Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 08.09.2022 Version number 6 (replaces version 5) Revision: 08.09.2022

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

· **1.1 Product identifier**
· Trade name: **Lettering Colour Thinner**

· Article number: 11415
· UFI: E9T6-S0E1-3007-RSJW
· **1.2 Relevant identified uses of the substance or mixture and uses advised against** No further relevant information available.
· Application of the substance / the mixture Thinner, Diluent

· **1.3 Details of the supplier of the safety data sheet**
· Manufacturer/Supplier: AKEMI chemisch technische Spezialfabrik GmbH
Lechstrasse 28
D 90451 Nürnberg
Tel. +49(0)911-642960
Fax. +49(0)911-644456
e-mail info@akemi.de

· Further information obtainable from: Laboratory
· **1.4 Emergency telephone number:** Product Safety Department AKEMI chemisch technische Spezialfabrik GmbH
Tel. +49(0)911-64296-59
Reachable during the following office hours:
Monday – Thursday from 07:30 a.m. to 16:30 p.m.
Friday from 07:30 a.m. to 13:30 p.m.

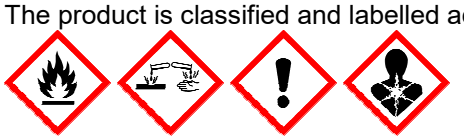
SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· Classification according to Regulation (EC) No 1272/2008

Flam. Liq. 3	H226	Flammable liquid and vapour.
Skin Irrit. 2	H315	Causes skin irritation.
Eye Dam. 1	H318	Causes serious eye damage.
STOT SE 3	H335-H336	May cause respiratory irritation. May cause drowsiness or dizziness.
STOT RE 2	H373	May cause damage to organs through prolonged or repeated exposure.
Asp. Tox. 1	H304	May be fatal if swallowed and enters airways.

· Response: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
IF exposed or concerned: Get medical advice/attention.
· Storage: Store in a well-ventilated place. Keep container tightly closed.
Store locked up.

· **2.2 Label elements**
· Labelling according to Regulation (EC) No 1272/2008 The product is classified and labelled according to the CLP regulation.
· Hazard pictograms



GHS02 GHS05 GHS07 GHS08

· Signal word Danger

· Hazard-determining components of labelling: reaction mass of ethylbenzole and xylole

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butanol
1-methoxy-2-propanol
n-butyl acetate

· Hazard statements
H226 Flammable liquid and vapour.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.
H373 May cause damage to organs through prolonged or repeated exposure.
H304 May be fatal if swallowed and enters airways.

· Precautionary statements
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read carefully and follow all instructions.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260 Do not breathe mist/vapours/spray.
P280 Wear protective gloves / eye protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P331 Do NOT induce vomiting.
P302+P352 IF ON SKIN: Wash with plenty of water.
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 CENTER/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 in accordance with local/ regional/national/international regulations.

· **2.3 Other hazards**
· Results of PBT and vPvB assessment
· PBT: Not applicable.
· vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**
· Description: Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

107-98-2	1-methoxy-2-propanol Flam. Liq. 3, H226 STOT SE 3, H336	25-50%
123-86-4	n-butyl acetate Flam. Liq. 3, H226 STOT SE 3, H336 EUH066	25-50%
	reaction mass of ethylbenzole and xylole Flam. Liq. 3, H226 STOT RE 2, H373; Asp. Tox. 1, H304 Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	12.5-25%
71-36-3	butanol Flam. Liq. 3, H226 Eye Dam. 1, H318 Acute Tox. 4, H302; Skin Irrit. 2, H315; STOT SE 3, H335-H336	1-5%

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112-07-2	2-butoxyethyl acetate Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332	1-5%
1589-47-5	2-methoxypropanol Flam. Liq. 3, H226 Repr. 1B, H360D Eye Dam. 1, H318 Skin Irrit. 2, H315; STOT SE 3, H335	<1%

· Additional information: For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**

· General information: Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
Immediately remove any clothing soiled by the product.
Take affected persons out into the fresh air.
Position and transport stably in side position.

· After inhalation: Supply fresh air. If required, provide artificial respiration. Keep patient warm.
Consult doctor if symptoms persist.
In case of unconsciousness place patient stably in side position for transportation.

· After skin contact: Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.

· After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.

· After swallowing: Rinse out mouth and then drink plenty of water.
Do not induce vomiting; call for medical help immediately.

· **4.2 Most important symptoms and effects, both acute and delayed**
Breathing difficulty
Headache
Dizziness
Dizziness
Nausea

· Hazards Danger of impaired breathing.

· **4.3 Indication of any immediate medical attention and special treatment needed** If swallowed, gastric irrigation with added, activated carbon.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**

· Suitable extinguishing agents: CO2, sand, extinguishing powder. Do not use water.

· For safety reasons unsuitable extinguishing agents: Water with full jet

· **5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
In case of fire, the following can be released:
Carbon monoxide (CO)
Under certain fire conditions, traces of other toxic gases cannot be excluded.

· **5.3 Advice for firefighters**

· Protective equipment: Wear self-contained respiratory protective device.
Do not inhale explosion gases or combustion gases.
Wear fully protective suit.

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· Additional information: Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Collect contaminated fire fighting water separately. It must not enter the sewage system.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**: Wear protective equipment. Keep unprotected persons away.
Remove persons from danger area.
Ensure adequate ventilation
Keep away from ignition sources.
Use respiratory protective device against the effects of fumes/dust/aerosol.

· **6.2 Environmental precautions:** Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.

· **6.3 Methods and material for containment and cleaning up:** Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents

· **6.4 Reference to other sections** See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**: Keep receptacles tightly sealed.
Store in cool, dry place in tightly closed receptacles.
Keep away from heat and direct sunlight.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
Use only in well ventilated areas.

· Information about fire - and explosion protection: Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Protect from heat.

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

· Storage:

· Requirements to be met by storerooms and receptacles: Store in a cool location.
Store only in the original receptacle.
Prevent any seepage into the ground.

· Information about storage in one common storage facility: Store away from oxidising agents.
Store away from foodstuffs.

· Further information about storage conditions: Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.

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Protect from heat and direct sunlight.
Store receptacle in a well ventilated area.

· Storage class: 3
· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· Ingredients with limit values that require monitoring at the workplace:

107-98-2 1-methoxy-2-propanol	
IOELV	Short-term value: 568 mg/m³, 150 ppm Long-term value: 375 mg/m³, 100 ppm Skin
123-86-4 n-butyl acetate	
IOELV	Short-term value: 723 mg/m³, 150 ppm Long-term value: 241 mg/m³, 50 ppm
reaction mass of ethylbenzole and xylole	
AGW	Short-term value: 442 mg/m³, 100 ppm Long-term value: 221 mg/m³, 50 ppm H
112-07-2 2-butoxyethyl acetate	
IOELV	Short-term value: 333 mg/m³, 50 ppm Long-term value: 133 mg/m³, 20 ppm Skin

· DNELs

107-98-2 1-methoxy-2-propanol		
Oral	DNEL (Langzeit-wiederholt)	33 mg/kg bw/day (BEV)
Dermal	DNEL (Langzeit-wiederholt)	183 mg/kg bw/day (ARB)
		78 mg/kg bw/day (BEV)
Inhalative	DNEL (Kurzzeit-akut)	553.5 mg/m³ Air (ARB)
	DNEL (Langzeit-wiederholt)	369 mg/m³ Air (ARB)
		43.9 mg/m³ Air (BEV)
123-86-4 n-butyl acetate		
Oral	DNEL (Kurzzeit-akut)	2 mg/kg bw/day (BEV)
	DNEL (Langzeit-wiederholt)	2 mg/kg bw/day (BEV)
Dermal	DNEL (Kurzzeit-akut)	11 mg/kg bw/day (ARB)
		6 mg/kg bw/day (BEV)
	DNEL (Langzeit-wiederholt)	7 mg/kg bw/day (ARB)
		3.4 mg/kg bw/day (BEV)
Inhalative	DNEL (Kurzzeit-akut)	600 mg/m³ Air (ARB)
		300 mg/m³ Air (BEV)
	DNEL (Langzeit-wiederholt)	48-300 mg/m³ Air (ARB)
		12-35.7 mg/m³ Air (BEV)
reaction mass of ethylbenzole and xylole		
Oral	DNEL (Langzeit-wiederholt)	1.6 mg/kg bw/day (BEV)
Dermal	DNEL (Langzeit-wiederholt)	180 mg/kg bw/day (ARB)
		108 mg/kg bw/day (BEV)
Inhalative	DNEL (Kurzzeit-akut)	289-442 mg/m³ Air (ARB)

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	DNEL (Langzeit-wiederholt)	174 mg/m³ Air (BEV) 77-221 mg/m³ Air (ARB) 14.8-65.3 mg/m³ Air (BEV)
71-36-3 butanol		
Oral	DNEL (Langzeit-wiederholt)	3.125 mg/kg bw/day (BEV)
Dermal	DNEL (Langzeit-wiederholt)	3,125 mg/kg bw/day (BEV)
Inhalative	DNEL (Langzeit-wiederholt)	310 mg/m³ Air (ARB) 55 mg/m³ Air (BEV)
112-07-2 2-butoxyethyl acetate		
Oral	DNEL (Kurzzeit-akut)	36 mg/kg bw/day (BEV)
	DNEL (Langzeit-wiederholt)	8.6 mg/kg bw/day (BEV)
Dermal	DNEL (Kurzzeit-akut)	120 mg/kg bw/day (ARB) 72 mg/kg bw/day (BEV)
	DNEL (Langzeit-wiederholt)	169 mg/kg bw/day (ARB) 102 mg/kg bw/day (BEV)
Inhalative	DNEL (Kurzzeit-akut)	333 mg/m³ Air (ARB) 200 mg/m³ Air (BEV)
	DNEL (Langzeit-wiederholt)	133 mg/m³ Air (ARB) 80 mg/m³ Air (BEV)

· PNECs

107-98-2 1-methoxy-2-propanol	
PNEC (wässrig)	100 mg/l (KA) 1 mg/l (MW) 10 mg/l (SW) 100 mg/l (WAS)
PNEC (fest)	2.47 mg/kg Trockengew (BO) 4.17 mg/kg Trockengew (MWS) 41.6 mg/kg Trockengew (SWS)
123-86-4 n-butyl acetate	
PNEC (wässrig)	35.6 mg/l (KA) 0.018 mg/l (MW) 0.18 mg/l (SW) 0.36 mg/l (WAS)
PNEC (fest)	0.0903 mg/kg Trockengew (BO) 0.0981 mg/kg Trockengew (MWS) 0.981 mg/kg Trockengew (SWS)
reaction mass of ethylbenzole and xylole	
PNEC (wässrig)	6.58 mg/l (KA) 0.327 mg/l (MW) 0.327 mg/l (SW)
PNEC (fest)	2.31 mg/kg Trockengew (BO) 12.46 mg/kg Trockengew (MWS) 12.46 mg/kg Trockengew (SWS)
71-36-3 butanol	
PNEC (wässrig)	2,476 mg/l (KA)

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PNEC (fest)	0.008 mg/l (MW) 0.082 mg/l (SW) 2.25 mg/l (WAS) 0.015 mg/kg Trockengew (BO) 0.018 mg/kg Trockengew (MWS) 0.178 mg/kg Trockengew (SWS)
112-07-2 2-butoxyethyl acetate	
PNEC (wässrig)	90 mg/l (KA) 0.0304 mg/l (MW) 0.304 mg/l (SW) 0.56 mg/l (WAS)
PNEC (fest)	0.415 mg/kg Trockengew (BO) 0.203 mg/kg Trockengew (MWS) 2.03 mg/kg Trockengew (SWS)

· Additional information: The lists valid during the making were used as basis.

· **8.2 Exposure controls**

· Appropriate engineering controls No further data; see item 7.

· Individual protection measures, such as personal protective equipment

· General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
Do not inhale gases / fumes / aerosols.
Do not eat, drink, smoke or sniff while working.
Use skin protection cream for skin protection.
Clean skin thoroughly immediately after handling the product.

· Respiratory protection: In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
Short term filter device:
Filter AX

· Hand protection



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
Preventive skin protection by use of skin-protecting agents is recommended.
After use of gloves apply skin-cleaning agents and skin cosmetics.
The protection gloves to be used have to comply with the specifications of the directive 89/686/EC and the directive derived decree EN374, respectively, e.g. the above listed protection glove type.
The mentioned permeation times´ data were generated and verified with material samples of the recommended protection glove type in the scope of laboratory anylyses of the company KCL GmbH in compliance with EN374.
This recommendation refers exclusively to the material safety data sheet referenced product delivered by Akemi and the indicated field of application. In case of product dilution or in case of mixture with

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different substances or chemicals, and in condition of EN374 deviation the producer of CE-approved protection gloves must be contacted for detailed information (e.g., KCL GmbH, Germany, 36124 Eichenzell, internet: http://www.kcl.de).

· Material of gloves: Fluorocarbon rubber (Viton)
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· Penetration time of glove material: The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
Value for the permeation: Level ≤ 2, 60 min

· For the permanent contact gloves made of the following materials are suitable: Fluorocarbon rubber (Viton)
Vitoject (KCL, Art_No. 890)

· As protection from splashes gloves made of the following materials are suitable: Fluorocarbon rubber (Viton)
Vitoject (KCL, Art_No. 890)
Butyl rubber, BR
Butoject (KCL, Art_No. 897, 898)
Nitrile rubber, NBR
Camatril (KCL, 730, 731, 732, 733)

· Not suitable are gloves made of the following materials: Leather gloves
Strong material gloves

· Eye/face protection



Tightly sealed goggles

· Body protection: Protective work clothing

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SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· General Information	
· Colour:	Colourless
· Odour:	Specific type
· Melting point/freezing point:	Undetermined.
· Boiling point or initial boiling point and boiling range	119-195 °C
· Lower and upper explosion limit	
· Lower:	1 Vol %
· Upper:	13.7 Vol %
· Flash point:	23 °C
· Ignition temperature:	270 °C (107-98-2 1-methoxy-2-propanol)
· pH	Not determined. Not applicable
· Viscosity:	
· Kinematic viscosity at 40 °C	20.5 mm²/s
· Dynamic:	Not determined.
· Solubility	
· water:	Not miscible or difficult to mix.
· Vapour pressure at 20 °C:	12 hPa (107-98-2 1-methoxy-2-propanol)
· Density and/or relative density	
· Density at 20 °C:	0.89 g/cm³

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· **9.2 Other information**

· Appearance:	
· Form:	Fluid
· Important information on protection of health and environment, and on safety.	
· Auto-ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product is not explosive. However, formation of explosive air/ vapour mixtures are possible.
· Solvent content:	
· Organic solvents:	100.0 %

· Information with regard to physical hazard classes

· Explosives

Void

· Flammable gases

Void

· Aerosols

Void

· Oxidising gases

Void

· Gases under pressure

Void

· Flammable liquids

Flammable liquid and vapour.

· Flammable solids

Void

· Self-reactive substances and mixtures

Void

· Pyrophoric liquids

Void

· Pyrophoric solids

Void

· Self-heating substances and mixtures

Void

· Substances and mixtures, which emit flammable gases in contact with water

Void

· Oxidising liquids

Void

· Oxidising solids

Void

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· Organic peroxides

Void

· Corrosive to metals

Void

· Desensitised explosives

Void

SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.
· **10.2 Chemical stability**
· Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
No decomposition if used and stored according to specifications.
· **10.3 Possibility of hazardous reactions** Reacts with strong oxidising agents.
· **10.4 Conditions to avoid** No further relevant information available.
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:** Carbon monoxide and carbon dioxide
Possible in traces.

SECTION 11: Toxicological information

· **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
· Acute toxicity Based on available data, the classification criteria are not met.

· LD/LC50 values relevant for classification:

ATE (Acute Toxicity Estimates)		
Oral	LD50	62,667 mg/kg (rat)
Dermal	LD50	52,667 mg/kg (rbt)
Inhalative	LC50/4 h	>88.7 mg/l (rat)

107-98-2 1-methoxy-2-propanol		
Oral	LD50	4,016 mg/kg (rat)
Dermal	LD50	13,500 mg/kg (rbt)
Inhalative	LC50	27.596 mg/l (rat)
	LC50/4 h	54.6 mg/l (rat)

123-86-4 n-butyl acetate		
Oral	LD50	10,760 mg/kg (rat) (OECD 423)
Dermal	LD50	>14,112 mg/kg (rabbit) (OECD 402)
Inhalative	LC50/4 h	>21 mg/l (rat) (OECD 403)
	LC50	390 mg/m3 (rat)
	LC50/48h	64 mg/l (Brachydanio rerio)

reaction mass of ethylbenzole and xylole		
Oral	LD50	3,523 mg/kg (rat)
	NOAEL-Werte	250 mg/kg (rat)
Dermal	LD50	12,126 mg/kg (rabbit)

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Inhalative	LC50/4h	29,000 mg/m3 (rat)
	LC50/4 h	27.124 mg/l (rat)
71-36-3 butanol		
Oral	LD50	3,430 mg/kg (rabbit) (OECD 402)
		2,292 mg/kg (rat) (OECD 401)
Dermal	LD50	3,400 mg/kg (rbt)
Inhalative	LC50/4h	17.76 mg/m3 (rat)
	LC50/4 h	8,000 mg/l (rat)
112-07-2 2-butoxyethyl acetate		
Oral	LD50	1,880 mg/kg (rat) (OECD 401)
Dermal	LD50	1,580 mg/kg (rbt)
Inhalative	LC50/4 h	>2.66 mg/l (rat) (OECD 403)
	LC50/8h	>3.91 mg/l (rat)

· Skin corrosion/irritation Causes skin irritation.
· Serious eye damage/irritation Causes serious eye damage.
· Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
· Germ cell mutagenicity Based on available data, the classification criteria are not met.
· Carcinogenicity Based on available data, the classification criteria are not met.
· Reproductive toxicity Based on available data, the classification criteria are not met.
· STOT-single exposure May cause respiratory irritation. May cause drowsiness or dizziness.
· STOT-repeated exposure May cause damage to organs through prolonged or repeated exposure.
· Aspiration hazard May be fatal if swallowed and enters airways.

· **11.2 Information on other hazards**

· Endocrine disrupting properties

None of the ingredients is listed.

SECTION 12: Ecological information

· **12.1 Toxicity**

· Aquatic toxicity:

107-98-2 1-methoxy-2-propanol	
EC50/96h	>1,000 mg/l (BES)
EC50	>1,000 mg/l (BES) (OECD 209)
	>1,000 mg/l (Pseudokirchneriella subcapitata)
LC 0/96h	>4,600 mg/l (Leuciscus idus)
EC50/48h	23,300 mg/l (daphnia magna)
LC50/96h	>100 mg/l (daphnia magna)
	>100 mg/l (Desmodesmus subspicatus)
	6,812 mg/l (Leuciscus idus) (DIN 38412)
	>1,000 mg/l (Oncorhynchus mykiss) (OECD 203)
	20,800 mg/l (pimephales promelas) (ASTM)
123-86-4 n-butyl acetate	
EC50/24h	72.8 mg/l (daphnia magna) (DIN 38412)
EC50/96h	320 mg/l (green alge)
LC50/24h	205 mg/l (daphnia magna)
IC50/72h	648 mg/l (Desmodesmus subspicatus)
EC10/18h	959 mg/l (pseudomonas putida)

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EC50/48h	44 mg/l (daphnia magna)
EC50/16h	959 mg/l (pseudomonas putida)
NOEC	200 mg/kg (Desmodesmus subspicatus)
NOEC/21d	23 mg/l (daphnia magna) (OECD 211)
EC50/72h	647.7 mg/l (Desmodesmus subspicatus) (Zellvermehrungshemmtest)
	674 mg/l (Scenedesmus subspicatus)
LC50/96h	62 mg/l (Danio rerio.)
	81 mg/l (piscis)
	100 mg/l (lepomis macrochirus)
	62 mg/l (Leuciscus idus) (DIN 38412)
	18 mg/l (pimephales promelas) (OECD 203)
reaction mass of ethylbenzole and xylole	
LC50/24h	1 mg/l (daphnia magna) (OECD 202)
EC50/48h	3.2-9.5 mg/l (daphnia magna) (US EPA)
ErC50/72h	4.9 mg/l (Pseudokirchneriella subcapitata) (OECD 201)
NOEC	16 mg/l (BES)
	1.3 mg/l (Oncorhynchus mykiss)
NOELR/72h	0.44 mg/l (green alge)
NOEC/21d	1.57 mg/l (daphnia magna) (OECD 211)
NOELR/28d	16 mg/l (bacteria)
EC50/72h	2.2 mg/l (selenastrum capricornutum) (OECD 201)
LC50/96h	2.6 mg/l (Oncorhynchus mykiss) (OECD 203)
	8.9-16.4 mg/l (pimephales promelas)
71-36-3 butanol	
EC50/96h	225 mg/l (Pseudokirchneriella subcapitata) (OECD 201)
EC50	4,400 mg/l (pseudomonas putida)
IC50/72h	>500 mg/l (Desmodesmus subspicatus)
EC10/16h	2,376 mg/l (pseudomonas putida) (DIN 38412)
NOEC/21d	4.1 mg/l (daphnia magna) (OECD 211)
EC50/48h	1,328 mg/l (daphnia magna) (OECD 202)
EC50/72h	8,500 mg/l (green alge)
LC50/96h	1,200 mg/l (Leuciscus idus)
	1,376 mg/l (pimephales promelas) (OECD 203)
	>500 mg/l (Scenedesmus subspicatus)
112-07-2 2-butoxyethyl acetate	
IC50/72h	>100 mg/l (Scenedesmus subspicatus)
EC50/48h	37 mg/l (daphnia magna) (DIN 38 412 Part 11)
	10 mg/l (piscis)
EC20/3h	>1,000 mg/l (BES) (ISO 8692)
EC10	30.4 mg/l (ceriodaphnia Dubai) (OECD 211)
EC50/72h	1,570 mg/l (Pseudokirchneriella subcapitata) (ISO 8692)
LC50/96h	28.3 mg/l (Oncorhynchus mykiss) (OECD 203)
1589-47-5 2-methoxypropanol	
EC50/48h	>500 mg/l (daphnia magna)
EC50/72h	>1,000 mg/l (Selenastrum capricornutum)

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LC50/96h	>1,000 mg/l (Pimephales promelas)

· **12.2 Persistence and degradability** No further relevant information available.
· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.
· **12.5 Results of PBT and vPvB assessment**
· PBT: Not applicable.
· vPvB: Not applicable.
· **12.6 Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.
· **12.7 Other adverse effects**
· Remark: Toxic for fish
· Additional ecological information:
· General notes: Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· Recommendation Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue	
07 00 00	WASTES FROM ORGANIC CHEMICAL PROCESSES
07 01 00	wastes from the manufacture, formulation, supply and use (MFSU) of basic organic chemicals
07 01 04*	other organic solvents, washing liquids and mother liquors
15 00 00	WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED
15 01 00	packaging (including separately collected municipal packaging waste)
15 01 10*	packaging containing residues of or contaminated by hazardous substances

· Uncleaned packaging:
· Recommendation: Disposal must be made according to official regulations.
Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.
· Recommended cleansing agents: Alcohol

SECTION 14: Transport information

· **14.1 UN number or ID number**
· ADR, IMDG, IATA UN1993

· **14.2 UN proper shipping name**
· ADR 1993 FLAMMABLE LIQUID, N.O.S. (1-METHOXY-2-PROPANOL, BUTYL ACETATES)
· IMDG, IATA FLAMMABLE LIQUID, N.O.S. (1-methoxy-2-propanol, BUTYL ACETATES)

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· **14.3 Transport hazard class(es)**

· ADR



· Class	3 (F1) Flammable liquids.
· Label	3

· IMDG, IATA



· Class	3 Flammable liquids.
· Label	3

· **14.4 Packing group**
· ADR, IMDG, IATA: III

· **14.5 Environmental hazards:** Product contains environmentally hazardous substances:
· Marine pollutant: Yes

· **14.6 Special precautions for user** Warning: Flammable liquids.
· Hazard identification number (Kemler code): 30
· EMS Number: F-E,S-E
· Stowage Category A

· **14.7 Maritime transport in bulk according to IMO instruments** Not applicable.

· Transport/Additional information:

· ADR

· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· Transport category	3
· Tunnel restriction code	D/E

· IMDG

· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml

· UN "Model Regulation": UN 1993 FLAMMABLE LIQUID, N.O.S. (1-METHOXY-2-PROPANOL, BUTYL ACETATES), 3, III

SECTION 15: Regulatory information

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

· Directive 2012/18/EU
· Named dangerous substances - ANNEX I None of the ingredients is listed.

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· Seveso category	P5c FLAMMABLE LIQUIDS
· Qualifying quantity (tonnes) for the application of lower-tier requirements	5,000 t
· Qualifying quantity (tonnes) for the application of upper-tier requirements	50,000 t
· REGULATION (EC) No 1907/2006 ANNEX XVII	Conditions of restriction: 3

· DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed.

· REGULATION (EU) 2019/1148

· Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

· Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

· Regulation (EC) No 273/2004 on drug precursors

None of the ingredients is listed.

· Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

None of the ingredients is listed.

· National regulations:

· Information about limitation of use: Employment restrictions concerning pregnant and lactating women must be observed.
Employment restrictions concerning women of child-bearing age must be observed.

· Waterhazard class: Water hazard class 2 (Self-assessment): hazardous for water.

· Substances of very high concern (SVHC) according to REACH, Article 57

None of the ingredients is listed.

· VOC EU	889.0 g/l
· **15.2 Chemical safety assessment:**	A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing SDS:	Laboratory
· Contact:	Elke Hake Fon ++49 (0)911 64296-59 @mail E.Hake@akemi.de
· Date of previous version:	08.09.2022
· Version number of previous version:	5
· Abbreviations and acronyms:	RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA) ICAO: International Civil Aviation Organisation ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO) ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

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IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Repr. 1B: Reproductive toxicity – Category 1B
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Asp. Tox. 1: Aspiration hazard – Category 1