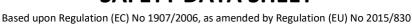
SAFETY DATA SHEET





MULTICLEAN

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name : MULTICLEAN

Registration number REACH : Not applicable (mixture)

Product type REACH : Mixture

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

1.2.1 Relevant identified uses

Detergent according to Regulation (EC) No 648/2004

Degreasing agent

Uses advised against 1.2.2

No uses advised against

1.3. Details of the supplier of the safety data sheet

Supplier of the safety data sheet

TEC7*

Industrielaan 5B

B-2250 Olen

3 +32 14 85 97 37

4 +32 14 85 97 38 info@tec7.be

*TEC7 is a registered trademark of Novatech International

Industrielaan 5B

Manufacturer of the product

Novatech International N.V.

Industrielaan 5B

B-2250 Olen **2** +32 14 85 97 37

4 +32 14 85 97 38

info@tec7.be

1.4. Emergency telephone number

24h/24h (Telephone advice: English, French, German, Dutch):

+32 14 58 45 45 (BIG)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

Class	Category	Hazard statements
Aerosol	category 1	H222: Extremely flammable aerosol.
Aerosol	category 1	H229: Pressurised container: May burst if heated.

2.2. Label elements



Signal word	Danger
H-statements	

H222

Extremely flammable aerosol.

Pressurised container: May burst if heated. H229

P-statements

P102 Keep out of reach of children.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P210

Do not spray on an open flame or other ignition source. P211

Do not pierce or burn, even after use. P251

P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122°F.

Created by: Brandweerinformatiecentrum voor gevaarlijke stoffen vzw (BIG)

Technische Schoolstraat 43 A, B-2440 Geel http://www.big.be

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2.3. Other hazards

Gas/vapour spreads at floor level: ignition hazard

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name REACH Registration No	CAS No EC No	Conc. (C)	Classification according to CLP	Note	Remark
2-butoxyethanol 01-2119475108-36	111-76-2 203-905-0	C≤5 %	Acute Tox. 4; H332 Acute Tox. 4; H312 Acute Tox. 4; H302 Eye Irrit. 2; H319 Skin Irrit. 2; H315	(1)(2)(10)	Constituent
propan-2-ol 01-2119457558-25	67-63-0 200-661-7	0.1% <c<1%< td=""><td>Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336</td><td>(1)(2)(10)</td><td>Constituent</td></c<1%<>	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336	(1)(2)(10)	Constituent
ammonia	1336-21-6 215-647-6	C<5 %	Skin Corr. 1B; H314 Aquatic Acute 1; H400	(1)(2)(8)(10)	Constituent
butane 01-2119474691-32	106-97-8 203-448-7	5% <c<15%< td=""><td>Flam. Gas 1; H220 Press. Gas - Liquefied gas; H280</td><td>(1)(2)(10)</td><td>Propellant</td></c<15%<>	Flam. Gas 1; H220 Press. Gas - Liquefied gas; H280	(1)(2)(10)	Propellant
propane 01-2119486944-21	74-98-6 200-827-9	C<5 %	Flam. Gas 1; H220 Press. Gas - Liquefied gas; H280	(1)(2)(10)	Propellant

⁽¹⁾ For H-statements in full: see heading 16

SECTION 4: First aid measures

4.1. Description of first aid measures

General:

If you feel unwell, seek medical advice.

After inhalation:

Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

After skin contact:

Rinse with water. Take victim to a doctor if irritation persists.

After eye contact:

Rinse with water. Take victim to an ophthalmologist if irritation persists.

After ingestion:

Rinse mouth with water. Consult a doctor/medical service if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

4.2.1 Acute symptoms

After inhalation:

EXPOSURE TO HIGH CONCENTRATIONS: Central nervous system depression. Headache. Nausea. Disturbances of consciousness.

After skin contact:

No effects known.

After eye contact:

Redness of the eye tissue.

After ingestion:

Gastrointestinal complaints. Diarrhoea. Headache. Vomiting. Disturbances of consciousness.

4.2.2 Delayed symptoms

No effects known.

4.3. Indication of any immediate medical attention and special treatment needed

If applicable and available it will be listed below.

SECTION 5: Firefighting measures

5.1. Extinguishing media

5.1.1 Suitable extinguishing media:

Water spray. Polyvalent foam. BC powder. Carbon dioxide.

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⁽²⁾ Substance with a Community workplace exposure limit

⁽⁸⁾ Specific concentration limits, see heading 16

⁽¹⁰⁾ Subject to restrictions of Annex XVII of Regulation (EC) No. 1907/2006

5.1.2 Unsuitable extinguishing media:

No unsuitable extinguishing media known.

5.2. Special hazards arising from the substance or mixture

Upon combustion: CO and CO2 are formed. Pressurised container: May burst if heated.

5.3. Advice for firefighters

5.3.1 Instructions:

If exposed to fire cool the closed containers by spraying with water. Physical explosion risk: extinguish/cool from behind cover. Do not move the load if exposed to heat. After cooling: persistant risk of physical explosion.

5.3.2 Special protective equipment for fire-fighters:

Gloves. Safety glasses. Protective clothing. Heat/fire exposure: compressed air/oxygen apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Stop engines and no smoking. No naked flames or sparks. Spark- and explosion proof appliances and lighting equipment.

6.1.1 Protective equipment for non-emergency personnel

See heading 8.2

6.1.2 Protective equipment for emergency responders

Gloves. Safety glasses. Protective clothing.

Suitable protective clothing

See heading 8.2

6.2. Environmental precautions

Dam up the liquid spill.

6.3. Methods and material for containment and cleaning up

Liquid spill: dilute with water. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

6.4. Reference to other sections

See heading 13.

SECTION 7: Handling and storage

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

7.1. Precautions for safe handling

Use spark-/explosion proof appliances and lighting system. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Gas/vapour heavier than air at 20°C. Observe normal hygiene standards. Keep container tightly closed.

7.2. Conditions for safe storage, including any incompatibilities

7.2.1 Safe storage requirements:

Storage temperature: < 50 °C. Protect against frost. Keep out of direct sunlight. Keep container in a well-ventilated place. Fireproof storeroom. Meet the legal requirements.

7.2.2 Keep away from:

Heat sources, ignition sources.

7.2.3 Suitable packaging material:

Aerosol.

7.2.4 Non suitable packaging material:

No data available

7.3. Specific end use(s)

If applicable and available, exposure scenarios are attached in annex. See information supplied by the manufacturer.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 Occupational exposure

a) Occupational exposure limit values

If limit values are applicable and available these will be listed below.

EU

2-Butoxyethanol	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	20 ppm
	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	98 mg/m³
	Short time value (Indicative occupational exposure limit value)	50 ppm
	Short time value (Indicative occupational exposure limit value)	246 mg/m ³

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mmonia, anhydrous		
	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	20 ppm
	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	14 mg/m³
	Short time value (Indicative occupational exposure limit value)	50 ppm
	Short time value (Indicative occupational exposure limit value)	36 mg/m ³
	Short time value (mulcative occupational exposure innit value)	30 mg/m
elgium	Time-weighted average exposure limit 8 h	20 ppm
Butoxyéthanol		
	Time-weighted average exposure limit 8 h	98 mg/m³
	Short time value	50 ppm
	Short time value	246 mg/m ³
cool isopropylique	Time-weighted average exposure limit 8 h	200 ppm
	Time-weighted average exposure limit 8 h	500 mg/m ³
	Short time value	400 ppm
	Short time value	1000 mg/m ³
mmoniac	Time-weighted average exposure limit 8 h	20 ppm
Timornae	Time-weighted average exposure limit 8 h	14 mg/m³
	Short time value	50 ppm
	Short time value	36 mg/m ³
ydrocarbures aliphatiques sous forme gazeuse : (Alcanes C1- 4)	Time-weighted average exposure limit 8 h	1000 ppm
ne Netherlands		
Butoxyethanol	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	20 ppm
	,	100 mg/m³
	Short time value (Public occupational exposure limit value)	50 ppm
	Short time value (Public occupational exposure limit value)	246 mg/m³
		<u> </u>
Propanol	Time-weighted average exposure limit 8 h (Private occupational exposure limit value)	260 ppm
	Time-weighted average exposure limit 8 h (Private occupational exposure limit value)	650 mg/m ³
mmoniak	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	20 ppm
	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	14 mg/m³
	Short time value (Public occupational exposure limit value)	51 ppm
	Short time value (Public occupational exposure limit value)	36 mg/m ³
Butaan	Time-weighted average exposure limit 8 h (Private occupational	592 ppm
DULIDII	exposure limit value)	
	Time-weighted average exposure limit 8 h (Private occupational exposure limit value)	1430 mg/m ³
rance		
rance Butoxyéthanol	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	10 ppm
		10 ppm 49 mg/m³
	contraignante) Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire	49 mg/m³
	contraignante) Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante)	49 mg/m³ 50 ppm
Butoxyéthanol	contraignante) Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante)	49 mg/m³ 50 ppm 246 mg/m³
	contraignante) Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante) Short time value (VL: Valeur non réglementaire indicative)	49 mg/m³ 50 ppm 246 mg/m³ 400 ppm
Butoxyéthanol	contraignante) Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante) Short time value (VL: Valeur non réglementaire indicative) Short time value (VL: Valeur non réglementaire indicative) Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire	49 mg/m³ 50 ppm 246 mg/m³
Butoxyéthanol cool isopropylique	contraignante) Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante) Short time value (VL: Valeur non réglementaire indicative) Short time value (VL: Valeur non réglementaire indicative) Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire	49 mg/m ³ 50 ppm 246 mg/m ³ 400 ppm 980 mg/m ³
Butoxyéthanol cool isopropylique	contraignante) Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante) Short time value (VL: Valeur non réglementaire indicative) Short time value (VL: Valeur non réglementaire indicative) Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	49 mg/m ³ 50 ppm 246 mg/m ³ 400 ppm 980 mg/m ³ 10 ppm 7 mg/m ³
Butoxyéthanol cool isopropylique	contraignante) Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante) Short time value (VL: Valeur non réglementaire indicative) Short time value (VL: Valeur non réglementaire indicative) Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante)	49 mg/m ³ 50 ppm 246 mg/m ³ 400 ppm 980 mg/m ³ 10 ppm 7 mg/m ³
Butoxyéthanol cool isopropylique	contraignante) Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante) Short time value (VL: Valeur non réglementaire indicative) Short time value (VL: Valeur non réglementaire indicative) Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	49 mg/m ³ 50 ppm 246 mg/m ³ 400 ppm 980 mg/m ³ 10 ppm 7 mg/m ³
Butoxyéthanol cool isopropylique	contraignante) Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante) Short time value (VL: Valeur non réglementaire indicative) Short time value (VL: Valeur non réglementaire indicative) Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante)	49 mg/m ³ 50 ppm 246 mg/m ³ 400 ppm 980 mg/m ³ 10 ppm 7 mg/m ³
Butoxyéthanol Icool isopropylique mmoniac anhydre	contraignante) Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante) Short time value (VL: Valeur non réglementaire indicative) Short time value (VL: Valeur non réglementaire indicative) Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante) Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative) Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	49 mg/m³ 50 ppm 246 mg/m³ 400 ppm 980 mg/m³ 10 ppm 7 mg/m³ 20 ppm 14 mg/m³
Butoxyéthanol Icool isopropylique mmoniac anhydre Butane	contraignante) Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante) Short time value (VL: Valeur non réglementaire indicative) Short time value (VL: Valeur non réglementaire indicative) Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante) Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	49 mg/m³ 50 ppm 246 mg/m³ 400 ppm 980 mg/m³ 10 ppm 7 mg/m³ 20 ppm 14 mg/m³ 800 ppm
Butoxyéthanol cool isopropylique mmoniac anhydre Butane ermany	contraignante) Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante) Short time value (VL: Valeur non réglementaire indicative) Short time value (VL: Valeur non réglementaire indicative) Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante) Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative) Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	49 mg/m³ 50 ppm 246 mg/m³ 400 ppm 980 mg/m³ 10 ppm 7 mg/m³ 20 ppm 14 mg/m³ 800 ppm
Butoxyéthanol Icool isopropylique mmoniac anhydre Butane	contraignante) Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante) Short time value (VL: Valeur non réglementaire indicative) Short time value (VL: Valeur non réglementaire indicative) Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante) Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative) Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	49 mg/m³ 50 ppm 246 mg/m³ 400 ppm 980 mg/m³ 10 ppm 7 mg/m³ 20 ppm 14 mg/m³ 800 ppm 1900 mg/m³
Butoxyéthanol Icool isopropylique mmoniac anhydre Butane ermany Butoxyethanol	contraignante) Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante) Short time value (VL: Valeur non réglementaire indicative) Short time value (VL: Valeur non réglementaire indicative) Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante) Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative) Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative) Time-weighted average exposure limit 8 h (TRGS 900) Time-weighted average exposure limit 8 h (TRGS 900)	49 mg/m³ 50 ppm 246 mg/m³ 400 ppm 980 mg/m³ 10 ppm 7 mg/m³ 20 ppm 14 mg/m³ 800 ppm 1900 mg/m³
Butoxyéthanol cool isopropylique mmoniac anhydre Butane ermany	contraignante) Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante) Short time value (VL: Valeur non réglementaire indicative) Short time value (VL: Valeur non réglementaire indicative) Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante) Short time value (VRC: Valeur réglementaire contraignante) Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative) Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	49 mg/m³ 50 ppm 246 mg/m³ 400 ppm 980 mg/m³ 10 ppm 7 mg/m³ 20 ppm 14 mg/m³ 800 ppm 1900 mg/m³

Reason for revision: 3.2; 8.2.2; 13.1; 15.1 Publication date: 2000-09-16
Date of revision: 2016-06-14

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\$		
Butan	Time-weighted average exposure limit 8 h (TRGS 900)	2400 mg/m³
Propan	Time-weighted average exposure limit 8 h (TRGS 900)	1000 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	1800 mg/m³
Propan-2-ol	Time-weighted average exposure limit 8 h (TRGS 900)	200 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	500 mg/m ³

UK

UK		
2-Butoxyethanol	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	25 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	123 mg/m ³
	Short time value (Workplace exposure limit (EH40/2005))	50 ppm
	Short time value (Workplace exposure limit (EH40/2005))	246 mg/m ³
Ammonia, anhydrous	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	25 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	18 mg/m³
	Short time value (Workplace exposure limit (EH40/2005))	35 ppm
	Short time value (Workplace exposure limit (EH40/2005))	25 mg/m³
Butane	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	600 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	1450 mg/m³
	Short time value (Workplace exposure limit (EH40/2005))	750 ppm
	Short time value (Workplace exposure limit (EH40/2005))	1810 mg/m ³
Propan-2-ol	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	400 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	999 mg/m³
	Short time value (Workplace exposure limit (EH40/2005))	500 ppm
	Short time value (Workplace exposure limit (EH40/2005))	1250 mg/m ³

USA (TLV-ACGIH)

2-Butoxyethanol (EGBE)	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	20 ppm
2-propanol	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	200 ppm
	Short time value (TLV - Adopted Value)	400 ppm
Ammonia	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	25 ppm
	Short time value (TLV - Adopted Value)	35 ppm
Butane, all isomers	Short time value (TLV - Adopted Value)	1000 ppm

b) National biological limit values

If limit values are applicable and available these will be listed below.

Germany

	Urin: bei langzeitexposition: nach mehreren vorangegangenen schichten	200 mg/l	11/2012 Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG
2-Butoxyethanol (Butoxyessigsäure)	Urin: bei langzeitexposition: nach mehreren vorangegangenen schichten	100 mg/l	11/2012 Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG
Propan-2-ol (Aceton)	Urin: expositionsende, bzw. schichtende	25 mg/l	11/2012 Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG
Propan-2-ol (Aceton)	Vollblut: expositionsende, bzw. schichtende	25 mg/l	11/2012 Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG
Vitamin K-Antagonisten (Quick-Wert)	Vollblut: keine beschränkung	Reduktion auf nicht weniger als 70%	11/2012 Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG

UK

2-Butoxyethanol (butoxyacetic acid)	Urine: post shift	240 mmol/mol	
		creatinine	

USA (BEI-ACGIH)

			-
2-buthoxyethanol (Butoxyacetic acid	urine: end of shift	200 mg/g	
(BAA))		creatinine	
2-Propanol (Acetone)	Urine: end of shift at end of workweek	40 mg/L	

8.1.2 Sampling methods

If applicable and available it will be listed below.

ii applicable and available it will be listed below.			
2-Butoxyethanol (Alcohols IV)	NIOSH	1403	
2-Butoxyethanol (Butyl Cellosolve solvent)	OSHA	83	

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Ammonia (organic and inorganic gases by Extractive FTIR)	NIOSH	3800
Ammonia	NIOSH	6015
Ammonia	NIOSH	6015REV
Ammonia	NIOSH	6016
Ammonia	NON	41
Ammonia	OSHA	ID188
Butoxyacetic acid	NIOSH	8316
Butyl cellosolve (Volatile Organic compounds)	NIOSH	2549
Butyl Cellosolve	OSHA	83
Isopropanol (Volatile Organic compounds)	NIOSH	2549
Isopropyl Alcohol (Alcohols I)	NIOSH	1400
Isopropyl Alcohol	OSHA	109

8.1.3 Applicable limit values when using the substance or mixture as intended

If limit values are applicable and available these will be listed below.

8.1.4 DNEL/PNEC values_

DNEL/DMEL - Workers

2-butoxyethanol

z batoxyctnano	butoxycuiano		
Effect level (DNEL/DMEL)	Туре	Value	Remark
DNEL	Long-term systemic effects inhalation	98 mg/m³	
	Acute systemic effects inhalation	1091 mg/m³	
	Acute local effects inhalation	246 mg/m³	
	Long-term systemic effects dermal	125 mg/kg bw/day	
	Acute systemic effects dermal	89 mg/kg bw/day	

propan-2-ol

Effect level (DNEL/DMEL)	Туре	Value	Remark
DNEL	Long-term systemic effects inhalation	500 mg/m³	
	Long-term systemic effects dermal	888 mg/kg bw/day	

ammonia

Effect level (DNEL/DMEL)	Туре	Value	Remark
DNEL	Long-term systemic effects inhalation	47.6 mg/m ³	Test data of the pure substance
	Acute systemic effects inhalation	47.6 mg/m ³	Test data of the pure substance
	Long-term local effects inhalation	14 mg/m ³	Test data of the pure substance
	Acute local effects inhalation	36 mg/m ³	Test data of the pure substance
	Long-term systemic effects dermal	6.8 mg/kg bw/day	Test data of the pure substance
	Acute systemic effects dermal	6.8 mg/kg bw/day	Test data of the pure substance

DNEL/DMEL - General population 2-butoxyethanol

Effect level (DNEL/DMEL)	Туре	Value	Remark
DNEL	Long-term systemic effects inhalation	59 mg/m ³	
	Acute systemic effects inhalation	426 mg/m ³	
	Acute local effects inhalation	147 mg/m³	
	Long-term systemic effects dermal	75 mg/kg bw/day	
	Acute systemic effects dermal	89 mg/kg bw/day	
	Long-term systemic effects oral	6.3 mg/kg bw/day	
	Acute systemic effects oral	26.7 mg/kg bw/day	

propan-2-ol

Effect level (DNEL/DMEL)	Туре	Value	Remark
DNEL	Long-term systemic effects inhalation	89 mg/m ³	
	Long-term systemic effects dermal	319 mg/kg bw/day	
	Long-term systemic effects oral	26 mg/kg bw/day	

<u>ammonia</u>

Effect level (DNEL/DMEL)	Туре	Value	Remark
DNEL	Long-term systemic effects inhalation	23.8 mg/m³	Test data of the pure substance
	Acute systemic effects inhalation	23.8 mg/m³	Test data of the pure substance
	Long-term local effects inhalation	2.8 mg/m ³	Test data of the pure substance
	Acute local effects inhalation	7.2 mg/m ³	Test data of the pure substance
	Long-term systemic effects dermal	68 mg/kg bw/day	Test data of the pure substance
	Acute systemic effects dermal	68 mg/kg bw/day	Test data of the pure substance
	Long-term systemic effects oral	6.8 mg/kg bw/day	Test data of the pure substance
	Acute systemic effects oral	6.8 mg/kg bw/day	Test data of the pure substance

PNEC

Reason for revision: 3.2; 8.2.2; 13.1; 15.1 Publication date: 2000-09-16

Date of revision: 2016-06-14

Revision number: 1002 Product number: 32180 6 / 17

2-butoxyethanol

Compartments	Value	Remark
Fresh water	8.8 mg/l	
Marine water	0.88 mg/l	
Aqua (intermittent releases)	9.1 mg/l	
Fresh water sediment	34.6 mg/kg sediment dw	
Marine water sediment	3.46 mg/kg sediment dw	
STP	463 mg/l	
Soil	2.33 mg/kg soil dw	
Oral	0.02 g/kg food	

propan-2-ol

Compartments	Value	Remark
Fresh water	140.9 mg/l	
Marine water	140.9 mg/l	
Aqua (intermittent releases)	140.9 mg/l	
STP	2251 mg/l	
Fresh water sediment	552 mg/kg sediment dw	
Marine water sediment	552 mg/kg sediment dw	
Soil	28 mg/kg soil dw	
Oral	160 mg/kg food	

ammonia

Compartments	Value	Remark
Fresh water	0.0011 mg/l	Test data of the pure substance
Marine water	0.0011 mg/l	Test data of the pure substance
Aqua (intermittent releases)	0.0068 mg/l	Test data of the pure substance

8.1.5 Control banding

If applicable and available it will be listed below.

8.2. Exposure controls

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

8.2.1 Appropriate engineering controls

Use spark-/explosion proof appliances and lighting system. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Measure the concentration in the air regularly.

8.2.2 Individual protection measures, such as personal protective equipment

Observe normal hygiene standards. Keep container tightly closed. Do not eat, drink or smoke during work.

a) Respiratory protection:

Wear gas mask with filter type A if conc. in air > exposure limit.

b) Hand protection:

Gloves.

Materials	Breakthrough time	Thickness
nitrile rubber	>480 minutes	0.35 mm

- materials (excellent resistance)

Nitrile rubber.

c) Eye protection:

Protective goggles.

d) Skin protection:

Protective clothing.

8.2.3 Environmental exposure controls:

See headings 6.2, 6.3 and 13

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical form	Aerosol
Odour	Characteristic odour
Odour threshold	No data available
Colour	No data available on colour
Particle size	No data available
Explosion limits	1.13 - 12 vol %
Flammability	Extremely flammable aerosol.
Log Kow	Not applicable (mixture)
Dynamic viscosity	No data available
Kinematic viscosity	No data available
Melting point	No data available
Boiling point	No data available
Flash point	No data available
Evaporation rate	No data available

Reason for revision: 3.2; 8.2.2; 13.1; 15.1 Publication date: 2000-09-16
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Deletion con a condensate o	
Relative vapour density	>1
Vapour pressure	No data available
Solubility	water; soluble
Relative density	0.99 ; 20 °C ; Liquid
Decomposition temperature	No data available
Auto-ignition temperature	230 °C
Explosive properties	No chemical group associated with explosive properties
Oxidising properties	No chemical group associated with oxidising properties
pH	10.4

9.2. Other information

Absolute density	992 kg/m³ ; 20 °C ; Liquid

SECTION 10: Stability and reactivity

10.1. Reactivity

May be ignited by sparks. Gas/vapour spreads at floor level: ignition hazard.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

 $Use \ spark-/explosion proof \ appliances \ and \ lighting \ system. \ Keep \ away \ from \ naked \ flames/heat. \ Keep \ away \ from \ ignition \ sources/sparks.$

10.5. Incompatible materials

No data available.

10.6. Hazardous decomposition products

Upon combustion: CO and CO2 are formed.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

11.1.1 Test results

Acute toxicity

MULTICLEAN

No (test)data on the mixture available

2-butoxyethanol

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	Equivalent to OECD 401	1746 mg/kg bw		Rat (male)	Experimental value	
Dermal			category 4			Annex VI	
Dermal	LD50	OECD 402	> 2000 mg/kg bw		Rat (male/female)	Experimental value	
Inhalation			category 4			Annex VI	
Inhalation (vapours)	LC50	Equivalent to OECD 403	2.2 mg/l	4 h	Rat (female)	Experimental value	
Inhalation (vapours)	LC50	Equivalent to OECD 403	450 ppm	4 h	Rat (female)	Experimental value	

propan-2-ol

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value	Remark
						determination	
Oral	LD50	Equivalent to OECD 401	5840 mg/kg bw		Rat	Experimental value	
Dermal	LD50	Equivalent to OECD 402	13120 mg/kg bw	24 h	Rabbit	Experimental value	
Inhalation (vapours)	LC50	Equivalent to OECD 403	> 10000 ppm	6 h	Rat (male/female)	Experimental value	

ammonia

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value	Remark
						determination	
Oral	LD50	Equivalent to OECD 401	350 mg/kg bw		Rat (male)	Experimental value	Aqueous solution
Dermal						Data waiving	
Inhalation						Annex VI	Not classified
Inhalation	LC50		9850 mg/m³ air	60 minutes	Rat (male)	Experimental value	Anhydrous form

Judgement is based on the relevant ingredients

Reason for revision: 3.2; 8.2.2; 13.1; 15.1 Publication date: 2000-09-16
Date of revision: 2016-06-14

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Conclusion

Not classified for acute toxicity

Corrosion/irritation

MULTICLEAN

No (test)data on the mixture available

2-butoxyethanol

Route of exposure	Result	Method	Exposure time	Time point		Value determination	Remark
Eye	Irritating	OECD 405		24; 48; 72 hours	Rabbit	Experimental value	
Skin	Irritating	OECD 404		24; 48; 72 hours	Rabbit	Experimental value	

propan-2-ol

Route of exposure	Result	Method	Exposure time	Time point	Species	Value	Remark
						determination	
Eye	0	Equivalent to OECD 405		24 hours	Rabbit	Experimental value	Single treatment
Skin	Not irritating		4 h	4; 24; 48; 72 hours	Rabbit	Experimental value	

<u>ammonia</u>

Route of exposure	Result	Method	Exposure time	Time point	Species	Value	Remark
						determination	
Eye						Data waiving	
Skin	Corrosive; category 1B					Annex VI	

Judgement is based on the relevant ingredients

Conclusion

Not classified as irritating to the skin Not classified as irritating to the eyes

Respiratory or skin sensitisation

MULTICLEAN

No (test)data on the mixture available

2-butoxyethanol

Route of exposure	Result	Method	 Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	OECD 406	, ·	Guinea pig (male/female)	Experimental value	

propan-2-ol

Route of exposure	Result	Method		Observation time point	Species	Value determination	Remark
Skin	Not sensitizing		3 weeks (6h/day, 1 day/week)	· ·	Guinea pig (male/female)	Experimental value	

ammonia

Route of exposure	Result	Method	 Observation time point	Species	Value determination	Remark
Skin					Data waiving	
Inhalation					Data waiving	

Judgement is based on the relevant ingredients

Conclusion

Not classified as sensitizing for skin

Specific target organ toxicity

MULTICLEAN

No (test)data on the mixture available

2-butoxyethanol

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	-	Value determination
Oral (drinking water)		Equivalent to OECD 408	< 69 mg/kg bw/day			90 days (continuous)	Rat (male)	Experimental value
Dermal	_		150 mg/kg bw/day		No effect	/ (- /	Rabbit (male/female)	Experimental value
Inhalation	LOAEC	OECD 453	152 mg/m ³	Blood	0,	(// -	Rat (male/female)	Experimental value

Reason for revision: 3.2; 8.2.2; 13.1; 15.1 Publication date: 2000-09-16
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Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral								Data waiving
Dermal								Data waiving
Inhalation (vapours)	NOAEC	OECD 451	5000 ppm		No effect	104 weeks (6h/day, 5 days/week)	Rat (male/female)	Experimental value
Inhalation (vapours)	NOAEL	OECD 413	5000 ppm		No effect	13 weeks (6h/day, 5 days/week)	Rat (male/female)	Experimental value
Inhalation (vapours)	Dose level	OECD 403	5000 ppm	Central nervous system	Drowsiness, dizziness	6 h	Rat (male/female)	Experimental value

<u>ammonia</u>

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	- •	Value determination
Oral (stomach tube)	NOAEL	OECD 422	250 mg/kg bw/day	General	No effect	/(-/	Rat (male/female)	Read-across
Oral (stomach tube)	LOAEL	OECD 422	750 mg/kg bw/day	General	Overall effects	35 day(s)	Rat (male/female)	Read-across
Dermal								Data waiving
Inhalation (gases)	LOEL	Subchronic toxicity test	119 mg/m³ air	General	Histopathology	18 weeks (6h/day, 5 days/week)	Guinea pig (male)	Experimental value

Judgement is based on the relevant ingredients

Conclusion

Not classified for subchronic toxicity

Mutagenicity (in vitro)

MULTICLEAN

No (test)data on the mixture available

2-butoxyethanol

Result	Method	Test substrate	Effect	Value determination
Negative	Equivalent to OECD 471	Bacteria (S.typhimurium)		Experimental value
Negative	Equivalent to OECD 476	Hamster ovary		Experimental value

propan-2-ol

Result	Method	Test substrate	Effect	Value determination
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 476	Chinese hamster ovary (CHO)	No effect	Experimental value

<u>ammonia</u>

Result	Method	Test substrate	Effect	Value determination
Negative with metabolic	Equivalent to OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value
activation, negative without				
metabolic activation				

Mutagenicity (in vivo)

MULTICLEAN

No (test)data on the mixture available

2-butoxyethanol

Result	Method	Exposure time	lest substrate	Organ	Value determination
Negative	Equivalent to OECD 474		Mouse (male)		Experimental value

propan-2-ol

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative	Equivalent to OECD		Mouse (male/female)		Experimental value
	474				

<u>ammonia</u>

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative	Equivalent to OECD		Mouse (male)	Bone marrow	Read-across
	474				

Judgement is based on the relevant ingredients

Conclusion

Not classified for mutagenic or genotoxic toxicity

Carcinogenicity

MULTICLEAN

No (test)data on the mixture available

Reason for revision: 3.2; 8.2.2; 13.1; 15.1 Publication date: 2000-09-16 Date of revision: 2016-06-14

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Carcinoge

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Route of	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value
exposure								determination
Inhalation			0 ppm	2 year(s)		Neoplastic		Experimental
		OECD 451			(male/female)	effects		value
Inhalation	NOAEC	Equivalent to	125 ppm	2 year(s)	Mouse	Neoplastic		Experimental
		OECD 451			(male/female)	effects		value

propan-2-ol

Route of	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value
exposure								determination
Inhalation	NOEL	Equivalent to	5000 ppm	104 weeks (6h/day,	Mouse	No carcinogenic		Experimental
(vapours)		OECD 451		5 days/week)	(male/female)	effect		value

ammonia

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	- 0	Value determination
Oral	_	•	256 mg/kg hw/day	104 weeks (daily)	(No carcinogenic effect		Read-across

Judgement is based on the relevant ingredients

Conclusion

Not classified for carcinogenicity

Reproductive toxicity

MULTICLEAN

No (test)data on the mixture available

2-butoxyethanol

- Datoxyctnano								
	Parameter	Method	Value	Exposure time	Species	Effect	- 0	Value determination
								determination
Developmental toxicity	NOAEL	OECD 414	100 mg/kg	5 day(s)	Rat	Weight changes		Experimental
			bw/day					value
	NOAEC	Equivalent to	100 ppm	12 day(s)	Rabbit			Experimental
		OECD 414						value
Effects on fertility	NOAEL	Other	720 mg/kg	14 weeks	Mouse	No effect		Experimental
	(P/F1/F2)		bw/day	(daily)	(male/female)			value

propan-2-ol

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEL	Equivalent to OECD 414	400 mg/kg bw/day	10 day(s)	Rat	No effect	Foetus	Experimental value
	NOAEL	Equivalent to OECD 414	480 mg/kg bw/day	13 day(s)	Rabbit	No effect	Foetus	Experimental value
Maternal toxicity	NOAEL	Equivalent to OECD 414	400 mg/kg bw/day	10 day(s)	Rat (female)	No effect		Experimental value
Effects on fertility	NOAEL	Equivalent to OECD 415	853 mg/kg bw/day	21 day(s) - 70 day(s)	Rat (male/female)	No effect		Experimental value

ammonia

	Parameter	Method	Value	Exposure time	Species	Effect	- 0	Value determination
Developmental toxicity	NOAEL	Equivalent to OECD 414	100 mg/kg bw/day	23 day(s)	Rabbit	No effect		Read-across
Maternal toxicity	NOAEL	Equivalent to OECD 414	1 mg/kg bw/day	23 day(s)	Rabbit	No effect		Read-across
Effects on fertility	NOAEL (P)	OECD 422	1500 mg/kg bw/day	28 day(s) - 53 day(s)	Rat (male/female)	No effect		Read-across

Judgement is based on the relevant ingredients

Conclusion

Not classified for reprotoxic or developmental toxicity

Toxicity other effects

MULTICLEAN

No (test)data on the mixture available

Chronic effects from short and long-term exposure

MULTICLEAN

No effects known.

SECTION 12: Ecological information

12.1. Toxicity

Reason for revision: 3.2; 8.2.2; 13.1; 15.1 Publication date: 2000-09-16

Date of revision: 2016-06-14

Revision number: 1002 Product number: 32180 11 / 17

MULTICLEAN

No (test)data on the mixture available

2-butoxyethanol

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	1474 ppm	96 h	Oncorhynchus mykiss	Static system	Fresh water	Experimental value
Acute toxicity invertebrates	EC50	OECD 202	1550 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value
Toxicity algae and other aquatic plants	EC50	OECD 201	911 mg/l	72 h	Pseudokirchnerie Ila subcapitata	Static system	Fresh water	Experimental value
	NOEC	OECD 201	88 mg/l	72 h	Pseudokirchnerie Ila subcapitata	Static system	Fresh water	Experimental value
Long-term toxicity fish	NOEC	Equivalent to OECD 204	> 100 mg/l	21 day(s)	Danio rerio	Semi-static system	Fresh water	Experimental value
Long-term toxicity aquatic invertebrates	NOEC	OECD 211	100 mg/l	21 day(s)	1,	Semi-static system	Fresh water	Experimental value
Toxicity aquatic micro- organisms	Toxicity threshold	Other	463 mg/l	48 h		Static system	Fresh water	Experimental value

propan-2-ol

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	9640 mg/l	96 h	Pimephales promelas	Flow-through system	Fresh water	Experimental value; Lethal
Acute toxicity invertebrates	LC50	Equivalent to OECD 202	> 10000 mg/l	24 h	Daphnia magna	Static system	Fresh water	Experimental value; Locomotor effect
Toxicity algae and other aquatic plants	EC0		1800 mg/l	7 day(s)	Scenedesmus quadricauda	Static system	Fresh water	Experimental value; Toxicity test
Toxicity aquatic micro- organisms	EC50	ISO 8192	41676 mg/l	30 minutes	Bacteria			Experimental value; Activated sludge

<u>ammonia</u>

	Parameter	Method	Value	Duration	Species		Fresh/salt water	Value determination
Acute toxicity fishes	LC50		0.6 mg/l - 1.1 mg/l		l '	Flow-through system	Fresh water	Experimental value

 $\label{lem:lement} \mbox{ Judgement is based on the relevant ingredients }$

Conclusion

pH shift

Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008

12.2. Persistence and degradability

2-butoxyethanol

Biodegradation water

Method	Value	Duration	Value determination
OECD 301B: CO2 Evolution Test	90.4 %	28 day(s)	Experimental value

Phototransformation air (DT50 air)

Method	Value	Conc. OH-radicals	Value determination
AOPWIN v1.90	5.46 h	1500000 /cm³	QSAR

propan-2-ol

Biodegradation water

Method	Value	Duration	Value determination
OECD 301E: Modified OECD Screening Test	95 %	21 day(s)	Experimental value

Conclusion

The surfactant(s) is/are biodegradable

12.3. Bioaccumulative potential

MULTICLEAN

Log Kow

Method	Remark	Value	Temperature	Value determination
	Not applicable (mixture)			

2-butoxyethanol

Log Kow

Method	Remark	Value	Temperature	Value determination
			20 °C	Test data

Reason for revision: 3.2; 8.2.2; 13.1; 15.1 Publication date: 2000-09-16
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propan-2-ol

Log Kow

	Method	Remark	Value	Temperature	Value determination
	Other		0.05	25 °C	Weight of evidence approach
am	<u>monia</u>				

Log Kow

-0 -				
Method	Remark	Value	Temperature	Value determination
			25 °C	Estimated value

Conclusion

Does not contain bioaccumulative component(s)

12.4. Mobility in soil

2-butoxyethanol

Volatility (Henry's Law constant H)

Value	Method	Temperature	Remark	Value determination
0.041 atm m³/mol	Other	20 °C		Experimental value

Percent distribution

Method	Fraction air		Fraction sediment	Fraction soil	Fraction water	Value determination
Mackay level I	0.31 %	0 %	0.01 %	0.59 %	99.09 %	QSAR
Mackay level III	1.01 %	0 %	0.37 %	51.9 %	46.8 %	QSAR

Conclusion

Contains component(s) with potential for mobility in the soil

12.5. Results of PBT and vPvB assessment

Does not contain component(s) that meet(s) the criteria of PBT and/or vPvB as listed in Annex XIII of Regulation (EC) No 1907/2006.

12.6. Other adverse effects

MULTICLEAN

Fluorinated greenhouse gases (Regulation (EU) No 517/2014)

None of the known components is included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014)

Ozone-depleting potential (ODP)

Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009)

2-butoxyethanol

Ground water

Ground water pollutant

propan-2-ol

Ground water

Ground water pollutant

ammonia

Ground water

Ground water pollutant

SECTION 13: Disposal considerations

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

13.1. Waste treatment methods

13.1.1 Provisions relating to waste

Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014.

Waste material code (Directive 2008/98/EC, Decision 2000/0532/EC).

20 01 29* (separately collected fractions (except 15 01): detergents containing hazardous substances). Depending on branch of industry and production process, also other waste codes may be applicable.

13.1.2 Disposal methods

Remove waste in accordance with local and/or national regulations. Specific treatment. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Do not discharge into the sewer. Contains a component for which a prohibition exists against discharge into surface water.

13.1.3 Packaging/Container

Waste material code packaging (Directive 2008/98/EC).

15 01 10* (packaging containing residues of or contaminated by dangerous substances).

SECTION 14: Transport information

Road (ADR)

Reason for revision: 3.2; 8.2.2; 13.1; 15.1 Publication date: 2000-09-16

Date of revision: 2016-06-14

Revision number: 1002 Product number: 32180 13 / 17

.1. UN number UN number	1950
.2. UN proper shipping name	1330
Proper shipping name	Aerosols
.3. Transport hazard class(es)	ACTOSOS
Hazard identification number	
Class	2
Classification code	5F
.4. Packing group	31
Packing group	
	2.1
Labels	2.1
.5. Environmental hazards	
Environmentally hazardous substance mark	no
.6. Special precautions for user	1400
Special provisions	190
Special provisions	327
Special provisions	344
Special provisions	625
Limited quantities	Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)
RID)	, , , , , , , , , , , , , , , , , , , ,
.1. UN number	
UN number	1950
.2. UN proper shipping name	
Proper shipping name	Aerosols
.3. Transport hazard class(es)	7.0.70000
Hazard identification number	23
Class	2
Classification code	5F
	jar
.4. Packing group	
Packing group	24
Labels	2.1
.5. Environmental hazards	
Environmentally hazardous substance mark	no
.6. Special precautions for user	
Special provisions	190
Special provisions	327
Special provisions	344
Special provisions	625
Limited quantities	Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)
d waterways (ADN)	inquirus. A puckage simir not weigh more than 50 kg. (gross mass)
.1. UN number	
UN number	1950
.2. UN proper shipping name	'
Proper shipping name	Aerosols
.3. Transport hazard class(es)	1
Class	2
Classification code	
.4. Packing group	Γ
Packing group	
Labels	2.1
.5. Environmental hazards	L-1
Environmentally hazardous substance mark	no
	IIIU
.6. Special precautions for user	100
	190
Special provisions	
Special provisions	327
Special provisions Special provisions	344
Special provisions Special provisions Special provisions	344 625
Special provisions Special provisions	344 625 Combination packagings: not more than 1 liter per inner packaging for
Special provisions Special provisions Special provisions Limited quantities	344 625
Special provisions Special provisions Special provisions Limited quantities IMDG/IMSBC)	344 625 Combination packagings: not more than 1 liter per inner packaging for
Special provisions Special provisions Special provisions Limited quantities IMDG/IMSBC) 1. UN number	344 625 Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)
Special provisions Special provisions Special provisions Limited quantities IMDG/IMSBC) 1. UN number UN number	344 625 Combination packagings: not more than 1 liter per inner packaging for
Special provisions Special provisions Special provisions Limited quantities IMDG/IMSBC) 1. UN number	344 625 Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

 Reason for revision: 3.2; 8.2.2; 13.1; 15.1
 Publication date: 2000-09-16

 Date of revision: 2016-06-14

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Class	2.1
4.4. Packing group	<u> </u>
Packing group	
Labels	2.1
4.5. Environmental hazards	
Marine pollutant	-
Environmentally hazardous substance mark	no
4.6. Special precautions for user	
Special provisions	63
Special provisions	190
Special provisions	277
Special provisions	327
Special provisions	344
Special provisions	959
Limited quantities	Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)
L 4.7. Transport in bulk according to Annex II of Marpol and the I	
Annex II of MARPOL 73/78	Not applicable
•	
4.1. UN number	
4.1. UN number UN number	1950
4.1. UN number UN number	1950
4.1. UN number UN number	1950 Aerosols, flammable
4.1. UN number UN number 4.2. UN proper shipping name Proper shipping name 4.3. Transport hazard class(es)	Aerosols, flammable
4.1. UN number UN number 4.2. UN proper shipping name Proper shipping name 4.3. Transport hazard class(es) Class	
4.1. UN number UN number 4.2. UN proper shipping name Proper shipping name 4.3. Transport hazard class(es) Class	Aerosols, flammable
4.1. UN number UN number 4.2. UN proper shipping name Proper shipping name 4.3. Transport hazard class(es) Class	Aerosols, flammable
4.1. UN number UN number 4.2. UN proper shipping name Proper shipping name 4.3. Transport hazard class(es) Class 4.4. Packing group	Aerosols, flammable
4.1. UN number UN number 4.2. UN proper shipping name Proper shipping name 4.3. Transport hazard class(es) Class 4.4. Packing group Packing group Labels	Aerosols, flammable 2.1
4.1. UN number UN number 4.2. UN proper shipping name Proper shipping name 4.3. Transport hazard class(es) Class 4.4. Packing group Packing group Labels	Aerosols, flammable 2.1
4.1. UN number UN number 4.2. UN proper shipping name Proper shipping name 4.3. Transport hazard class(es) Class 4.4. Packing group Packing group Labels 4.5. Environmental hazards Environmentally hazardous substance mark	Aerosols, flammable 2.1 2.1
4.2. UN proper shipping name Proper shipping name 4.3. Transport hazard class(es) Class 4.4. Packing group Packing group Labels 4.5. Environmental hazards	Aerosols, flammable 2.1 2.1
4.1. UN number UN number 4.2. UN proper shipping name Proper shipping name 4.3. Transport hazard class(es) Class 4.4. Packing group Packing group Labels 4.5. Environmental hazards Environmentally hazardous substance mark 4.6. Special precautions for user	Aerosols, flammable 2.1 2.1 no

SECTION 15: Regulatory information

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

European legislation:

VOC content Directive 2010/75/EU

VOC content	Remark
14.5 %	
138.643 g/l	

30 kg G

Indicative occupational exposure limit values (Directive 98/24/EC, 2000/39/EC and 2009/161/EU)

Product name	Skin resorption
2-Butoxyethanol	Skin

Ingredients according to Regulation (EC) No 648/2004 and amendments

Passenger and cargo transport: limited quantities: maximum net quantity

5-15% aliphatic hydrocarbons, perfumes, limonene

REACH Annex XVII - Restriction

Contains component(s) subject to restrictions of Annex XVII of Regulation (EC) No 1907/2006: restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles.

	Designation of the substance, of the group of	Conditions of restriction
· 2-butoxyethanol · propan-2-ol · ammonia	criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008:	— games for one or more participants, or any article intended to be used as such, even with ornamental aspects, 2. Articles not complying with paragraph 1 shall not be placed on the
	types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F;	market.3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they: — can be used as fuel in decorative oil lamps for supply to the general public, and, — present an aspiration hazard and are labelled with R65 or H304,4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to

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	effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10; (c) hazard class4.1; (d) hazard class5.1.	the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).5. Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met: a) lamp oils, labelled with R65 or H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: "Keep lamps filled with this liquid out of the reach of children"; and, by 1 December 2010, "Just a sip of lamp oil — or even sucking the wick of lamps — may lead to life- threatening lung damage"; b) grill lighter fluids, labelled with R65 or H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: "Just a sip of grill lighter may lead to life threatening lung damage"; c) lamp oils and grill lighters, labelled with R65 or H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.6. No later than 1 June 2014, the Commission shall request the European Chemicals Agency to prepare a dossier, in accordance with Article 69 of the present Regulation with a view to ban if appropriate, grill lighter fluids and fuel for decorative lamps, labelled R65 or H304, intended for supply to the general public.7. Natural or legal persons placing on the market for the first time lamp oils and grill lighter fluids, labelled with R65 or H304, shall by 1 December 2011, and annually thereafter, provide data on alternatives to lamp oils and gril lighter fluids labelled R65 or H304 to the competent authority in the Member State concerned. Member States shall make those data available to the Commission.'
rpropan-2-ol	2 or 3, flammable solids category 1 or 2,	
National legislation Belgium MULTICLEAN No data available 2-butoxyethanol Résorption peau	,	fie que la résorption de l'agent, via la peau, les muqueuses ou les yeux, constitue sle. Cette résorption peut se faire tant par contact direct que par présence de
National legislation The Netherla MULTICLEAN	<u>nds</u>	
	INACA (46 - NI-46 - ol. 12 VCA	
Waste identification (the Netherlands)	LWCA (the Netherlands): KGA category 06	·
Waterbezwaarlijkheid	B (2)	

Waste identification (the	LWCA (the Netherlands): KGA category 06
Netherlands)	
Waterbezwaarlijkheid	B (2)
<u>2-butoxyethano</u> l	
Huidopname (wettelijk)	2-Butoxyethanol; H

National legislation France

MULTICLEAN

No data available

2-butoxyethanol

VME - Risque de pénétration 2-	Butoxyéthanol; PP
percutanée	

National legislation Germany MULTICLEAN

WGK

WGK	1; Classification water polluting based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 27 July 2005 (Anhang 4)
2-butoxyethanol	
TA-Luft	5.2.5
TRGS900 - Risiko der Fruchtschädigung	2-Butoxyethanol; Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes nicht befürchtet zu werden
Hautresorptive Stoffe	2-Butoxyethanol; H; Hautresorptiv

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propan-2-ol

TA-Luft 5.2.5					
TRGS900 - Risiko der	Propan-2-ol; Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen				
Fruchtschädigung	Grenzwertes nicht befürchtet zu werden				
<u>ammonia</u>					
TRGS900 - Risiko der Ammoniak; Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologis					
Fruchtschädigung Grenzwertes nicht hefürchtet zu werden					

National legislation United Kingdom

MULTICLEAN

No data available

2-butoxyethanol

·	
Skin absorption	2-Butoxyethanol; Sk

Other relevant data

MULTICLEAN

No data available

2-butoxyethanol

TLV - Carcinogen	2-Butoxyethanol (EGBE); A3				
IARC - classification	3; 2-butoxyethanol				
propan-2-ol					
TLV - Carcinogen	2-propanol; A4				
IARC - classification	3; Isopropanol				

15.2. Chemical safety assessment

No chemical safety assessment is required.

SECTION 16: Other information

Full text of any H-statements referred to under headings 2 and 3:

H220 Extremely flammable gas.

H222 Extremely flammable aerosol.

H225 Highly flammable liquid and vapour.

H229 Pressurised container: May burst if heated.

H280 Contains gas under pressure; may explode if heated.

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H336 May cause drowsiness or dizziness.

H400 Very toxic to aquatic life.

(*) = INTERNAL CLASSIFICATION BY BIG

PBT-substances = persistent, bioaccumulative and toxic substances

CLP (EU-GHS) Classification, labelling and packaging (Globally Harmonised System in Europe)

M-factor ammonia

Specific concentration limits CLP						
	ammonia	C≥5%	STOT SE 3; H335	CLP Annex VI (ATP 0)		

Acute

BIG

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