.18 mg/l

Components

Toxicity to daphnia and other aquatic invertebrates : solvents /additives48 h EC50 Daphnia magna (Water flea): 6.4 mg/l
Eugenol48 h EC50 Daphnia magna (Water flea): 1.13 mg/l
1,2-benzisothiazol-3(2H)-one48 h EC50 Daphnia magna (Water flea): 2.94 mg/l

Components

Toxicity to algae : 2-butoxyethanol72 h EC50 Aquatic Plant: 911 mg/l
solvents /additives72 h EC50 Desmodesmus subspicatus (green algae): 17.1 mg/l
Eugenol72 h EC50 Desmodesmus subspicatus (green algae): 24 mg/l
1,2-benzisothiazol-3(2H)-one72 h EC50 Pseudokirchneriella subcapitata (algae): 0.11 mg/l

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12.2 Persistence and degradability

Product

Biodegradability : The surfactants contained in the product are biodegradable according to the requirements of the detergent regulation 648/2004/EC

Components

Biodegradability : Alcohols, C6-12, ethoxylatedResult: Readily biodegradable.
2-butoxyethanolResult: Readily biodegradable.
sodium dodecylbenzene sulfonateResult: Readily biodegradable.
solvents /additivesResult: Readily biodegradable.
EugenolResult: Readily biodegradable.
1,2-benzisothiazol-3(2H)-oneResult: Biodegradable

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

Product

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

no data available

Section: 13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with the European Directives on waste and hazardous waste. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

13.1 Waste treatment methods

Product AS SOLD

Product : Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of contents/container in accordance with local regulations Dispose of wastes in an approved waste disposal facility.

Contaminated packaging : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do

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not re-use empty containers. Dispose of in accordance with local, state, and federal regulations.

Guidance for Waste Code selection : Organic wastes containing dangerous substances. If this product is used in any further processes, the final user must redefine and assign the most appropriate European Waste Catalogue Code. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable European (EU Directive 2008/98/EC) and local regulations.

Product AT USE DILUTION

Product : Diluted product can be flushed to sanitary sewer.

Contaminated packaging : Dispose of in accordance with local, state, and federal regulations.

Section: 14. TRANSPORT INFORMATION**Product AS SOLD**

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (ADR/ADN/RID)

14.1 UN number : Not dangerous goods
 14.2 UN proper shipping name : Not dangerous goods
 14.3 Transport hazard class(es) : Not dangerous goods
 14.4 Packing group : Not dangerous goods
 14.5 Environmental hazards : Not dangerous goods
 14.6 Special precautions for user : Not dangerous goods

Air transport (IATA)

14.1 UN number : Not dangerous goods
 14.2 UN proper shipping name : Not dangerous goods
 14.3 Transport hazard class(es) : Not dangerous goods
 14.4 Packing group : Not dangerous goods
 14.5 Environmental hazards : Not dangerous goods
 14.6 Special precautions for user : Not dangerous goods

Sea transport (IMDG/IMO)

14.1 UN number : Not dangerous goods
 14.2 UN proper shipping name : Not dangerous goods
 14.3 Transport hazard class(es) : Not dangerous goods
 14.4 Packing group : Not dangerous goods

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14.5 Environmental hazards : Not dangerous goods
 14.6 Special precautions for user : Not dangerous goods
 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not dangerous goods

Section: 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

according to Detergents Regulation EC 648/2004 : less than 5 %: Anionic surfactants, Non-ionic surfactants, EDTA and salts thereof
 Other constituents: Perfumes
 Preservation agents: 1,2-benzisothiazol-3(2H)-one
 Allergens: Eugenol

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. : Not applicable.

National Regulations

Take note of Dir 94/33/EC on the protection of young people at work.

Other regulations : The Chemicals (Hazard Information and Packaging for Supply) Regulations.
 The Control of Substances Hazardous to Health Regulations.
 Health and Safety at Work Act.

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out on the product.

Section: 16. OTHER INFORMATION

Procedure used to derive the classification according to REGULATION (EC) No 1272/2008

Classification	Justification
Eye irritation 2, H319	Calculation method

Full text of H-Statements

H226 Flammable liquid and vapour.
 H302 Harmful if swallowed.
 H304 May be fatal if swallowed and enters airways.
 H312 Harmful in contact with skin.
 H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.
 H318 Causes serious eye damage.
 H319 Causes serious eye irritation.
 H331 Toxic if inhaled.
 H332 Harmful if inhaled.
 H400 Very toxic to aquatic life.

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H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.

Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AIIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECL - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Prepared by : Regulatory Affairs

Numbers quoted in the MSDS are given in the format: 1,000,000 = 1 million and 1,000 = 1 thousand. 0.1 = 1 tenth and 0.001 = 1 thousandth

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Annex: Exposure Scenarios

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Exposure Scenario: Sanitary cleaner. Manual process

Life Cycle Stage : Widespread use by professional workers

Product category : **PC35** Washing and cleaning products (including solvent based products)

Contributing scenario controlling environmental exposure for:

Environmental release category : **ERC8a** Wide dispersive indoor use of processing aids in open systems

Daily amount per site : 7.5 kg

Type of Sewage Treatment Plant : Municipal sewage treatment plant

Contributing scenario controlling worker exposure for:

Process category : **PROC10** Roller application or brushing

Exposure duration : 480 min

Operational conditions and risk management measures : Indoor

Local Exhaust Ventilation is not required

General ventilation Ventilation rate per hour 1

Skin Protection : see section 8

Respiratory Protection : see section 8

Contributing scenario controlling worker exposure for:

Process category : **PROC8a** Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities

Exposure duration : 60 min

Operational conditions and risk management measures : Indoor

Local Exhaust Ventilation is not required

General ventilation Ventilation rate per hour 1

Skin Protection : see section 8

Respiratory Protection : see section 8