

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

Product name : MURIL

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
Multi-purpose non-abrasive cleaner

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

1.3 Details of the supplier of the safety data sheet

Company : 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 : +4932221096286
+32-(0)3-575-5555 Trans-European

Poison Information Centre telephone number : +49 (0)551 38318854

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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
Skin corrosion, Category 1A	H314
Serious eye damage, Category 1	H318
Skin sensitization, Category 1	H317
Specific target organ toxicity - single exposure, Category 3,	H335

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Respiratory system

Chronic aquatic toxicity, Category 3

H412

The classification of this product is based only on its extreme pH value (in accordance with current European legislation).

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

Hazard pictograms

:



Signal Word

: Danger

Hazard Statements

: H314

Causes severe skin burns and eye damage.

H317

May cause an allergic skin reaction.

H335

May cause respiratory irritation.

H412

Harmful to aquatic life with long lasting effects.

H290

May be corrosive to metals.

Precautionary Statements

: **Prevention:**

P273

Avoid release to the environment.

P280

Wear protective gloves/ eye protection/ face protection.

Response:

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

P310

Immediately call a POISON CENTER/doctor.

Hazardous components which must be listed on the label:

monoethanolamine
potassium hydroxide
Limonen

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: [%]
2-butoxyethanol	111-76-2 203-905-0 01-2119475108-36	Acute toxicity Category 4; H302 Acute toxicity Category 4; H332 Acute toxicity Category 4; H312 Skin irritation Category 2; H315 Eye irritation Category 2; H319	>= 10 - < 20
monoethanolamine	141-43-5	Acute toxicity Category 4; H302	>= 5 - < 10

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	205-483-3 01-2119486455-28	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	
Sodiumcumenesulphonate	28348-53-0 248-983-7 01-2119489411-37	Eye irritation Category 2; H319	$\geq 3 - < 5$
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	$\geq 3 - < 5$
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	$\geq 2.5 - < 5$
Fatty alcohol C10 (iso) ethoxylated	78330-20-8 POLYMER	Acute toxicity Category 4; H302 Serious eye damage Category 1; H318	$\geq 2.5 - < 3$
Limonen	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	$\geq 1 - < 2.5$
ammonium hydroxide	1336-21-6 215-647-6 01-2119982985-14	Nota B Skin corrosion Category 1B; H314 Acute aquatic toxicity Category 1; H400	$\geq 0.25 - < 0.5$

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 immediately.
- In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes. Use a mild soap if available. 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 if symptoms occur.

4.2 Most important symptoms and effects, both acute and delayed

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

4.3 Indication of immediate medical attention and special treatment needed

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Treatment : Treat symptomatically.

Section: 5. FIREFIGHTING MEASURES

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 (NO_x)
Sulphur oxides
Oxides of phosphorus

5.3 Advice for firefighters

Special protective equipment for firefighters : Use personal protective equipment.

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

Section: 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

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

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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.

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 heat and sources of ignition. Do not store near acids. Keep away from oxidizing agents. Keep out of reach of children. Keep container tightly closed. Store in suitable labeled containers.

|| Keep only in original container. Absorb spillage to prevent material damage.

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
Multi-purpose non-abrasive cleaner

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

Components	CAS-No.	Value type (Form	Control parameters	Basis
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SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

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		of exposure)		
2-butoxyethanol	111-76-2	AGW	10 ppm 49 mg/m3	TRGS 900
Further information	AGS	Commission for dangerous substances		
	H	Skin absorption		
	Y	When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child		
monoethanolamine	141-43-5	AGW (Vapour and aerosols)	0.2 ppm 0.5 mg/m3	TRGS 900
Further information	DFG	Senate commission for the review of compounds at the work place dangerous for the health (MAK-commission).		
	EU	European Union (The EU has established a limit value: deviations in value and peak limit are possible)		
	11	Sum of vapor and aerosols.		
	H	Skin absorption		
	Y	When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child		
	Sh	Substance sensitizing through the skin		
Isopropyl Alcohol	67-63-0	AGW	200 ppm 500 mg/m3	TRGS 900
Further information	DFG	Senate commission for the review of compounds at the work place dangerous for the health (MAK-commission).		
	Y	When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child		
Limonen	5989-27-5	AGW	5 ppm 28 mg/m3	TRGS 900
Further information	DFG	Senate commission for the review of compounds at the work place dangerous for the health (MAK-commission).		
	H	Skin absorption		
	Y	When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child		
	Sh	Substance sensitizing through the skin		
ammonium hydroxide	1336-21-6	AGW	20 ppm 14 mg/m3	TRGS 900
Further information	DFG	Senate commission for the review of compounds at the work place dangerous for the health (MAK-commission).		
	EU	European Union (The EU has established a limit value: deviations in value and peak limit are possible)		
	Y	When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child		

Biological occupational exposure limits

Substance name	CAS-No.	Control parameters	Sampling time	Basis
	Proprietary Ingredient	butoxy acetic acid: 100 mg/l (Urine)	In case of long-term exposure: after more than one shift	TRGS 903
		butoxy acetic acid: 150 mg/g Creatinine (Urine)	Immediately after exposition or after working hours, In case of long-term exposure: after more than one shift	TRGS 903
Alcohols	Proprietary Ingredient	Acetone: 25 mg/l (Blood)	Immediately after exposition or after working hours	TRGS 903
		Acetone: 25 mg/l (Urine)	Immediately after exposition or after working hours	TRGS 903

DNEL

2-butoxyethanol	:	End Use: Consumers
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		Exposure routes: Ingestion Potential health effects: Long-term systemic effects Value: 3.2 ppm
Isopropyl Alcohol	:	End Use: Workers Exposure routes: Dermal Potential health effects: Long-term systemic effects Value: 888 mg/cm ² End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 500 mg/m ³ End Use: Consumers Exposure routes: Dermal Potential health effects: Long-term systemic effects Value: 319 mg/cm ² End Use: Consumers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 89 mg/m ³ End Use: Consumers Exposure routes: Ingestion Potential health effects: Long-term systemic effects Value: 26 ppm
potassium hydroxide	:	End Use: Workers Exposure routes: Inhalation Value: 1 mg/m ³ End Use: Consumers Exposure routes: Inhalation Value: 1 mg/m ³

PNEC

2-butoxyethanol	:	Fresh water Value: 8.8 mg/l Marine water Value: 0.88 mg/l Water Value: 9.1 mg/l Fresh water sediment Value: 8.14 mg/kg Water Value: 463 mg/l Soil Value: 2.8 mg/kg
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		Value: 20 mg/kg Other conditions
Isopropyl Alcohol	:	Fresh water Value: 140.9 mg/l 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

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.

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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) : 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**

Appearance : liquid
Colour : green
Odour : ammoniacal
pH : 13.3 - 13.9, 100 %
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
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 : 1.031 - 1.041
Water solubility : soluble
Solubility in other solvents : Not applicable and/or not determined for the mixture
Partition coefficient: n-octanol/water : Not applicable and/or not determined for the mixture
Auto-ignition temperature : Not applicable and/or not determined for the mixture
Thermal decomposition : Not applicable and/or not determined for the mixture
Viscosity, kinematic : Not applicable and/or not determined for the mixture
Explosive properties : Not applicable and/or not determined for the mixture
Oxidizing properties : The substance or mixture is not classified as oxidizing.

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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 (NO_x)
Sulphur oxides
Oxides of phosphorus

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 : > 2,000 mg/kg
Acute inhalation toxicity	: 4 h Acute toxicity estimate : > 5 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	: There is no data available for this product.

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irritation

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

Sodiumcumenesulphonate
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

Limonen
LD50 rat: 4,400 mg/kg

Components

Acute inhalation toxicity : monoethanolamine
4 h LC50 rat: > 1.6 mg/l
Test atmosphere: dust/mist

Sodiumcumenesulphonate
4 h LC50 rat: > 770 mg/l
Test atmosphere: dust/mist

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

Components

Acute dermal toxicity : monoethanolamine

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LD50 rabbit: 1,025 mg/kg

Sodiumcumenesulphonate
LD50 rabbit: > 2,000 mg/kg

Isopropyl Alcohol
LD50 rabbit: 12,870 mg/kg

Limonen
LD50 rabbit: > 5,000 mg/kg

Potential Health Effects

Eyes : Causes serious eye damage.

Skin : Causes severe skin burns. May cause allergic skin reaction.

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, Irritation, Corrosion, Allergic reactions

Ingestion : Corrosion, Abdominal pain

Inhalation : Respiratory irritation, Cough

Section: 12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity

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: 1,474 mg/l

Sodiumcumenesulphonate
96 h LC50 Fish: > 450 mg/l

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

Fatty alcohol C10 (iso) ethoxylated

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96 h LC50 *Leuciscus idus* (Golden orfe): 55 mg/l

Components

Toxicity to daphnia and other aquatic invertebrates : 2-butoxyethanol
48 h EC50: 690 mg/l

monoethanolamine
48 h LC50: 65 mg/l

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

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

Components

Toxicity to algae : 2-butoxyethanol
72 h EC50: 911 mg/l

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

12.2 Persistence and degradability

Product

no data available

Components

Biodegradability : 2-butoxyethanol
Result: Readily biodegradable.

monoethanolamine
Result: Readily biodegradable.

Sodiumcumenesulphonate
Result: Readily biodegradable.

Isopropyl Alcohol
Result: Readily biodegradable.

potassium hydroxide
Result: Not applicable - inorganic

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

Limonen
Result: Readily biodegradable.

ammonium hydroxide
Result: Not applicable - inorganic

12.3 Bioaccumulative potential

no data available

MURIL**12.4 Mobility in soil**

no data available

12.5 Results of PBT and vPvB assessment**Product**

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

12.6 Other adverse effects

no data available

Section: 13. DISPOSAL CONSIDERATIONS

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

13.1 Waste treatment methods

- Product : 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 : 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 : 2924
- 14.2 UN proper shipping name : FLAMMABLE LIQUID, CORROSIVE, N.O.S.
(Potassium hydroxide, Isopropanol)
- 14.3 Transport hazard class(es) : 3 (8)
- 14.4 Packing group : III

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14.5 Environmental hazards : No
14.6 Special precautions for user : None

Air transport (IATA)

14.1 UN number : 2924
14.2 UN proper shipping name : Flammable liquid, corrosive, n.o.s.
(Potassium hydroxide, Isopropanol)
14.3 Transport hazard class(es) : 3 (8)
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 : 2924
14.2 UN proper shipping name : FLAMMABLE LIQUID, CORROSIVE, N.O.S.
(Potassium hydroxide, Isopropanol)
14.3 Transport hazard class(es) : 3 (8)
14.4 Packing group : III
14.5 Environmental hazards : No
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

according to Detergents Regulation EC 648/2004 : Other constituents: Perfumes
Allergens:
Limonen

National Regulations

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

Hazard class for water : WGK 2
Classification according to AwSV, Annex 1

German storage class : 8B

15.2 Chemical Safety Assessment

This product contains substances for which Chemical Safety Assessments are still required.

Section: 16. OTHER INFORMATION

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

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Classification	Justification
Corrosive to metals 1, H290	On basis of test data.
Skin corrosion 1A, H314	On basis of test data.
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.
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.
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; AICS – Australian Inventory of Chemical Substances; ASTM – American Society for the Testing of Materials; bw – Body weight; CLP – Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR – Carcinogen, Mutagen or Reproductive Toxicant; DIN – Standard of the German Institute for Standardisation; DSL – Domestic Substances List (Canada); ECHA – European Chemicals Agency; EC-Number – European Community number; ECx – Concentration associated with x% response; ELx – Loading rate associated with x% response; EmS – Emergency Schedule; ENCS – Existing and New Chemical Substances (Japan); ErCx – Concentration associated with x% growth rate response; GHS – Globally Harmonized System; GLP – Good Laboratory Practice; IARC – International Agency for Research on Cancer; IATA – International Air Transport Association; IBC – International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 – Half maximal inhibitory concentration; ICAO – International Civil Aviation Organization; IECSC – Inventory of Existing Chemical Substances in China; IMDG – International Maritime Dangerous Goods; IMO – International Maritime Organization; ISHL – Industrial Safety and Health Law (Japan); ISO – International Organisation for Standardization; KECI – Korea Existing Chemicals Inventory; LC50 – Lethal Concentration to 50 % of a test population; LD50 – Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL – International Convention for the Prevention of Pollution from Ships; n.o.s. – Not Otherwise Specified; NO(A)EC – No Observed (Adverse) Effect Concentration; NO(A)EL – No Observed (Adverse) Effect Level; NOELR – No Observable Effect Loading Rate; NZIoC – New Zealand Inventory of Chemicals; OECD – Organization for Economic Co-operation and Development; OPPTS – Office of Chemical Safety and Pollution Prevention; PBT – Persistent, Bioaccumulative and Toxic substance; PICCS – Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR – (Quantitative) Structure Activity Relationship; REACH – Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID – Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT – Self-Accelerating Decomposition Temperature; SDS – Safety Data Sheet;

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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

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

Contributing scenario controlling worker exposure for:

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

Exposure duration : 480 min

Operational conditions and risk management measures : Indoor

Local Exhaust Ventilation is not required

General ventilation Ventilation rate per hour 1

Skin Protection : No

Respiratory Protection : No

MURIL**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	: Yes: See Section 8	
Respiratory Protection	: No	

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	
Operational conditions and risk management measures	: Indoor	
		Local Exhaust Ventilation is not required
General ventilation	Ventilation rate per hour	1
Skin Protection	: No	
Respiratory Protection	: No	

Contributing scenario controlling worker exposure for:

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

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 : Yes: See Section 8

Respiratory Protection : No

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

General ventilation Ventilation rate per hour 1

Respiratory Protection : No

Skin Protection : Yes: 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

MURIL

Local Exhaust Ventilation is not required

General ventilation Ventilation rate per hour 1

Skin Protection : Yes: See Section 8

Respiratory Protection : No

Exposure Scenario: Multi-purpose non-abrasive cleaner

Life Cycle Stage : Use at industrial sites

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

General ventilation Ventilation rate per hour 1

Skin Protection : Yes: See Section 8

Respiratory Protection : No

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 : No

Skin Protection : Yes: See Section 8

MURIL

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 : No

Skin Protection : Yes: See Section 8