Safety data sheet
according to Regulation (EC) No 1907/2006, Annex II

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

1.1 Product identifier

Active Primer

1.2 Relevant identified uses of the substance or mixture and uses advised against
Relevant identified uses of the substance or mixture:
Priming
Primer/adhesion promoter
Uses advised against:
No information available at present.

1.3 Details of the supplier of the safety data sheet
GB

LIQUI MOLY GmbH
Jerg-Wieland-Str. 4
89081 Ulm-Lehr
Tel.: (+49) 0731-1420-0
Fax: (+49) 0731-1420-88

Qualified person's e-mail address: info@chemical-check.de, k.schnurbusch@chemical-check.de Please DO NOT use for requesting Safety Data Sheets.

1.4 Emergency telephone number
Emergency information services / official advisory body:
GB

Landspitali- The National University Hospital of Iceland, tel. +354 543 2222 or 112 (valid only for Iceland)
Telephone number of the company in case of emergencies:
+49 (0) 700 / 24 112 112 (LMR)
+1 872 5888271 (LMR)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) 1272/2008 (CLP)

Hazard class	Hazard category	Hazard statement
Flam. Liq.	2	H225-Highly flammable liquid and vapour.
Eye Irrit.	2	H319-Causes serious eye irritation.
Skin Sens.	1	H317-May cause an allergic skin reaction.
STOT SE	3	H336-May cause drowsiness or dizziness.

2.2 Label elements
Labeling according to Regulation (EC) 1272/2008 (CLP)

Danger

H225-Highly flammable liquid and vapour. H319-Causes serious eye irritation. H317-May cause an allergic skin reaction. H336-May cause drowsiness or dizziness.

P101-If medical advice is needed, have product container or label at hand. P102-Keep out of reach of children.
P210-Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P261-Avoid breathing vapours or spray. P271-Use only outdoors or in a well-ventilated area. P280-Wear protective gloves / eye protection / face protection.
P305+P351+P338-IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P312-Call a POISON CENTRE / doctor if you feel unwell.
P403+P233-Store in a well-ventilated place. Keep container tightly closed. P405-Store locked up.
P501-Dispose of contents / container to an approved waste disposal facility.

EUH066-Repeated exposure may cause skin dryness or cracking.
EUH204-Contains isocyanates. May produce an allergic reaction.

n-butyl acetate
Ethyl acetate
Butanone
2-methoxy-1-methylethyl acetate
Benzene, 2,4-diisocyanato-1-methyl-, polymer with 1,6-diisocyanatohexane

2.3 Other hazards

The mixture does not contain any vPvB substance (vPvB = very persistent, very bioaccumulative) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).
The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).
The mixture does not contain any substance with endocrine disrupting properties (< 0,1 %).

SECTION 3: Composition/information on ingredients

3.1 Substances

n.a.

3.2 Mixtures

n-butyl acetate	Substance for which an EU exposure limit value applies.
Registration number (REACH)	01-2119485493-29-XXXX
Index	607-025-00-1
EINECS, ELINCS, NLP, REACH-IT List-No.	204-658-1
CAS	123-86-4
content %	20-<40
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	EUH066 Flam. Liq. 3, H226 STOT SE 3, H336

2-methoxy-1-methylethyl acetate	Substance for which an EU exposure limit value applies.
Registration number (REACH)	---
Index	607-195-00-7
EINECS, ELINCS, NLP, REACH-IT List-No.	203-603-9
CAS	108-65-6

content %	20-<40
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Flam. Liq. 3, H226 STOT SE 3, H336

Butanone	**Substance for which an EU exposure limit value applies.**
Registration number (REACH)	---
Index	606-002-00-3
EINECS, ELINCS, NLP, REACH-IT List-No.	201-159-0
CAS	78-93-3
content %	10-<20
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	EUH066 Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336

Benzene, 2,4-diisocyanato-1-methyl-, polymer with 1,6-diisocyanatohexane	
Registration number (REACH)	---
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	927-271-6
CAS	26426-91-5
content %	1-<10
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Eye Irrit. 2, H319 Skin Sens. 1, H317

Ethyl acetate	**Substance for which an EU exposure limit value applies.**
Registration number (REACH)	01-2119475103-46-XXXX
Index	607-022-00-5
EINECS, ELINCS, NLP, REACH-IT List-No.	205-500-4
CAS	141-78-6
content %	1-<10
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	EUH066 Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336

Tris(p-isocyanatophenyl) thiophosphate	
Registration number (REACH)	01-2119948848-16-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	223-981-9
CAS	4151-51-3
content %	1-<10
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Acute Tox. 4, H302
Specific Concentration Limits and ATE	ATE (oral): 500 mg/kg

Bis(trimethoxysilylpropyl)amine	
Registration number (REACH)	01-2119969956-12-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	280-084-5
CAS	82985-35-1
content %	1-<3
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Eye Dam. 1, H318

Dibutyl hydrogen phosphate	
Registration number (REACH)	---
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	203-509-8
CAS	107-66-4
content %	1-<3
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Skin Irrit. 2, H315 Eye Dam. 1, H318

Impurities, test data and additional information may have been taken into account in classifying and labelling the product.

For the text of the H-phrases and classification codes (GHS/CLP), see Section 16.
The substances named in this section are given with their actual, appropriate classification!
For substances that are listed in appendix VI, table 3.1 of the regulation (EC) no. 1272/2008 (CLP regulation) this means that all notes that may be given here for the named classification have been taken into account.
The addition of the highest concentrations listed here can result in a classification. Only when this classification is listed in Section 2 does it apply. In all other cases the total concentration is below the classification.

SECTION 4: First aid measures

4.1 Description of first aid measures
First-aiders should ensure they are protected!
Never pour anything into the mouth of an unconscious person!

Inhalation
Remove person from danger area.
Supply person with fresh air and consult doctor according to symptoms.
If the person is unconscious, place in a stable side position and consult a doctor.

Skin contact
Remove polluted, soaked clothing immediately, wash thoroughly with plenty of water and soap, in case of irritation of the skin (flare), consult a doctor.

Eye contact
Remove contact lenses.
Wash thoroughly for several minutes using copious water. Seek medical help if necessary.

Ingestion
Rinse the mouth thoroughly with water.
Give copious water to drink - consult doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed
If applicable delayed symptoms and effects can be found in section 11 and the absorption route in section 4.1.
In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.
eyes, reddened
watering eyes
reddening of the skin
drying of the skin.
Allergic reaction
headaches
dizziness
Coordination disorders
mental confusion

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

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media
CO2
Sand
Extinction powder

Unsuitable extinguishing media
Water
High volume water jet

5.2 Special hazards arising from the substance or mixture
In case of fire the following can develop:
Oxides of carbon
Acetic acid
Oxides of sulphur
Oxides of nitrogen
Oxides of phosphorus
Possible build up of explosive/highly flammable vapour/air mixture.

5.3 Advice for firefighters

For personal protective equipment see Section 8.
In case of fire and/or explosion do not breathe fumes.
Protective respirator with independent air supply.
According to size of fire
Full protection, if necessary.
Cool container at risk with water.
Dispose of contaminated extinction water according to official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel

In case of spillage or accidental release, wear personal protective equipment as specified in section 8 to prevent contamination.
Ensure sufficient ventilation, remove sources of ignition.
Avoid dust formation with solid or powder products.
Leave the danger zone if possible, use existing emergency plans if necessary.
Avoid contact with eyes or skin.
If applicable, caution - risk of slipping.

6.1.2 For emergency responders

See section 8 for suitable protective equipment and material specifications.

6.2 Environmental precautions

If leakage occurs, dam up.
Resolve leaks if this possible without risk.
Prevent surface and ground-water infiltration, as well as ground penetration.
Prevent from entering drainage system.
If accidental entry into drainage system occurs, inform responsible authorities.

6.3 Methods and material for containment and cleaning up

Soak up with absorbent material (e.g. universal binding agent, sand, diatomaceous earth, sawdust) and dispose of according to Section 13.
Do not wash away with water or watery cleaning agents.

6.4 Reference to other sections

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

SECTION 7: Handling and storage

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

7.1 Precautions for safe handling

7.1.1 General recommendations

Ensure good ventilation.
Avoid aerosol formation.
Avoid inhalation of the vapours.
Keep away from sources of ignition - Do not smoke.
Take measures against electrostatic charging, if appropriate.
Avoid contact with eyes or skin.
Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.
Observe directions on label and instructions for use.
Use working methods according to operating instructions.

7.1.2 Notes on general hygiene measures at the workplace

General hygiene measures for the handling of chemicals are applicable.
Wash hands before breaks and at end of work.
Keep away from food, drink and animal feedingstuffs.
Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

7.2 Conditions for safe storage, including any incompatibilities

Keep out of access to unauthorised individuals.
Store product closed and only in original packing.
Not to be stored in gangways or stair wells.
Do not store with flammable or self-igniting materials.
Protect from direct sunlight and warming.
Store in a well ventilated place.
Store cool.
Observe special storage conditions.

7.3 Specific end use(s)

No information available at present.
Observe the instructions for good working practice and the recommendations for risk assessment.
Consult hazardous substance information systems, e.g. from the professional associations, the chemical industry or different industries, depending on the application (building materials, wood, chemistry, laboratory, leather, metal).
Observe special requirements for isocyanates, also within the framework of the risk assessment and definition of protective measures.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

GB	Chemical Name	n-butyl acetate	
WEL-TWA: 150 ppm (724 mg/m3) (WEL-TWA), 50 ppm (241 mg/m3) (EU)	WEL-STEL: 200 ppm (966 mg/m3) (WEL-STEL), 150 ppm (723 mg/m3) (EU)	---	
Monitoring procedures:	- Compur - KITA-138 U (548 857) - Compur - KITA-139 SB(C) (549 731) - NIOSH 1450 (ESTERS 1) - 2003 - NIOSH 2549 (VOLATILE ORGANIC COMPOUNDS (SCREENING)) - 1996 - OSHA 1009 (n-Butyl Acetate Isobutyl Acetate sec-Butyl Acetate tert-Butyl Acetate) - 2007		
BMGV: ---		Other information: ---	

GB	Chemical Name	2-methoxy-1-methylethyl acetate	
WEL-TWA: 50 ppm (274 mg/m3) (WEL-TWA), 50 ppm (275 mg/m3) (EU)	WEL-STEL: 100 ppm (548 mg/m3) (WEL-STEL), 100 ppm (550 mg/m3) (EU)	---	
Monitoring procedures:	INSHT MTA/MA-024/A92 (Determination of esters II (1-methoxy-2-propyl acetate, 2-ethoxyethyl acetate) in air - Charcoal tube method / Gas chromatography) - 1992 - EU - project BC/CEN/ENTR/000/2002-16 card 15-1 (2004) - NIOSH 2554 (GLYCOL ETHERS) - 2003 - OSHA 99 (Propylene Glycol Monomethyl Ethers/Acetates) - 1993		
BMGV: ---		Other information: Sk (WEL)	

GB	Chemical Name	Butanone	
WEL-TWA: 200 ppm (600 mg/m3) (WEL-TWA, EU)	WEL-STEL: 300 ppm (899 mg/m3) (WEL-STEL), 300 ppm (900 mg/m3) (EU)	---	
Monitoring procedures:	- Compur - KITA-122 SA(C) (549 277) - Compur - KITA-139 SB (549 731) - Compur - KITA-139 U (549 749) - DFG Meth.-Nr. 4 (D) (Loesungsmittelgemische 4), DFG (E) (Solvent mixtures 4) - 2015, 2002 - INSHT MTA/MA-031/A96 (Determination of ketones (acetone, methyl ethyl ketone, methyl isobutyl ketone) in air - Charcoal tube method / Gas chromatography) - 1996 - EU project BC/CEN/ENTR/000/2002-16 card 105-1 (2004) - MDHS 72 (Volatile organic compounds in air – Laboratory method using pumped solid sorbent tubes, thermal desorption and gas chromatography) - 1993 - NIOSH 2500 (METHYL ETHYL KETONE) - 1996 - NIOSH 2549 (VOLATILE ORGANIC COMPOUNDS (SCREENING)) - 1996 - NIOSH 2555 (KETONES I) - 2003 - NIOSH 3800 (ORGANIC AND INORGANIC GASES BY EXTRACTIVE FTIR SPECTROMETRY) - 2016 - OSHA 1004 (2-Butanone (MEK) Hexone (MIBK)) - 2000		
BMGV: 70 µmol butan-2-one/l in urine, post shift (BMGV)		Other information: Sk	

GB	Chemical Name	Benzene, 2,4-diisocyanato-1-methyl-, polymer with 1,6-diisocyanatohexane	
WEL-TWA: 0,02 mg/m3 (Isocyanates, all (as -NCO))	WEL-STEL: 0,07 mg/m3 (Isocyanates, all (as -NCO))	---	
Monitoring procedures:	- ISO 16702 (Workplace air quality – determination of total isocyanate groups in air using 2-(1-methoxyphenylpiperazine and liquid chromatography) - 2007 - MDHS 25/4 (Organic isocyanates in air – Laboratory method using sampling either onto 2-(1-methoxyphenylpiperazine coated glass fibre filters followed by solvent desorption or into impingers and analysis using high performance liquid chromatography) - 2015		
BMGV: 1 µmol isocyanate-derived diamine/mol creatinine in urine (At the end of the period of exposure)		Other information: Sen (Isocyanates, all)	

GB	Chemical Name	Ethyl acetate

WEL-TWA: 200 ppm (734 mg/m3) (WEL-TWA, EU)	WEL-STEL: 400 ppm (1468 mg/m3) (WEL-STEL, EU)	---
Monitoring procedures:	- Draeger - Ethyl Acetate 200/a (CH 20 201) - Compur - KITA-111 SA (549 160) - Compur - KITA-111 U(C) (549 178) - DFG Meth. Nr. 1 (D) (Loesungsmittelgemische 2), DFG (E) (Solvent mixtures 2) - 1993, 2002 - DFG Meth. Nr. 2 (D) (Loesungsmittelgemische 3), DFG (E) (Solvent mixtures 3) - 2014, 2002 - DFG Meth. Nr. 6 (D) (Loesungsmittelgemische 4), DFG (E) (Solvent mixtures 4) - 2014, 2002 - NIOSH 1457 (ETHYL ACETATE) - 1994 - NIOSH 2549 (VOLATILE ORGANIC COMPOUNDS (SCREENING)) - 1996	
BMGV: ---	Other information: ---	

Chemical Name	Tris(p-isocyanatophenyl) thiophosphate	
WEL-TWA: 0,02 mg/m3 (Isocyanates, all (as -NCO))	WEL-STEL: 0,07 mg/m3 (Isocyanates, all (as -NCO))	---
Monitoring procedures:	- ISO 16702 (Workplace air quality – determination of total isocyanate groups in air using 2-(1-methoxyphenylpiperazine and liquid chromatography) - 2007 - MDHS 25/4 (Organic isocyanates in air – Laboratory method using sampling either onto 2-(1-methoxyphenylpiperazine coated glass fibre filters followed by solvent desorption or into impingers and analysis using high performance liquid chromatography) - 2015	
BMGV: ---	Other information: Sen (Isocyanates, all)	

Chemical Name	Dibutyl hydrogen phosphate	
WEL-TWA: 1 ppm (8,7 mg/m3)	WEL-STEL: 2 ppm (17 mg/m3)	---
Monitoring procedures:	---	
BMGV: ---	Other information: ---	

Chemical Name	Carbon black	
WEL-TWA: 3,5 mg/m3	WEL-STEL: 7 mg/m3	---
Monitoring procedures:	---	
BMGV: ---	Other information: ---	

Chemical Name	Methanol	
WEL-TWA: 200 ppm (266 mg/m3) (WEL-TWA), 200 ppm (260 mg/m3) (EU)	WEL-STEL: 250 ppm (333 mg/m3 (WEL-STEL)	---
Monitoring procedures:	- Draeger - Alcohol 25/a Methanol (81 01 631) - Compur - KITA-119 SA (549 640) - Compur - KITA-119 U (549 657) - DFG Meth. Nr. 6 (D) (Loesungsmittelgemische 6), DFG (E) (Solvent mixtures 6) - 2013, 2002 - EU project BC/CEN/ENTR/000/2002-16 card 65-1 (2004) - NIOSH 2000 (METHANOL) - 1998 - NIOSH 2549 (VOLATILE ORGANIC COMPOUNDS (SCREENING)) - 1996 - NIOSH 3800 (ORGANIC AND INORGANIC GASES BY EXTRACTIVE FTIR SPECTROMETRY) - 2016 - Draeger - Alcohol 100/a (CH 29 701)	
BMGV: ---	Other information: Sk (WEL, EU)	

n-butyl acetate

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,18	mg/l	
	Environment - marine		PNEC	0,018	mg/l	
	Environment - periodic release		PNEC	0,36	mg/l	
	Environment - sediment, freshwater		PNEC	0,981	mg/kg	
	Environment - sediment, marine		PNEC	0,0981	mg/kg	
	Environment - soil		PNEC	0,0903	mg/kg	
	Environment - sewage treatment plant		PNEC	35,6	mg/l	
Consumer	Human - dermal	Long term, systemic effects	DNEL	3,4	mg/kg	

Consumer	Human - inhalation	Short term, systemic effects	DNEL	300	mg/m3	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	35,7	mg/m3	
Consumer	Human - inhalation	Short term, local effects	DNEL	300	mg/m3	
Consumer	Human - inhalation	Long term, local effects	DNEL	35,7	mg/m3	
Consumer	Human - dermal	Short term, systemic effects	DNEL	6	mg/kg bw/day	
Consumer	Human - oral	Long term, systemic effects	DNEL	2	mg/kg bw/day	
Consumer	Human - oral	Short term, systemic effects	DNEL	2	mg/kg bw/day	
Workers / employees	Human - inhalation	Short term, systemic effects	DNEL	600	mg/m3	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	300	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	7	mg/kg bw/d	
Workers / employees	Human - dermal	Short term, systemic effects	DNEL	11	mg/kg bw/day	
Workers / employees	Human - inhalation	Short term, local effects	DNEL	600	mg/m3	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	300	mg/m3	

2-methoxy-1-methylethyl acetate

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,635	mg/l	
	Environment - marine		PNEC	0,0635	mg/l	
	Environment - sewage treatment plant		PNEC	100	mg/l	
	Environment - sediment, freshwater		PNEC	3,29	mg/kg dw	
	Environment - sediment, marine		PNEC	0,329	mg/kg dw	
	Environment - soil		PNEC	0,29	mg/kg dw	
	Environment - oral (animal feed)		PNEC	6,35	mg/l	
	Environment - water, sporadic (intermittent) release		PNEC	6,35	mg/l	
Consumer	Human - oral	Short term, systemic effects	DNEL	500	mg/kg bw/day	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	33	mg/m3	
Consumer	Human - dermal	Long term, systemic effects	DNEL	320	mg/kg bw/day	
Consumer	Human - oral	Long term, systemic effects	DNEL	36	mg/kg bw/day	
Consumer	Human - inhalation	Long term, local effects	DNEL	33	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	796	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	275	mg/m3	
Workers / employees	Human - inhalation	Short term, local effects	DNEL	550	mg/m3	

Butanone

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	55,8	mg/l	
	Environment - marine		PNEC	55,8	mg/l	
	Environment - sediment, freshwater		PNEC	284,74	mg/kg dw	
	Environment - sediment, marine		PNEC	284,7	mg/kg dw	
	Environment - soil		PNEC	22,5	mg/kg dw	
	Environment - sewage treatment plant		PNEC	709	mg/l	
	Environment - sporadic (intermittent) release		PNEC	55,8	mg/l	
	Environment - oral (animal feed)		PNEC	1000	mg/kg	
Consumer	Human - dermal	Long term	DNEL	412	mg/kg bw/day	Overall assesment factor 2
Consumer	Human - inhalation	Long term	DNEL	106	mg/m3	Overall assesment factor 2
Consumer	Human - oral	Long term	DNEL	31	mg/kg bw/day	Overall assesment factor 2
Workers / employees	Human - dermal	Long term	DNEL	1161	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term	DNEL	600	mg/m3	

Ethyl acetate

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,24	mg/l	
	Environment - marine		PNEC	0,024	mg/l	
	Environment - water, sporadic (intermittent) release		PNEC	1,65	mg/l	
	Environment - sediment, freshwater		PNEC	1,15	mg/kg	
	Environment - sediment, marine		PNEC	0,115	mg/kg	
	Environment - soil		PNEC	0,148	mg/kg	
	Environment - sewage treatment plant		PNEC	650	mg/l	
	Environment - oral (animal feed)		PNEC	200	mg/kg	
Consumer	Human - oral	Long term, systemic effects	DNEL	4,5	mg/kg	
Consumer	Human - dermal	Long term, systemic effects	DNEL	37	mg/kg	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	367	mg/m3	
Consumer	Human - inhalation	Long term, local effects	DNEL	367	mg/m3	
Consumer	Human - inhalation	Short term, systemic effects	DNEL	734	mg/m3	
Consumer	Human - inhalation	Short term, local effects	DNEL	734	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	63	mg/kg	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	734	mg/m3	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	734	mg/m3	

Workers / employees	Human - inhalation	Short term, systemic effects	DNEL	1468	mg/m3	
Workers / employees	Human - inhalation	Short term, local effects	DNEL	1468	mg/m3	

Carbon black						
Area of application	**Exposure route / Environmental compartment**	**Effect on health**	**Descriptor**	**Value**	**Unit**	**Note**
	Environment - freshwater		PNEC	1	mg/l	
	Environment - marine		PNEC	0,1	mg/l	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	0,06	mg/m3	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	1	mg/m3	

Methanol						
Area of application	**Exposure route / Environmental compartment**	**Effect on health**	**Descriptor**	**Value**	**Unit**	**Note**
	Environment - freshwater		PNEC	154	mg/l	
	Environment - marine		PNEC	15,4	mg/l	
	Environment - sediment, freshwater		PNEC	570,4	mg/kg	
	Environment - sediment, marine		PNEC	57,04	mg/kg	
	Environment - soil		PNEC	23,5	mg/kg	
	Environment - water, sporadic (intermittent) release		PNEC	1540	mg/l	
	Environment - sewage treatment plant		PNEC	100	mg/l	
Consumer	Human - inhalation	Long term, local effects	DNEL	26	mg/m3	
Consumer	Human - inhalation	Short term, local effects	DNEL	26	mg/m3	
Consumer	Human - dermal	Short term, systemic effects	DNEL	4	mg/kg bw/day	
Consumer	Human - inhalation	Short term, systemic effects	DNEL	26	mg/m3	
Consumer	Human - oral	Short term, systemic effects	DNEL	4	mg/kg bw/day	
Consumer	Human - dermal	Long term, systemic effects	DNEL	4	mg/kg bw/day	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	26	mg/m3	
Consumer	Human - oral	Long term, systemic effects	DNEL	4	mg/kg bw/day	
Workers / employees	Human - dermal	Short term, systemic effects	DNEL	20	mg/kg bw/day	
Workers / employees	Human - inhalation	Short term, systemic effects	DNEL	130	mg/m3	
Workers / employees	Human - inhalation	Short term, local effects	DNEL	130	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	20	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	130	mg/m3	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	130	mg/m3	

GB - United Kingdom | WEL-TWA = Workplace Exposure Limit - Long-term exposure limit - 8-hour TWA (= time weighted average) reference period (EH40/2005 Workplace exposure limits (Fourth Edition 2020)).
(EU) = Directive 91/322/EEC, 98/24/EC, 2000/39/EC, 2004/37/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU or 2019/1831/EU:

(8) = Inhalable fraction (2004/37/CE, 2017/164/EU). (9) = Respirable fraction (2004/37/CE, 2017/164/EU). (11) = Inhalable fraction (2004/37/CE). (12) = Inhalable fraction. Respirable fraction in those Member States that implement, on the date of the entry into force of this Directive, a biomonitoring system with a biological limit value not exceeding 0,002 mg Cd/g creatinine in urine (2004/37/CE). |
| WEL-STEL = Workplace Exposure Limit - Short-term exposure limit - 15-minute reference period (EH40/2005 Workplace exposure limits (Fourth Edition 2020)).
(EU) = Directive 91/322/EEC, 98/24/EC, 2000/39/EC, 2004/37/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU or 2019/1831/EU:
(8) = Inhalable fraction (2004/37/EC, 2017/164/EU). (9) = Respirable fraction (2004/37/EC, 2017/164/EU). (10) = Short-term exposure limit value in relation to a reference period of 1 minute (2017/164/EU). |
| BMGV = Biological monitoring guidance value (EH40/2005 Workplace exposure limits (Fourth Edition 2020)).
(EU) = Directive 98/24/EC or 2004/37/EC or SCOEL (Biological Limit Value - BLV, Recommendation from the Scientific Committee on Occupational Exposure Limits (SCOEL)) |
| Other information (EH40/2005 Workplace exposure limits (Fourth Edition 2020)): Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.
(EU) = Directive 91/322/EEC, 98/24/EC, 2000/39/EC, 2004/37/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU or 2019/1831/EU:
(13) = The substance can cause sensitisation of the skin and of the respiratory tract (2004/37/CE), (14) = The substance can cause sensitisation of the skin (2004/37/CE). |

8.2 Exposure controls
8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction.
If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn.
Applies only if maximum permissible exposure values are listed here.
Suitable assessment methods for reviewing the effectiveness of protection measures adopted include metrological and non-metrological investigative techniques.
These are specified by e.g. EN 14042.
EN 14042 "Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents".

8.2.2 Individual protection measures, such as personal protective equipment

General hygiene measures for the handling of chemicals are applicable.
Wash hands before breaks and at end of work.
Keep away from food, drink and animal feedingstuffs.
Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

Eye/face protection:
Tight fitting protective goggles with side protection (EN 166).

Skin protection - Hand protection:
Chemical resistant protective gloves (EN ISO 374).
If applicable
Protective gloves made of fluorocarbon rubber (EN ISO 374).
Protective nitrile gloves (EN ISO 374).
Minimum layer thickness in mm:
0,5
Permeation time (penetration time) in minutes:
480
Protective hand cream recommended.
The breakthrough times determined in accordance with EN 16523-1 were not obtained under practical conditions.
The recommended maximum wearing time is 50% of breakthrough time.

Skin protection - Other:
Protective working garments (e.g. safety shoes EN ISO 20345, long-sleeved protective working garments).

Respiratory protection:
If OES or MEL is exceeded.
Filter A2 P2 (EN 14387), code colour brown, white
Observe wearing time limitations for respiratory protection equipment.

Thermal hazards:
Not applicable

Additional information on hand protection - No tests have been performed.
In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents.

Selection of materials derived from glove manufacturer's indications.
Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.
Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.
In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use.
The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

8.2.3 Environmental exposure controls
No information available at present.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	Black
Odour:	Characteristic
Melting point/freezing point:	There is no information available on this parameter.
Boiling point or initial boiling point and boiling range:	79-80,5 °C
Flammability:	There is no information available on this parameter.
Lower explosion limit:	1,8 Vol-%
Upper explosion limit:	11,5 Vol-%
Flash point:	-4 °C
Auto-ignition temperature:	There is no information available on this parameter.
Decomposition temperature:	There is no information available on this parameter.
pH:	Mixture is non-polar/aprotic.
Kinematic viscosity:	There is no information available on this parameter.
Solubility:	Mixable
Partition coefficient n-octanol/water (log value):	Does not apply to mixtures.
Vapour pressure:	105 hPa (20°C)
Density and/or relative density:	0,98-0,99 g/cm3 (20°C)
Relative vapour density:	There is no information available on this parameter.
Particle characteristics:	Does not apply to liquids.

9.2 Other information

Solvents content:	78,4 %

SECTION 10: Stability and reactivity

10.1 Reactivity
The product has not been tested.

10.2 Chemical stability
Stable with proper storage and handling.

10.3 Possibility of hazardous reactions
No dangerous reactions are known.

10.4 Conditions to avoid
See also section 7.
Heating, open flame, ignition sources
Electrostatic charge

10.5 Incompatible materials
See also section 7.
Avoid contact with strong oxidizing agents.

10.6 Hazardous decomposition products
See also section 5.2
No decomposition when used as directed.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008
Possibly more information on health effects, see Section 2.1 (classification).

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	ATE	>2000	mg/kg			calculated value
Acute toxicity, by dermal route:						n.d.a.
Acute toxicity, by inhalation:						n.d.a.
Skin corrosion/irritation:						n.d.a.
Serious eye damage/irritation:						n.d.a.
Respiratory or skin sensitisation:						n.d.a.
Germ cell mutagenicity:						n.d.a.
Carcinogenicity:						n.d.a.
Reproductive toxicity:						n.d.a.
Specific target organ toxicity - single exposure (STOT-SE):						n.d.a.
Specific target organ toxicity - repeated exposure (STOT-RE):						n.d.a.
Aspiration hazard:						n.d.a.
Symptoms:						n.d.a.

n-butyl acetate

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	10760-13100	mg/kg	Rat	OECD 423 (Acute Oral Toxicity - Acute Toxic Class Method)	
Acute toxicity, by dermal route:	LD50	>14112	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	>21,1	mg/l/4h	Rat	OECD 403 (Acute Inhalation Toxicity)	Vapours
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant, Repeated exposure may cause skin dryness or cracking.
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	No (skin contact)
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Reproductive toxicity:	NOAEC	9640	mg/m3		OECD 416 (Two-generation Reproduction Toxicity Study)	Negative
Specific target organ toxicity - single exposure (STOT-SE):						Vapours may cause drowsiness and dizziness.
Specific target organ toxicity - repeated exposure (STOT-RE):						Negative
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOAEC	500	ppm	Rat		
Symptoms:						drowsiness, unconsciousness, headaches, drowsiness, mucous membrane irritation, dizziness, nausea and vomiting.

2-methoxy-1-methylethyl acetate

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>5000	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	>23,5	mg/l/6h	Rat	OECD 403 (Acute Inhalation Toxicity)	Vapours
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	No (skin contact)
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Germ cell mutagenicity:				Mammalian	OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	NegativeChinese hamster
Germ cell mutagenicity:				Rat	OECD 482 (Gen. Tox. - DNA Damage and Repair, Unscheduled DNA Synthesis in Mammalian Cells In Vitro)	Negative
Carcinogenicity:	NOAEL	~ 3690	mg/m3	Rat		Analogous conclusionvapour
Reproductive toxicity:	NOAEL	300-1000	ppm	Rat	OECD 416 (Two-generation Reproduction Toxicity Study)	Analogous conclusionvapour
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	>= 1000	mg/kg	Rat	OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Developm. Tox. Screening Test)	
Specific target organ toxicity - repeated exposure (STOT-RE), dermal:	NOAEL	>= 1000	mg/kg bw/d	Rabbit	OECD 410 (Repeated Dose Dermal Toxicity - 90-Day)	Analogous conclusion
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOEL	300	ppm	Rat	OECD 453 (Combined Chronic Toxicity/Carcinogenicity Studies)	Vapours, Analogous conclusion
Symptoms:						respiratory distress, drowsiness, unconsciousness, vomiting, headaches, mucous membrane irritation, dizziness, nausea

Butanone

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>2000	mg/kg	Rat	OECD 423 (Acute Oral Toxicity - Acute Toxic Class Method)	
Acute toxicity, by dermal route:	LD50	5000	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	34-34,5	mg/l/4h	Rat		

Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant, Repeated exposure may cause skin dryness or cracking.
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Eye Irrit. 2
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Not sensitizising
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Germ cell mutagenicity:				Mouse	OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative
Germ cell mutagenicity:				Mouse	OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative
Reproductive toxicity (Developmental toxicity):	NOAEC	1002	ppm	Rat	OECD 414 (Prenatal Developmental Toxicity Study)	Negative
Specific target organ toxicity - single exposure (STOT-SE):						STOT SE 3, H336, May cause drowsiness or dizziness.
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOAEC	5041	ppm/6h/d	Rat	OECD 413 (Subchronic Inhalation Toxicity - 90-Day Study)	Vapours, Negative
Symptoms:						respiratory distress, drowsiness, unconsciousness, drop in blood pressure, coughing, headaches, cramps, intoxication, drowsiness, mucous membrane irritation, dizziness, nausea and vomiting., mental confusion, fatigue

Ethyl acetate

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	4934	mg/kg	Rabbit	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>20000	mg/kg	Rabbit		
Acute toxicity, by inhalation:	LC0	29,3	mg/l/4h	Rat		Vapours
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant, Repeated exposure may cause skin dryness or cracking.
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Eye Irrit. 2
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	No (skin contact)

Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Germ cell mutagenicity:				Mammalian	OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	Negative
Germ cell mutagenicity:				Mammalian	OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative
Carcinogenicity:						Negative
Reproductive toxicity:						Negative
Specific target organ toxicity - single exposure (STOT-SE):						STOT SE 3, H336, May cause drowsiness or dizziness.
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	900	mg/kg bw/d	Rat	Regulation (EC) 440/2008 B.26 (SUB-CHRONIC ORAL TOXICITY TEST REPEATED DOSE 90 - DAY (RODENTS))	
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOAEL	0,002	mg/kg	Rat	Regulation (EC) 440/2008 B.29 (SUB-CHRONIC INHALATION TOXICITY STUDY 90-DAY REPEATED (RODENTS))	
Aspiration hazard:						No
Symptoms:						lack of appetite, breathing difficulties, drowsiness, unconsciousness, drop in blood pressure, cornea opacity, coughing, headaches, gastrointestinal disturbances, intoxication, drowsiness, mucous membrane irritation, dizziness, salivation, nausea and vomiting., fatigue

Tris(p-isocyanatophenyl) thiophosphate

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	ATE	500	mg/kg			
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	No (skin contact)
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOAEL	0,0028	mg/l/6h/d	Rat	OECD 412 (Subacute Inhalation Toxicity - 28-Day Study)	Aerosol

Bis(trimethoxysilylpropyl)amine

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	4850	mg/kg	Rat		

Acute toxicity, by dermal route:	LD50	11752	mg/kg	Rat		Female
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Eye Dam. 1
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	No (skin contact)
Germ cell mutagenicity:				Mouse	OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Germ cell mutagenicity:					OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative Chinese hamster
Germ cell mutagenicity:					OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	Negative Chinese hamster
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	1000	mg/kg	Rat	OECD 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents)	
Symptoms:						dizziness, nausea, abdominal pain

Dibutyl hydrogen phosphate

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	3200	mg/kg	Rat		
Respiratory or skin sensitisation:					OECD 406 (Skin Sensitisation)	Not sensitizising
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Symptoms:						breathing difficulties, cornea opacity, mucous membrane irritation

Carbon black

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>2000	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>3000	mg/kg			
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Not sensitizising
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Carcinogenicity:				Mouse		Negative
Specific target organ toxicity - repeated exposure (STOT-RE):	NOEL	0,0011	mg/l			References, Target organ(s): lung(90d)
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	137	mg/kg	Mouse		

Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	52	mg/kg	Rat		
Aspiration hazard:						No

Methanol						
Toxicity / effect	**Endpoint**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
Acute toxicity, by oral route:	ATE	300	mg/kg	Human being		Experiences on persons.
Acute toxicity, by dermal route:	LD50	17100	mg/kg	Rabbit		Does not conform with EU classification.
Acute toxicity, by dermal route:	ATE	300	mg/kg			
Acute toxicity, by inhalation:	ATE	3	mg/l/4h			Vapours
Acute toxicity, by inhalation:	ATE	0,5	mg/l/4h			Dusts or mist
Skin corrosion/irritation:				Rabbit		Not irritantBASF-Test
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	No (skin contact)
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Germ cell mutagenicity:				Mammalian	OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative
Germ cell mutagenicity:				Mouse	OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative
Carcinogenicity:				Mouse	OECD 453 (Combined Chronic Toxicity/Carcinogenicity Studies)	Negative
Reproductive toxicity:	NOAEL	1,3	mg/l	Mouse	OECD 416 (Two-generation Reproduction Toxicity Study)	
Specific target organ toxicity - repeated exposure (STOT-RE):	NOAEL	0,13	mg/l	Rat	OECD 453 (Combined Chronic Toxicity/Carcinogenicity Studies)	
Symptoms:						abdominal pain, vomiting, headaches, gastrointestinal disturbances, drowsiness, visual disturbances, watering eyes, nausea, mental confusion, intoxication, dizziness

11.2. Information on other hazards

Active Primer						
Toxicity / effect	**Endpoint**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
Endocrine disrupting properties:						Does not apply to mixtures.

Other information:						No other relevant information available on adverse effects on health.

SECTION 12: Ecological information

Possibly more information on environmental effects, see Section 2.1 (classification).

Active Primer

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:							n.d.a.
12.1. Toxicity to daphnia:							n.d.a.
12.1. Toxicity to algae:							n.d.a.
12.2. Persistence and degradability:							n.d.a.
12.3. Bioaccumulative potential:							n.d.a.
12.4. Mobility in soil:							n.d.a.
12.5. Results of PBT and vPvB assessment							n.d.a.
12.6. Endocrine disrupting properties:							Does not apply to mixtures.
12.7. Other adverse effects:							No information available on other adverse effects on the environment.
Other information:							DOC-elimination degree(complexing organic substance)>= 80%/28d: n.a.
Other information:	AOX		0	%			According to the recipe, contains no AOX.

n-butyl acetate

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	18	mg/l	Pimephales promelas	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	48h	44	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	23	mg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	
12.1. Toxicity to algae:	EC50	72h	397	mg/l	Scenedesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	NOEC/NOEL	72h	200	mg/l	Desmodesmus subspicatus		
12.2. Persistence and degradability:		28d	98	%		OECD 301 D (Ready Biodegradability - Closed Bottle Test)	Readily biodegradable
12.3. Bioaccumulative potential:	Log Pow		1,78 - 2,3				Low

12.3. Bioaccumulative potential:	BCF		15,3				
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC10		959	mg/l	Pseudomonas putida		

2-methoxy-1-methylethyl acetate

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	100-180	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to fish:	NOEC/NOEL	14d	47,5	mg/l	Oryzias latipes	OECD 204 (Fish, Prolonged Toxicity Test - 14-Day Study)	
12.1. Toxicity to daphnia:	EC50	48h	>500	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	>100	mg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	
12.1. Toxicity to algae:	EC50	72h	>1000	mg/l	Selenastrum capricornutum	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	83-90	%	activated sludge	OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	Readily biodegradable
12.3. Bioaccumulative potential:	Log Kow		1,2			OECD 117 (Partition Coefficient (n-octanol/water) - HPLC method)	A notable biological accumulation potential is not to be expected (LogPow 1-3).20 °C, pH 6.8
12.4. Mobility in soil:	Koc		1,7-3,998				
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC10	30min	>1000	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	
Other information:							Does not contain any organically bound halogens which can contribute to the AOX value in waste water.

Butanone

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	1690	mg/l	Lepomis macrochirus		

12.1. Toxicity to fish:	LC50	96h	2993	mg/l	Pimephales promelas	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	48h	308	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EC50	72h	1972	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	EC50	96h	2029	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	98	%		OECD 301 D (Ready Biodegradability - Closed Bottle Test)	Readily biodegradable
12.3. Bioaccumulative potential:	Log Pow		0,29-0,3			OECD 117 (Partition Coefficient (n-octanol/water) - HPLC method)	Bioaccumulation is unlikely (LogPow < 1).
12.4. Mobility in soil:	H (Henry)		0,0000244				25°C
12.4. Mobility in soil:	Log Koc		3,8				
12.5. Results of PBT and vPvB assessment							No vPvB substance, No PBT substance
Toxicity to bacteria:	EC0	16h	1150	mg/l	Pseudomonas putida	DIN 38412 T.8	
Other information:	DOC		>70	%			
Other information:	BOD/COD		>50	%			

Ethyl acetate

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	NOEC/NOEL	32d	<9,65	mg/l	Pimephales promelas		
12.1. Toxicity to fish:	LC50	96h	230	mg/l	Pimephales promelas		
12.1. Toxicity to fish:	LC50	48h	333	mg/l	Leuciscus idus		
12.1. Toxicity to daphnia:	EC50	48h	610	mg/l	Daphnia magna	DIN 38412 T.11	
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	2,4	mg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	
12.1. Toxicity to daphnia:	EC50	48h	165	mg/l			Daphnia cucullata
12.1. Toxicity to algae:	EC50	48h	5600	mg/l	Desmodesmus subspicatus	DIN 38412 T.9	
12.1. Toxicity to algae:	NOEC/NOEL	96h	2000	mg/l	Scenedesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	EC50	96h	>2000	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	NOEC/NOEL	72h	>100	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	EC50	48h	3300	mg/l	Scenedesmus subspicatus		
12.2. Persistence and degradability:		20d	79	%		OECD 301 D (Ready Biodegradability - Closed Bottle Test)	Readily biodegradable

12.3. Bioaccumulative potential:	BCF	72h	30				(Fish)
12.3. Bioaccumulative potential:	Log Kow		0,68			OECD 107 (Partition Coefficient (n-octanol/water) - Shake Flask Method)	Bioaccumulation is unlikely (LogPow < 1).25 °C
12.4. Mobility in soil:	H (Henry)		0,00012	atm*m3/mol			
12.4. Mobility in soil:	Koc		3				
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC10	16h	2900	mg/l	Escherichia coli		
Toxicity to bacteria:	EC50	15min	5870	mg/l	Photobacterium phosphoreum		
Toxicity to bacteria:	EC10	18h	2900	mg/l	Pseudomonas putida	DIN 38412 T.8	

Tris(p-isocyanatophenyl) thiophosphate

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	>100	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	NOEC/NOEL	48h	>100	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EC50	72h	>100	mg/l	Desmodesmus subspicatus	U.S. EPA-600/9-78-018	
12.2. Persistence and degradability:		28d	58	%		OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	
Other information:	BOD5		71,3	mg/l			

Bis(trimethoxysilylpropyl)amine

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	130	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to fish:	NOEC/NOEL	96h	100	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	48h	>100	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EC50	72h	>100	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	11-20	%	activated sludge	OECD 301 D (Ready Biodegradability - Closed Bottle Test)	Not readily biodegradable
12.3. Bioaccumulative potential:							Not to be expected
12.4. Mobility in soil:							Adsorption in ground., Low

12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC50	3h	1000	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	

Dibutyl hydrogen phosphate

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC0	96h	>10000	mg/l	Brachydanio rerio		
12.2. Persistence and degradability:		28d	>98	%		Zahn-Wellens-Test	

Carbon black

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	>1000	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	24h	>5600	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	NOEC/NOEL	3d	10000	mg/l	Scenedesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:							Not biodegradable
12.3. Bioaccumulative potential:							Not to be expected
Toxicity to bacteria:	EC0	3h	>=800	mg/l	activated sludge	Regulation (EC) 440/2008 C.22 (SOIL MICROORGANISMS - CARBON TRANSFORMATION TEST)	
Water solubility:							Insoluble, Product floats on the water surface.

Methanol

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	15400	mg/l	Lepomis macrochirus		EPA-660/3-75-009
12.1. Toxicity to daphnia:	EC50	96h	18260	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EC50	96h	22000	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	99	%		OECD 301 D (Ready Biodegradability - Closed Bottle Test)	Readily biodegradable
12.3. Bioaccumulative potential:	BCF		28400		Chlorella vulgaris		Not to be expected

12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	IC50	3h	>1000	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	
Other information:	Log Pow		-0,77				
Other information:	DOC		<70	%			
Other information:	BOD		>60	%			

SECTION 13: Disposal considerations

13.1 Waste treatment methods

For the substance / mixture / residual amounts

EC disposal code no.:
The waste codes are recommendations based on the scheduled use of this product.
Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2014/955/EU)
08 04 09 waste adhesives and sealants containing organic solvents or other hazardous substances
Recommendation:
Sewage disposal shall be discouraged.
Pay attention to local and national official regulations.
E.g. suitable incineration plant.

For contaminated packing material

Pay attention to local and national official regulations.
15 01 01 paper and cardboard packaging
15 01 02 plastic packaging
15 01 04 metallic packaging
Empty container completely.
Uncontaminated packaging can be recycled.
Dispose of packaging that cannot be cleaned in the same manner as the substance.

SECTION 14: Transport information

General statements

Transport by road/by rail (ADR/RID)

14.1. UN number or ID number:	1866
14.2. UN proper shipping name:	
UN 1866 RESIN SOLUTION	
14.3. Transport hazard class(es):	3
14.4. Packing group:	II
14.5. Environmental hazards:	Not applicable
Tunnel restriction code:	D/E
Classification code:	F1
LQ:	5 L
Transport category:	2

Transport by sea (IMDG-code)

14.1. UN number or ID number:	1866
14.2. UN proper shipping name:	
UN 1866 RESIN SOLUTION	
14.3. Transport hazard class(es):	3
14.4. Packing group:	II
14.5. Environmental hazards:	Not applicable
Marine Pollutant:	Not applicable
EmS:	F-E, S-E

Transport by air (IATA)

14.1. UN number or ID number: 1866
14.2. UN proper shipping name:
UN 1866 Resin solution

14.3. Transport hazard class(es): 3
14.4. Packing group: II
14.5. Environmental hazards: Not applicable

14.6. Special precautions for user

Persons employed in transporting dangerous goods must be trained.
All persons involved in transporting must observe safety regulations.
Precautions must be taken to prevent damage.

14.7. Maritime transport in bulk according to IMO instruments

Freighted as packaged goods rather than in bulk, therefore not applicable.
Minimum amount regulations have not been taken into account.
Danger code and packing code on request.
Comply with special provisions.

SECTION 15: Regulatory information

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

Observe restrictions:
Comply with national regulations/laws governing the protection of young people at work (national implementation of the Directive 94/33/EC)!
Regulation (EC) No 1907/2006, Annex XVII
Benzene, 2,4-diisocyanato-1-methyl-, polymer with 1,6-diisocyanatohexane
Comply with national regulations/laws governing maternity protection (national implementation of the Directive 92/85/EEC)!
Comply with trade association/occupational health regulations.

Directive 2012/18/EU ("Seveso III"), Annex I, Part 1 - The following categories apply to this product (others may also need to be considered according to storage, handling etc.):

Hazard categories	Notes to Annex I	Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of - Lower-tier requirements	Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of - Upper-tier requirements
P5c		5000	50000

The Notes to Annex 1 of Directive 2012/18/EU, in particular those named in the tables here and notes 1-6, must be taken into account when assigning categories and qualifying quantities.

Directive 2010/75/EU (VOC): 78,72 %

National requirements/regulations on safety and health protection must be applied when using work equipment.

15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

Revised sections: 2
Employee training in handling dangerous goods is required.
These details refer to the product as it is delivered.
Employee instruction/training in handling hazardous materials is required.

Classification and processes used to derive the classification of the mixture in accordance with the ordinance (EG) 1272/2008 (CLP):

Classification in accordance with regulation (EC) No. 1272/2008 (CLP)	Evaluation method used
Flam. Liq. 2, H225	Classification based on test data.
Eye Irrit. 2, H319	Classification according to calculation procedure.

Skin Sens. 1, H317	Classification according to calculation procedure.
STOT SE 3, H336	Classification according to calculation procedure.

The following phrases represent the posted Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents.
H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
EUH066 Repeated exposure may cause skin dryness or cracking.

Flam. Liq. — Flammable liquid
Eye Irrit. — Eye irritation
Skin Sens. — Skin sensitization
STOT SE — Specific target organ toxicity - single exposure - narcotic effects
Acute Tox. — Acute toxicity - oral
Eye Dam. — Serious eye damage
Skin Irrit. — Skin irritation

Key literature references and sources for data:

Regulation (EC) No 1907/2006 (REACH) and Regulation (EC) No 1272/2008 (CLP) as amended.
Guidelines for the preparation of safety data sheets as amended (ECHA).
Guidelines on labelling and packaging according to the Regulation (EG) Nr. 1272/2008 (CLP) as amended (ECHA).
Safety data sheets for the constituent substances.
ECHA Homepage - Information about chemicals.
GESTIS Substance Database (Germany).
German Environment Agency "Rigoletto" information site on substances that are hazardous to water (Germany).
EU Occupation Exposure Limits Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, (EU) 2017/164, (EU) 2019/1831, each as amended.
National Lists of Occupational Exposure Limits for each country as amended.
Regulations on the transport of hazardous goods by road, rail, sea and air (ADR, RID, IMDG, IATA) as amended.

Any abbreviations and acronyms used in this document:

acc., acc. to according, according to
ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)
AOX Adsorbable organic halogen compounds
approx. approximately
Art., Art. no. Article number
ASTM ASTM International (American Society for Testing and Materials)
ATE Acute Toxicity Estimate
BAM Bundesanstalt für Materialforschung und -prüfung (= Federal Institute for Materials Research and Testing, Germany)
BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)
BCF Bioconcentration factor
BSEF The International Bromine Council
CAS Chemical Abstracts Service
CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)
CMR carcinogenic, mutagenic, reproductive toxic
DMEL Derived Minimum Effect Level
DNEL Derived No Effect Level
DOC Dissolved organic carbon
e.g. for example (abbreviation of Latin 'exempli gratia'), for instance
EbCx, EyCx, EbLx (x = 10, 50) Effect Concentration/Level of x % on reduction of the biomass (algae, plants)
EC European Community
ECHA European Chemicals Agency

ECx, ELx (x = 0, 3, 5, 10, 20, 50, 80, 100) Effect Concentration/Level for x % effect
EEC European Economic Community
EINECS European Inventory of Existing Commercial Chemical Substances
ELINCS European List of Notified Chemical Substances
EN European Norms
EPA United States Environmental Protection Agency (United States of America)
ErCx, EμCx, ErLx (x = 10, 50) Effect Concentration/Level of x % on inhibition of the growth rate (algae, plants)
etc. et cetera
EU European Union
EVAL Ethylene-vinyl alcohol copolymer
Fax. Fax number
gen. general
GHS Globally Harmonized System of Classification and Labelling of Chemicals
GWP Global warming potential
Koc Adsorption coefficient of organic carbon in the soil
Kow octanol-water partition coefficient
IARC International Agency for Research on Cancer
IATA International Air Transport Association
IBC (Code) International Bulk Chemical (Code)
IMDG-code International Maritime Code for Dangerous Goods
incl. including, inclusive
IUCLID International Uniform Chemical Information Database
IUPAC International Union for Pure Applied Chemistry
LC50 Lethal Concentration to 50 % of a test population
LD50 Lethal Dose to 50% of a test population (Median Lethal Dose)
Log Koc Logarithm of adsorption coefficient of organic carbon in the soil
Log Kow, Log Pow Logarithm of octanol-water partition coefficient
LQ Limited Quantities
MARPOL International Convention for the Prevention of Marine Pollution from Ships
mg/kg bw mg/kg body weight
mg/kg bw/d, mg/kg bw/day mg/kg body weight/day
mg/kg dw mg/kg dry weight
mg/kg wwt mg/kg wet weight
n.a. not applicable
n.av. not available
n.c. not checked
n.d.a. no data available
NIOSH National Institute for Occupational Safety and Health (USA)
NLP No-longer-Polymer
NOEC, NOEL No Observed Effect Concentration/Level
OECD Organisation for Economic Co-operation and Development
org. organic
OSHA Occupational Safety and Health Administration (USA)
PBT persistent, bioaccumulative and toxic
PE Polyethylene
PNEC Predicted No Effect Concentration
ppm parts per million
PVC Polyvinylchloride
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)
REACH-IT List-No. 6/7/8/9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS No. or other numerical identifier. List Numbers do not have any legal significance, rather they are purely technical identifiers for processing a submission via REACH-IT.
RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)
SVHC Substances of Very High Concern
Tel. Telephone
TOC Total organic carbon
UN RTDG United Nations Recommendations on the Transport of Dangerous Goods
VOC Volatile organic compounds
vPvB very persistent and very bioaccumulative

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.

No responsibility.
These statements were made by:
Chemical Check GmbH, Chemical Check Platz 1-7, D-32839 Steinheim, Tel.: +49 5233 94 17 0, Fax: +49 5233 94 17 90