

**MARKETGUARD 87****Section: 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****1.1 Product identifier**

Product name : MARKETGUARD 87  
UFI : 092T-H9RK-TH0J-MJ8N  
Product code : 115512E  
Use of the Substance/Mixture : Hand Soap  
Substance type: : Mixture

**For professional users only.**

Product dilution information : Product is sold ready to use.

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

Identified uses : Skin disinfectant  
Recommended restrictions on use : Cosmetic

**1.3 Details of the supplier of the safety data sheet**

Company : Ecolab Limited  
Forest Park  
Mullingar Industrial Estate, Mullingar Co. Westmeath Ireland +353  
1 276 3500  
infoireland@ecolab.com  
  
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 : Poisons Information: For information or to report a poisoning incident contact The National Poisons Information Centre (01 8092166)

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**Section: 2. HAZARDS IDENTIFICATION**

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**2.1 Classification of the substance or mixture**


**Classification (REGULATION (EC) No 1272/2008)**

Eye irritation, Category 2 H319  
 Chronic aquatic toxicity, Category 3 H412

The classification of this product is based on toxicological assessment.

**2.2 Label elements**

**Labelling (REGULATION (EC) No 1272/2008)**

Hazard pictograms : 

Signal Word : Warning

Hazard Statements : H319 Causes serious eye irritation.  
 H412 Harmful to aquatic life with long lasting effects.

**2.3 Other hazards**

None known.

**Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS**

**3.2 Mixtures**

**Hazardous components**

Chemical Name	CAS-No. EC-No. REACH No.	Classification REGULATION (EC) No 1272/2008	Concentration : [%]
Didecyl Dimethyl Ammonium Chloride	7173-51-5 230-525-2 01-2119945987-15	Acute toxicity Category 4; H302 Skin corrosion Sub-category 1B; H314 Serious eye damage Category 1; H318 Acute aquatic toxicity Category 1; H400 Chronic aquatic toxicity Category 2; H411  M = 10	>= 0.5 - < 1
Chlorhexidine gluconate	18472-51-0 242-354-0 01-2119946568-22	Serious eye damage Category 1; H318 Acute aquatic toxicity Category 1; H400 Chronic aquatic toxicity Category 1; H410  M = 10 M(Chronic) = 1	>= 0.5 - < 1
1-Propanaminium, 3,3',3''-[phosphinylidynetris (oxy)]tris[N-(3-aminopropyl)-2-hydroxy-N,N-dimethyl-, N,N',N''-tri-C6-18-acyl derivs	83682-78-4 280-518-3 01-2120763938-35	Acute aquatic toxicity Category 1; H400	>= 0.5 - < 1
Amines, C12-14 alkyldimethyl, N-oxides	308062-28-4 01-2119490061-47	Acute toxicity Category 4; H302 Skin irritation Category 2; H315 Serious eye damage Category 1; H318 Acute aquatic toxicity Category 1; H400 Chronic aquatic toxicity Category 2; H411	>= 0.5 - < 1

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		M = 1	
Substances with a workplace exposure limit :			
Propylene glycol	57-55-6 200-338-0 01-2119456809-23	Not Classified;	>= 0.25 - < 0.5
Isopropyl Alcohol	67-63-0 200-661-7 01-2119457558-25	Flammable liquids Category 2; H225 Eye irritation Category 2; H319 Specific target organ toxicity - single exposure Category 3; H336	>= 0.25 - < 0.5

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**

- 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.

**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**

**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

**5.3 Advice for firefighters**

Special protective equipment for firefighters : Use personal protective equipment.

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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**

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.

**6.2 Environmental precautions**

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

**6.3 Methods and materials for containment and cleaning up**

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). 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**

Advice on safe handling : Do not get in eyes.

Hygiene measures : No specific measures identified.

**7.2 Conditions for safe storage, including any incompatibilities**

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

Storage temperature : 0 °C to 40 °C

**7.3 Specific end uses**

Specific use(s) : Skin disinfectant

**Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1 Control parameters**

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**Occupational Exposure Limits**

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Propylene glycol	57-55-6	OELV - 8 hrs (TWA) (particles)	10 mg/m3	IR_OEL
		OELV - 8 hrs (TWA) (total (vapour and particles))	150 ppm 470 mg/m3	IR_OEL
Isopropyl Alcohol	67-63-0	OELV - 8 hrs (TWA)	200 ppm	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		
		OELV - 15 min (STEL)	400 ppm	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		

**DNEL**

Propylene glycol	:	<p>End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 168 mg/m3</p> <p>End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term local effects Value: 10 mg/m3</p> <p>End Use: Consumers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 50 mg/m3</p> <p>End Use: Consumers Exposure routes: Inhalation Potential health effects: Long-term local effects Value: 10 mg/m3</p> <p>End Use: Consumers Exposure routes: Dermal Potential health effects: Long-term systemic effects 213 mg/kg</p> <p>End Use: Consumers Exposure routes: Ingestion Potential health effects: Long-term systemic effects Value: 85 ppm</p>
Isopropyl Alcohol	:	<p>End Use: Workers Exposure routes: Dermal Potential health effects: Long-term systemic effects 888 mg/kg</p> <p>End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 500 mg/m3</p>

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	<p>End Use: Consumers                  Exposure routes: Dermal                  Potential health effects: Long-term systemic effects                  319 mg/kg</p> <p>End Use: Consumers                  Exposure routes: Inhalation                  Potential health effects: Long-term systemic effects                  Value: 89 mg/m<sup>3</sup></p> <p>End Use: Consumers                  Exposure routes: Ingestion                  Potential health effects: Long-term systemic effects                  26 mg/kg</p>
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**PNEC**

<p>Propylene glycol</p>	<p>: Fresh water                  Value: 260 mg/l</p> <p>Marine water                  Value: 26 mg/l</p> <p>Intermittent use/release                  Value: 183 mg/l</p> <p>Fresh water sediment                  Value: 572 mg/kg</p> <p>Marine sediment                  Value: 57.2 mg/kg</p> <p>Sewage treatment plant                  Value: 20000 mg/l</p> <p>Soil                  Value: 50 mg/kg</p>
<p>Isopropyl Alcohol</p>	<p>: Fresh water                  Value: 140.9 mg/l</p> <p>Marine water                  Value: 140.9 mg/l</p> <p>Intermittent use/release                  Value: 140.9 mg/l</p> <p>Fresh water                  Value: 552 mg/kg</p> <p>Marine sediment                  Value: 552 mg/kg</p> <p>Soil                  Value: 28 mg/kg</p> <p>Sewage treatment plant</p>

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	Value: 2251 mg/l
	Oral Value: 160 mg/kg

**8.2 Exposure controls**

**Appropriate engineering controls**

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

**Individual protection measures**

Hygiene measures : No specific measures identified.

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**

Physical state	: liquid
Colour	: clear, colourless
Odour	: slight
pH	: 5.5 - 7.5, 100 %
<b>Particle characteristics</b>	
Assessment	: not applicable
Particle size	: not applicable
Particle Size Distribution	: not applicable
Dustiness	: not applicable
Specific surface area	: not applicable
Surface charge/Zeta potential	: not applicable

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Shape	: not applicable
Crystallinity	: not applicable
Surface treatment /Coatings	: not applicable
Flash point	: Not applicable.
Odour Threshold	: Not applicable and/or not determined for the mixture
Melting point/freezing point	: Not applicable and/or not determined for the mixture
Boiling point, initial boiling point and boiling range	: > 100 °C
Evaporation rate	: Not applicable and/or not determined for the mixture
Flammability	: 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
Density and / or relative density	: 0.99 - 1.01
Water solubility	: Not applicable and/or not determined for the mixture
Solubility in other solvents	: Not applicable and/or not determined for the mixture
Partition coefficient: n-octanol/water (log value)	: 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**

**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**



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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

**Section: 11. TOXICOLOGICAL INFORMATION**

**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

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

**Product**

Acute oral toxicity : There is no data available for this product.

Acute inhalation toxicity : There is no data available for this product.

Acute dermal toxicity : There is no data available for this product.

Skin corrosion/irritation : There is no data available for this product.

Serious eye damage/eye irritation : Irritating to eyes.

Causes serious eye irritation. The classification of this product is based on toxicological assessment.

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**

Acute oral toxicity : Chlorhexidine gluconate LD50 rat: 2,135 mg/kg

Amines, C12-14 alkyldimethyl, N-oxides LD50 rat: 1,064 mg/kg

Propylene glycol LD50 rat: 22,000 mg/kg

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Isopropyl Alcohol LD50 rat: 5,840 mg/kg

**Components**

Acute inhalation toxicity : Chlorhexidine gluconate 4 h LC50 rat: 0.365 mg/l  
Test atmosphere: dust/mist

Propylene glycol 4 h LC50 rabbit: 158.5 mg/l  
Test atmosphere: dust/mist

Isopropyl Alcohol 4 h LC50 rat: > 30 mg/l  
Test atmosphere: vapour

**Components**

Acute dermal toxicity : Didecyl Dimethyl Ammonium Chloride LD50 rabbit: 2,930 mg/kg

Chlorhexidine gluconate LD50 rabbit: > 2,000 mg/kg

Isopropyl Alcohol LD50 rabbit: 12,870 mg/kg

**Potential Health Effects**

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.

**Experience with human exposure**

Eye contact : Redness, Pain, Irritation

Skin contact : No symptoms known or expected.

Ingestion : No symptoms known or expected.

Inhalation : No symptoms known or expected.

**11.2 Information on other hazards**

**Further information** : no data available

**Section: 12. ECOLOGICAL INFORMATION**

**12.1 Toxicity**

Environmental Effects : Harmful to aquatic life with long lasting effects.

**Product**

Toxicity to fish : no data available

Toxicity to daphnia and other aquatic invertebrates : no data available

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Toxicity to algae : no data available

**Components**

Toxicity to fish : Didecyl Dimethyl Ammonium Chloride  
96 h LC50 Fish: > 1 mg/l

Amines, C12-14 alkyldimethyl, N-oxides  
96 h LC50: 2.67 mg/l

Propylene glycol  
96 h LC50 Fish: > 10,000 mg/l

Isopropyl Alcohol  
96 h LC50 Pimephales promelas (fathead minnow): 9,640 mg/l

**Components**

Toxicity to daphnia and other aquatic invertebrates : Didecyl Dimethyl Ammonium Chloride  
48 h EC50 Daphnia magna (Water flea): 0.029 mg/l

Chlorhexidine gluconate  
48 h EC50: 0.06 mg/l

Amines, C12-14 alkyldimethyl, N-oxides  
48 h EC50 Daphnia magna (Water flea): 3.1 mg/l

Propylene glycol  
48 h EC50 Aquatic Invertebrate: 18,340 mg/l

Isopropyl Alcohol  
LC50 Daphnia magna (Water flea): > 10,000 mg/l

**Components**

Toxicity to algae : Didecyl Dimethyl Ammonium Chloride  
72 h EC50 Pseudokirchneriella subcapitata (algae): 0.062 mg/l

Amines, C12-14 alkyldimethyl, N-oxides  
72 h LC50: 0.143 mg/l  
72 h NOEC: 0.067 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 : Didecyl Dimethyl Ammonium Chloride  
Result: Biodegradable

Chlorhexidine gluconate  
Result: Readily biodegradable.

1-Propanaminium, 3,3',3"-[phosphinylidynetris (oxy)]tris[N-(3-aminopropyl) -2-hydroxy-N,N-dimethyl-, N,N',N"-tri-C6-18-acyl derivs  
Result: Biodegradable

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Amines, C12-14 alkyldimethyl, N-oxides  
Result: Readily biodegradable.

Propylene glycol  
Result: Readily biodegradable.

Isopropyl Alcohol  
Result: Readily 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 Endocrine disrupting properties**

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher

**12.7 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 : Do not contaminate storm water drains, natural waterways or soil with chemical or used container. 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 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

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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.

**Section: 14. TRANSPORT INFORMATION**

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 or ID 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 or ID 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 or ID 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 Maritime transport in bulk according to IMO instruments : Not dangerous goods

**Section: 15. REGULATORY INFORMATION**

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

- according to Detergents : less than 5 %: Anionic surfactants, Non-ionic surfactants

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Regulation EC 648/2004                      Contains: Disinfectants

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

Candidate List of Substances   : Not applicable.  
of Very High Concern for  
Authorisation

**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	Based on product data or assessment
Chronic aquatic toxicity 3, H412	Calculation method

**Full text of H-Statements**

H225                      Highly flammable liquid and vapour.  
H302                      Harmful if swallowed.  
H314                      Causes severe skin burns and eye damage.  
H315                      Causes skin irritation.  
H318                      Causes serious eye damage.  
H319                      Causes serious eye irritation.  
H336                      May cause drowsiness or dizziness.  
H400                      Very toxic to aquatic life.  
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; AIIC - 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

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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.