

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

Product name : OLYMPUS ENDODIS  
UFI : 3XVY-X7JD-X00G-9YFH  
Product code : E0420002, WD00343A, WD00345A, WD00346A  
Use of the Substance/Mixture : Instrument Disinfectant  
Substance type: : Mixture

**For professional users only.**

Product dilution information : No dilution information provided.

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

Identified uses : Medical devices . Semi-automatic process  
Recommended restrictions on use : Reserved for industrial and professional use.

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

Company : Olympus KeyMed Ltd  
KeyMed House, Stock Road  
Southend-on-Sea Essex, SS2 5QH, Tel. +44 (0)1702 616333  
  
Manufacturer: Ecolab Deutschland GmbH  
Ecolab-Allee 1  
40789 Monheim am Rhein, Germany +49 (0)2173 599 0  
OfficeService.DEDUS@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)**

Corrosive to metals, Category 1 H290  
Acute toxicity, Category 4 H302

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Skin corrosion, Category 1 H314  
 Serious eye damage, Category 1 H318  
 Specific target organ toxicity - single exposure, Category 3, Respiratory system H335  
 Chronic aquatic toxicity, Category 1 H410

The classification of this product is based on toxicological assessment.

**2.2 Label elements**

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

Hazard pictograms :



Signal Word : Danger

Hazard Statements : H290 May be corrosive to metals.  
 H302 + H332 Harmful if swallowed or if inhaled.  
 H314 Causes severe skin burns and eye damage.  
 H335 May cause respiratory irritation.  
 H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements : **Prevention:**  
 P273 Avoid release to the environment.  
 P280 Wear protective gloves/ eye protection/ face protection.  
**Response:**  
 P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  
 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/doctor.

Hazardous components which must be listed on the label:

Hydrogen peroxide  
 Acetic acid  
 Peracetic acid

**2.3 Other hazards**

Do not mix with bleach or other chlorinated products – will cause chlorine gas.

**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 : [%]
Hydrogen peroxide	7722-84-1	Nota B Oxidizing liquids Category 1; H271	>= 25 - < 30

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	231-765-0 01-2119485845-22	Acute toxicity Category 4; H302 Acute toxicity Category 4; H332 Skin corrosion Category 1A; H314  Serious eye damage/eye irritation Category 1 8 - 100 % Serious eye damage/eye irritation Category 2A 5 - 8 % Oxidizing liquids Category 1 70 - 100 % Oxidizing liquids Category 2 50 - 70 % Skin corrosion/irritation Category 1A 70 - 100 % Skin corrosion/irritation Category 1B 50 - 70 % Skin corrosion/irritation Category 2 35 - 50 % Specific target organ toxicity - single exposure Category 3 H335 35 - 100 %	
Acetic acid	64-19-7 200-580-7 01-2119475328-30	Nota B Flammable liquids Category 3; H226 Skin corrosion Sub-category 1A; H314 Serious eye damage Category 1; H318  Skin corrosion Category 1A H314 >= 90 % Skin corrosion Category 1B H314 25 - < 90 % Skin irritation Category 2 H315 10 - < 25 % Eye irritation Category 2 H319 10 - < 25 %	>= 5 - < 10
Peracetic acid	79-21-0 201-186-8 01-2119531330-56	Flammable liquids Category 3; H226 Organic peroxides Type D; H242 Acute toxicity Category 4; H302 Acute toxicity Category 4; H332 Acute toxicity Category 4; H312 Skin corrosion Category 1A; H314 Acute aquatic toxicity Category 1; H400 Specific target organ toxicity - single exposure Category 3; H335 Chronic aquatic toxicity Category 1; H410  Specific target organ toxicity - single exposure Category 3 H335 >= 1 % M = 1 M(Chronic) = 10	>= 2.5 - < 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 immediately.
- In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes.

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Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

If swallowed : Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.

If inhaled : Remove to fresh air. Treat symptomatically. Get medical attention.

**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 : Special protective equipment for firefighters  
Oxidizer; material is an oxidizer which may readily react with other materials, especially upon heating.

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 : In case of fire, wear a full face positive-pressure self contained breathing apparatus and protective suit.

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains. 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 adequate ventilation. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.

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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. Isolate the waste do not allow it to come into contact with incompatible materials. For small spills contain with sand or vermiculite and dilute the contained product at least 10 times with water. Transfer to an open topped container and remove to a safe place for neutralization\* / disposal. For large spills contain spill and evacuate the area, leave until the reaction subsides, then collect up for disposal. Obtain consent from the local water company / authority if considering discharge to sewer.  
\*NEUTRALIZATION : once diluted, neutralize with a suitable alkali such as sodium bicarbonate.

**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 ingest. Do not get in eyes, on skin, or on clothing. Use only with adequate ventilation. Wash hands thoroughly after handling. Do not breathe spray, vapour. Do not mix with bleach or other chlorinated products – will cause chlorine gas. In case of mechanical malfunction, or if in contact with unknown dilution of product, wear full Personal Protective Equipment (PPE).

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. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

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

Requirements for storage areas and containers : Keep away from strong bases. Absorb spillage to prevent material damage. Keep out of reach of children. Keep container tightly closed. Keep only in original packaging. Store in suitable labeled containers. Pressure bursts may occur due to gas evolution if the container is not adequately vented.

Storage temperature : 0 °C to 25 °C

Packaging material : Suitable material: Plastic material

Unsuitable material: Mild steel, Aluminium

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**7.3 Specific end uses**

Specific use(s) : Medical devices . Semi-automatic process

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

**8.1 Control parameters**

**Occupational Exposure Limits**

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Hydrogen peroxide	7722-84-1	OELV - 15 min (STEL)	2 ppm 3 mg/m3	IR_OEL
		OELV - 8 hrs (TWA)	1 ppm 1.5 mg/m3	IR_OEL
Acetic acid	64-19-7	OELV - 15 min (STEL)	20 ppm 50 mg/m3	IR_OEL
		OELV - 8 hrs (TWA)	10 ppm 25 mg/m3	IR_OEL
		TWA	10 ppm 25 mg/m3	2017/164/EU
Further information		Indicative		
		STEL	20 ppm 50 mg/m3	2017/164/EU
Further information		Indicative		

**DNEL**

Hydrogen peroxide	:	<p>End Use: Workers Exposure routes: Inhalation Potential health effects: Short-term - local Value: 3 mg/m3</p> <p>End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term local effects Value: 1.4 mg/m3</p>
Peracetic acid	:	<p>End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 0.6 mg/m3</p> <p>End Use: Workers Exposure routes: Inhalation Potential health effects: Acute systemic effects Value: 0.6 mg/m3</p> <p>End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term local effects Value: 0.6 mg/m3</p> <p>End Use: Workers Exposure routes: Inhalation Potential health effects: Acute local effects Value: 0.6 mg/m3</p> <p>End Use: Workers</p>

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	<p>Exposure routes: Skin contact                  Potential health effects: Acute local effects                  Value: 0.12</p> <p>End Use: Consumers                  Exposure routes: Inhalation                  Potential health effects: Long-term systemic effects                  Value: 0.6 mg/m3</p> <p>End Use: Consumers                  Exposure routes: Inhalation                  Potential health effects: Acute systemic effects                  Value: 0.6 mg/m3</p> <p>End Use: Consumers                  Exposure routes: Inhalation                  Potential health effects: Long-term local effects                  Value: 0.6 mg/m3</p> <p>End Use: Consumers                  Exposure routes: Inhalation                  Potential health effects: Acute local effects                  Value: 0.3 mg/m3</p>
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**PNEC**

<p>Peracetic acid</p>	<p>: Fresh water                  Value: 0.000224 mg/l</p> <p>Fresh water sediment                  Value: 0.00018 mg/kg</p> <p>Water                  Value: 0.051 mg/l</p> <p>Soil                  Value: 0.32 mg/kg</p>
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**8.2 Exposure controls**

**Appropriate engineering controls**

Engineering measures : Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

**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. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

Eye/face protection (EN 166) : Safety goggles  
 Face-shield

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- Hand protection (EN 374) : Recommended preventive skin protection  
Gloves  
Nitrile rubber  
butyl-rubber  
Breakthrough time: 1 – 4 hours  
Minimum thickness for butyl-rubber 0.7 mm for nitrile rubber 0.4 mm or equivalent (please refer to the gloves manufacturer/distributor for advise).  
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
- Skin and body protection (EN 14605) : Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing including appropriate safety shoes
- Respiratory protection (EN 143, 14387) : When respiratory risks cannot be avoided or sufficiently limited by technical means of collective protection or by measures, methods or procedures of work organization, consider the use of certified respiratory protection equipment meeting EU requirements (89/656/EEC, (EU) 2016/425), or equivalent, with filter type:P

**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**

- Appearance : liquid
- Colour : light yellow
- Odour : vinegar-like
- pH : 1.0, 100 %
- 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 : Not applicable and/or not determined for the mixture
- 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 : 1.12
- Water solubility : soluble
- Solubility in other solvents : Not applicable and/or not determined for the mixture
- Partition coefficient: n- : Not applicable and/or not determined for the mixture



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octanol/water

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 : Yes

**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**

Contamination may result in dangerous pressure increases - closed containers may rupture.

**10.3 Possibility of hazardous reactions**

Do not mix with bleach or other chlorinated products – will cause chlorine gas.

**10.4 Conditions to avoid**

Direct sources of heat.  
Exposure to sunlight.

**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 toxicological effects**

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

**Product**

Acute oral toxicity : Acute toxicity estimate : 1,550 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

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- 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**

- Acute oral toxicity : Hydrogen peroxide LD50 rat: 486 mg/kg  
Acetic acid LD50 rat: 3,310 mg/kg

**Components**

- Acute inhalation toxicity : Hydrogen peroxide 4 h LC50 rat: 11 mg/l  
Test atmosphere: vapour  
Peracetic acid 4 h LC50 rat: 1.5 mg/l  
Test atmosphere: dust/mist

**Components**

- Acute dermal toxicity : Acetic acid LD50 rabbit: 1,060 mg/kg

**Potential Health Effects**

- Eyes : Causes serious eye damage.
- Skin : Causes severe skin burns.
- Ingestion : Causes digestive tract burns.
- Inhalation : May cause respiratory tract irritation. May cause nose, throat, and lung irritation.
- Chronic Exposure : Health injuries are not known or expected under normal use.

**Experience with human exposure**

- Eye contact : Redness, Pain, Corrosion
- Skin contact : Redness, Pain, Corrosion

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Ingestion : Corrosion, Abdominal pain  
Inhalation : Respiratory irritation, Cough

**Section: 12. ECOLOGICAL INFORMATION**

**12.1 Toxicity**

Environmental Effects : Very toxic to aquatic life with long lasting 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 : Acetic acid96 h LC50 Oncorhynchus mykiss (rainbow trout): > 1,000 mg/l  
Peracetic acid96 h LC50: 0.8 mg/l

**Components**

Toxicity to daphnia and other aquatic invertebrates : Acetic acid48 h EC50 Daphnia magna (Water flea): 39.6 mg/l  
Peracetic acid48 h EC50: 0.73 mg/l

**Components**

Toxicity to algae : Hydrogen peroxide72 h EC50: 1.38 mg/l  
Acetic acid72 h EC50 Skeletonema costatum (marine diatom): > 1,000 mg/l  
Peracetic acid72 h EC50: 0.7 mg/l

**12.2 Persistence and degradability**

**Product**

no data available

**Components**

Biodegradability : Hydrogen peroxideResult: Not applicable - inorganic  
Acetic acidResult: Readily biodegradable.  
Peracetic acidResult: Readily biodegradable.

**12.3 Bioaccumulative potential**

no data available

**12.4 Mobility in soil**

no data available

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**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 : The product should not be allowed to enter drains, water courses or the soil. 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 : Inorganic 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.

**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 : 3149
- 14.2 UN proper shipping name : HYDROGEN PEROXIDE AND PEROXYACETIC ACID MIXTURE, STABILIZED
- 14.3 Transport hazard class(es) : 5.1 (8)
- 14.4 Packing group : II
- 14.5 Environmental hazards : Yes
- 14.6 Special precautions for user : None

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**Air transport (IATA)**

- 14.1 UN number : 3149  
14.2 UN proper shipping name : Hydrogen peroxide and peroxyacetic acid mixture stabilized  
14.3 Transport hazard class(es) : 5.1 (8)  
14.4 Packing group : II  
14.5 Environmental hazards : Yes  
  
14.6 Special precautions for user : None

**Sea transport (IMDG/IMO)**

- 14.1 UN number : 3149  
14.2 UN proper shipping name : HYDROGEN PEROXIDE AND PEROXYACETIC ACID MIXTURE, STABILIZED  
14.3 Transport hazard class(es) : 5.1 (8)  
14.4 Packing group : II  
14.5 Environmental hazards : Yes  
  
14.6 Special precautions for user : None  
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not applicable.

**Section: 15. REGULATORY INFORMATION**

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture  
**Regulation (EU) 2019/1148 on the marketing and use of explosives precursors** This product is regulated (containing reportable or/and restricted substances) by Regulation (EU) 2019/1148 (explosives precursors): all suspicious transactions, significant disappearances and thefts should be reported to the relevant national contact point.

Seveso III: Directive : ENVIRONMENTAL HAZARDS E1  
2012/18/EU of the European Parliament and of the Council  
on the control of major-accident hazards involving dangerous substances.  
Lower tier : 100 t  
Upper tier : 200 t

**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**

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

Classification	Justification
Corrosive to metals 1, H290	Based on product data or assessment
Acute toxicity 4, H302	Calculation method
Skin corrosion 1, H314	Based on product data or assessment
Serious eye damage 1, H318	Based on product data or assessment
Specific target organ toxicity - single exposure 3, H335	Calculation method
Chronic aquatic toxicity 1, H410	Calculation method

**Full text of H-Statements**

H226	Flammable liquid and vapour.
H242	Heating may cause a fire.
H271	May cause fire or explosion; strong oxidiser.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H410	Very 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; EC<sub>x</sub> – Concentration associated with x% response; EL<sub>x</sub> – Loading rate associated with x% response; EmS – Emergency Schedule; ENCS – Existing and New Chemical Substances (Japan); ErC<sub>x</sub> – 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; IC<sub>50</sub> – 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; LC<sub>50</sub> – Lethal Concentration to 50 % of a test population; LD<sub>50</sub> – 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

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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**

**Exposure Scenario: Medical devices . Semi-automatic 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 : **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

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**Contributing scenario controlling worker exposure for:**

Process category : **PROC1** Use in closed process, no likelihood of exposure

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