



MURIL

Section: 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product name : MURIL
UFI : AE11-59WD-620K-4S7S
Product code : 114840E
Use of the Substance/Mixture : Heavy duty cleaner
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 : Floor cleaner. Semi-Automatic process
Floor cleaner. Manual process
Floor stripper. Semi-Automatic process
Recommended restrictions : Reserved for industrial and professional use.
on use

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

Poison Information Centre : Poisons Information: For information or to report a poisoning
telephone number : incident contact The National Poisons Information Centre (01
8092166)

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Version : 1.3

Section: 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

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Classification (REGULATION (EC) No 1272/2008)

Corrosive to metals, Category 1	H290
Acute toxicity, Category 4	H332
Skin corrosion, Category 1	H314
Serious eye damage, Category 1	H318
Skin sensitization, Category 1	H317
Specific target organ toxicity - single exposure, Category 3, Respiratory system	H335
Chronic aquatic toxicity, Category 3	H412

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal Word : Danger

Hazard Statements : H290 May be corrosive to metals.
 H314 Causes severe skin burns and eye damage.
 H317 May cause an allergic skin reaction.
 H332 Harmful if inhaled.
 H412 Harmful to aquatic life with long lasting effects.

Supplemental Hazard Statements : EUH071 Corrosive to the respiratory tract.

Precautionary Statements : **Prevention:**
 P261 Avoid breathing vapours.
 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:
 2-butoxyethanol
 monoethanolamine
 potassium hydroxide
 Limonene

2.3 Other hazards

None known.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

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Hazardous components

Chemical Name	CAS-No. EC-No. REACH No.	Classification REGULATION (EC) No 1272/2008	Concentration : [%]
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	>= 10 - < 20
monoethanolamine	141-43-5 205-483-3 01-2119486455-28	Acute toxicity Category 4; H302 Acute toxicity Category 4; H332 Acute toxicity Category 4; H312 Skin corrosion Sub-category 1B; H314 Chronic aquatic toxicity Category 3; H412 Specific target organ toxicity - single exposure Category 3; H335 Specific target organ toxicity - single exposure Category 3 H335 5 - 100 %	>= 5 - < 10
Sodium p-cumenesulphonate	15763-76-5 239-854-6 01-2119489411-37	Eye irritation Category 2; H319	>= 2.5 - < 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	>= 2.5 - < 5
potassium hydroxide	1310-58-3 215-181-3 01-2119487136-33	Acute toxicity Category 4; H302 Skin corrosion Category 1A; H314 Corrosive to metals Category 1; H290 Skin corrosion/irritation Category 1A 5 - 100 % Skin corrosion/irritation Category 1B 2 - < 5 % Skin corrosion/irritation Category 2 0.5 - < 2 % Serious eye damage/eye irritation Category 1 2 - 100 % Serious eye damage/eye irritation Category 2A 0.5 - < 2 %	>= 3 - < 5
Fatty alcohol C10 (iso) ethoxylated	78330-20-8 POLYMER	Acute toxicity Category 4; H302 Serious eye damage Category 1; H318	>= 2.5 - < 3
Limonene	5989-27-5 227-813-5 01-2119529223-47	Nota C Flammable liquids Category 3; H226 Skin irritation Category 2; H315 Skin sensitization Category 1; H317 Acute aquatic toxicity Category 1; H400 Chronic aquatic toxicity Category 1; H410 Aspiration hazard Category 1; H304 M = 1 M(Chronic) = 1	>= 1 - < 2.5
ammonium hydroxide	1336-21-6 215-647-6	Nota B Skin corrosion Category 1B; H314 Acute aquatic toxicity Category 1; H400	>= 0.25 - < 0.5

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	01-2119982985-14	Specific target organ toxicity - single exposure Category 3 H335 >= 5 %	
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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. 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. If conscious, give 2 glasses of water. 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 : Fire Hazard
Keep away from heat and sources of ignition.
Flash back possible over considerable distance.
Beware of vapours accumulating to form explosive concentrations.
Vapours can accumulate in low areas.
- Hazardous combustion products : Depending on combustion properties, decomposition products may include following materials:
Carbon oxides
nitrogen oxides (NOx)
Sulphur oxides
metal oxides

5.3 Advice for firefighters

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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

Advice for non-emergency personnel : Ensure adequate ventilation. Remove all sources of ignition. 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.

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 : Eliminate all ignition sources if safe to do so. 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

Advice on safe handling : Do not ingest. Do not get in eyes, on skin, or on clothing. Use only with adequate ventilation. Keep away from fire, sparks and heated surfaces. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Wash hands thoroughly after handling. Do not breathe spray, vapour. 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

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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 heat and sources of ignition. Do not store near acids. Keep away from oxidizing agents. 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.

Storage temperature : 0 °C to 35 °C

Packaging material : Suitable material: Plastic material

Unsuitable material: Mild steel, Aluminium

7.3 Specific end uses

Specific use(s) : Floor cleaner. Semi-Automatic process
 Floor cleaner. Manual process
 Floor stripper. 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
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		
		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		
		TWA	20 ppm 98 mg/m3	2000/39/EC
Further information	skin	Identifies the possibility of significant uptake through the skin		
		Indicative		
		STEL	50 ppm 246 mg/m3	2000/39/EC
Further information	skin	Identifies the possibility of significant uptake through the skin		
		Indicative		
monoethanolamine	141-43-5	OELV - 15 min (STEL)	3 ppm 7.6 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		
		OELV - 8 hrs (TWA)	1 ppm 2.5 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		
		TWA	1 ppm 2.5 mg/m3	2006/15/EC
Further information		Indicative		
	skin	Identifies the possibility of significant uptake through the skin		
		STEL	3 ppm 7.6 mg/m3	2006/15/EC

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

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Further information		Indicative		
	skin	Identifies the possibility of significant uptake through the skin		
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		
potassium hydroxide	1310-58-3	OELV - 15 min (STEL)	2 mg/m3	IR_OEL
ammonium hydroxide	1336-21-6	OELV - 8 hrs (TWA)	20 ppm 14 mg/m3	IR_OEL
Further information	IOEL V	Indicative Occupational Exposure Limit Value		
		OELV - 15 min (STEL)	50 ppm 36 mg/m3	IR_OEL
Further information	IOEL V	Indicative Occupational Exposure Limit Value		

DNEL

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> <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/m3</p> <p>End Use: Consumers Exposure routes: Ingestion Potential health effects: Long-term systemic effects 26 mg/kg</p>
potassium hydroxide	:	<p>End Use: Workers Exposure routes: Inhalation Value: 1 mg/m3</p> <p>End Use: Consumers Exposure routes: Inhalation Value: 1 mg/m3</p>

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Isopropyl Alcohol	:	Fresh water Value: 140.9 mg/l
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	Marine water Value: 140.9 mg/l Intermittent use/release Value: 140.9 mg/l Fresh water Value: 552 mg/kg Marine sediment Value: 552 mg/kg Soil Value: 28 mg/kg Sewage treatment plant Value: 2251 mg/l Oral Value: 160 mg/kg
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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

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

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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:AK

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	: green
Odour	: ammoniacal
pH	: 13.3 - 13.9, 100 %
Particle characteristics	
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
Shape	: not applicable
Crystallinity	: not applicable
Surface treatment /Coatings	: not applicable
Flash point	: 41 °C closed cup, 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
Boiling point, 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	: 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	: 1.031 - 1.041
Water solubility	: soluble
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

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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

Heat, flames and sparks.

10.5 Incompatible materials

Acids

Mild steel
Aluminium

10.6 Hazardous decomposition products

Depending on combustion properties, decomposition products may include following materials:
Carbon oxides
nitrogen oxides (NOx)
Sulphur oxides
metal 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 : Acute toxicity estimate : > 2,000 mg/kg

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Acute inhalation toxicity	: 4 h Acute toxicity estimate : 2.86 mg/l Test atmosphere: dust/mist
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

Acute oral toxicity	: 2-butoxyethanol LD50 rat: 1,500 mg/kg monoethanolamine LD50 rat: 1,089 mg/kg Sodium p-cumenesulphonate LD50 rat: > 7,000 mg/kg Isopropyl Alcohol LD50 rat: 5,840 mg/kg potassium hydroxide LD50 rat: 333 mg/kg Fatty alcohol C10 (iso) ethoxylated LD50 rat: 1,250 mg/kg Limonene LD50 rat: 4,400 mg/kg
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Components

Acute inhalation toxicity	: monoethanolamine 4 h LC50 rat: > 1.6 mg/l Test atmosphere: dust/mist Isopropyl Alcohol 4 h LC50 rat: > 30 mg/l Test atmosphere: vapour
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Components

Acute dermal toxicity	: monoethanolamine LD50 rabbit: 1,025 mg/kg Isopropyl Alcohol LD50 rabbit: 12,870 mg/kg Limonene LD50 rabbit: > 5,000 mg/kg
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Potential Health Effects

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- Eyes : Causes serious eye damage.
- Skin : Causes severe skin burns. May cause allergic skin reaction.
- Ingestion : Causes digestive tract burns.
- Inhalation : Harmful if inhaled. 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, Irritation, Corrosion, Allergic reactions
- Ingestion : Corrosion, Abdominal pain
- Inhalation : Respiratory irritation, Cough

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
- Toxicity to algae : no data available

Components

- Toxicity to fish : 2-butoxyethanol
96 h LC50 Fish: > 100 mg/l
- Sodium p-cumenesulphonate
96 h LC50 Oncorhynchus mykiss (rainbow trout): > 1,000 mg/l
- Isopropyl Alcohol
96 h LC50 Pimephales promelas (fathead minnow): 9,640 mg/l
- Fatty alcohol C10 (iso) ethoxylated
96 h LC50 Leuciscus idus (Golden orfe): 55 mg/l

Components

- Toxicity to daphnia and other aquatic invertebrates : monoethanolamine
48 h LC50 Daphnia magna (Water flea): 65 mg/l
- Isopropyl Alcohol
LC50 Daphnia magna (Water flea): > 10,000 mg/l

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Fatty alcohol C10 (iso) ethoxylated
48 h EC50: 55 mg/l

Limonene
48 h EC50 Daphnia magna (Water flea): 0.307 mg/l

Components

Toxicity to algae

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

Sodium p-cumenesulphonate
96 h EC50 Pseudokirchneriella subcapitata (algae): > 230 mg/l

Fatty alcohol C10 (iso) ethoxylated
96 h EC50: 55 mg/l

Limonene
72 h EC50 Pseudokirchneriella subcapitata (algae): 0.32 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

: 2-butoxyethanol
Result: Readily biodegradable.

monoethanolamine
Result: Readily biodegradable.

Sodium p-cumenesulphonate
Result: Readily biodegradable.

Isopropyl Alcohol
Result: Readily biodegradable.

potassium hydroxide
Result: Not applicable - inorganic

Fatty alcohol C10 (iso) ethoxylated
Result: Readily biodegradable.

Limonene
Result: Readily biodegradable.

ammonium hydroxide
Result: Not applicable - inorganic

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

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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 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 : 2924
- 14.2 UN proper shipping : FLAMMABLE LIQUID, CORROSIVE, N.O.S.

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name (Potassium hydroxide, Isopropanol)
14.3 Transport hazard : 3 (8)
class(es)
14.4 Packing group : III
14.5 Environmental hazards : No
14.6 Special precautions for user : None

Air transport (IATA)

14.1 UN number or ID : 2924
number
14.2 UN proper shipping : Flammable liquid, corrosive, n.o.s.
name
(Potassium hydroxide, Isopropanol)
14.3 Transport hazard : 3 (8)
class(es)
14.4 Packing group : III
14.5 Environmental hazards : No
14.6 Special precautions for user : None

Sea transport (IMDG/IMO)

14.1 UN number or ID : 2924
number
14.2 UN proper shipping : FLAMMABLE LIQUID, CORROSIVE, N.O.S.
name
(Potassium hydroxide, Isopropanol)
14.3 Transport hazard : 3 (8)
class(es)
14.4 Packing group : III
14.5 Environmental hazards : No
14.6 Special precautions for user : None
14.7 Maritime transport in : Not applicable.
bulk according to IMO
instruments

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
Regulation EC 648/2004 Other constituents: Perfumes
Allergens:
Limonene

Seveso III: Directive : FLAMMABLE LIQUIDS P5c
2012/18/EU of the European Lower tier : 5,000 t
Parliament and of the Council Upper tier : 50,000 t
on the control of major-
accident hazards involving
dangerous substances.

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

National Regulations

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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
Corrosive to metals 1, H290	Based on product data or assessment
Acute toxicity 4, H332	Calculation method
Skin corrosion 1, H314	Based on product data or assessment
Serious eye damage 1, H318	Based on product data or assessment
Skin sensitization 1, H317	Calculation method
Specific target organ toxicity - single exposure 3, H335	Calculation method
Chronic aquatic toxicity 3, H412	Calculation method

Full text of H-Statements

H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H290 May be corrosive to metals.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
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.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H412 Harmful 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 -

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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; TECI - 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

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: Floor cleaner. 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

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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

Exposure Scenario: Floor 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

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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

Exposure Scenario: Floor stripper. 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 : **PROC10** Roller application or brushing

Exposure duration : 480 min

Operational conditions and risk management measures : Indoor

Local Exhaust Ventilation is not required

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Contributing scenario controlling worker exposure for:

Process category : **PROC10** Roller application or brushing
Exposure duration : 480 min
Operational conditions and risk management measures : Indoor
General ventilation Ventilation rate per hour 1
Respiratory Protection : see section 8
Skin Protection : see section 8

Contributing scenario controlling worker exposure for:

Process category : **PROC13** Treatment of articles by dipping and pouring
Exposure duration : 480 min
Operational conditions and risk management measures : Indoor
General ventilation Ventilation rate per hour 1
Respiratory Protection : see section 8
Skin Protection : see section 8