

**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  
+353 (0)1 276 3500  
ccs@ecolab.com

**1.4 Emergency telephone number**

Emergency telephone number : +353766805288  
+32-(0)3-575-5555 Trans-European  
Poison Information Centre telephone number : For medical professionals only:  
+353 (0)1 837 9964 (8am-10pm)

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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**

Not a hazardous substance or mixture.

**Kristalin Bio****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 4; H332 Acute toxicity Category 4; H312 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	8006-64-2 232-350-7 01-2119502456-45	Flammable liquids Category 3; H226 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	>= 0.1 - < 0.25

**SAFETY DATA SHEET** according to Regulation (EC) No. 1907/2006

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		Aspiration hazard Category 1; H304 Chronic aquatic toxicity Category 2; H411	
Eugenol	97-53-0 202-589-1 01-2119971802-33	Skin corrosion/irritation Category 2; H315 Eye irritation Category 2; H319 Skin sensitization Category 1; H317	>= 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	< 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 4; H332 Acute toxicity Category 4; H312 Skin irritation Category 2; H315 Eye irritation Category 2; H319	>= 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.
- 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**

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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 responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials.

**6.2 Environmental precautions**

**Product AS SOLD**

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

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**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**

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 : Keep out of reach of children. Keep container tightly closed. Store

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areas and containers in suitable labeled containers.

**7.3 Specific end uses**

**Product AS SOLD**

**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	OELV - 8 hrs (TWA)	20 ppm 98 mg/m3	IR_OEL
Further information	Sk	Substances which have the capacity to penetrate intact skin when they come in contact with it, and be absorbed into the body		
	IOEL V	Indicative Occupational Exposure Limit Value		
		OELV - 15 min (STEL)	50 ppm 246 mg/m3	IR_OEL
Further information	Sk	Substances which have the capacity to penetrate intact skin when they come in contact with it, and be absorbed into the body		
	IOEL V	Indicative Occupational Exposure Limit Value		
solvents /additives	8006-64-2	OELV - 8 hrs (TWA)	20 ppm 112 mg/m3	IR_OEL
Further information	Sens	Chemical agents which following exposure may cause sensitisation of the respiratory tract and lead to asthma, rhinitis or extrinsic allergic alveolitis		
		OELV - 15 min (STEL)	150 ppm 840 mg/m3	IR_OEL
Further information	Sens	Chemical agents which following exposure may cause sensitisation of the respiratory tract and lead to asthma, rhinitis or extrinsic allergic alveolitis		

**DNEL**

2-butoxyethanol	:	End Use: Consumers Exposure routes: Ingestion Potential health effects: Long-term systemic effects Value: 3.2 ppm
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**PNEC**

2-butoxyethanol	:	Fresh water Value: 8.8 mg/l  Marine water Value: 0.88 mg/l  Water Value: 9.1 mg/l  Fresh water sediment Value: 8.14 mg/kg  Water Value: 463 mg/l  Soil
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	Value: 2.8 mg/kg
	Value: 20 mg/kg
	Other conditions

**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.

**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

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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**

	<b>Product AS SOLD</b>	<b>Product AT USE DILUTION</b>
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**

Not applicable and/or not determined for the mixture

**Section: 10. STABILITY AND REACTIVITY**



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**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**

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 (NOx)  
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.

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- 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**

- 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
- 1,2-benzisothiazol-3(2H)-one  
LD50 rat: 1,020 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.

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

**Section: 12. ECOLOGICAL INFORMATION**

**Product AS SOLD**

**12.1 Ecotoxicity**

Environmental Effects : This product has no known ecotoxicological effects.

**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, ethoxylated  
96 h LC50 Fish: 1.5 mg/l  
  
2-butoxyethanol  
96 h LC50: 1,474 mg/l  
  
sodium dodecylbenzene sulfonate  
96 h LC50 Fish: 3.2 mg/l  
  
solvents /additives  
96 h LC50 Fish: 19.9 mg/l

**Components**

Toxicity to daphnia and other aquatic invertebrates : 2-butoxyethanol  
48 h EC50: 690 mg/l  
  
solvents /additives  
48 h EC50 Daphnia magna (Water flea): 6.4 mg/l

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Eugenol  
48 h EC50: 1.13 mg/l

**Components**

Toxicity to algae

: 2-butoxyethanol  
72 h EC50: 911 mg/l

solvents /additives  
72 h EC50 *Desmodesmus subspicatus* (green algae): 17.1 mg/l

1,2-benzisothiazol-3(2H)-one  
72 h EC50: 0.15 mg/l

**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, ethoxylated  
Result: Readily biodegradable.

2-butoxyethanol  
Result: Readily biodegradable.

sodium dodecylbenzene sulfonate  
Result: Readily biodegradable.

solvents /additives  
Result: Readily biodegradable.

Eugenol  
Result: Readily biodegradable.

1,2-benzisothiazol-3(2H)-one  
Result: Not applicable - inorganic

**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.

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**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 in compliance 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 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)**

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- 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
- 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

**National Regulations**

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

- Other regulations : Safety, Health and Welfare at Work Act, 2005  
European Communities (Classification, Packaging, Labelling and Notification of Dangerous Preparations) Regulations 1995. (S.I. 272 of 1995) as amended

**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

**Kristalin Bio****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.
H332	Harmful if inhaled.
H400	Very toxic to aquatic life.
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; AICS – Australian Inventory of Chemical Substances; 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; TCSI – Taiwan Chemical Substance 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

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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**

**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 : No  
Respiratory Protection : No

**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 : Indoor



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risk management measures

Local Exhaust Ventilation is not required

General ventilation                      Ventilation rate per hour                      1

Skin Protection                      : Yes: See Section 8

Respiratory Protection                      : No