

(GB)

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

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COSMO CL-310.110

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

COSMO CL-310.110

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

Relevant identified uses of the substance or mixture:

Cleaning product

Uses advised against:

No information available at present.

1.3 Details of the supplier of the safety data sheet

Weiss Chemie + Technik GmbH & Co. KG

Hansastraße 2

35708 Haiger

Tel: +49 (0) 2773 / 815-0

msds@weiss-chemie.de

www.weiss-chemie.de

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:

Telephone number of the company in case of emergencies:

+49 (0) 700 / 24 112 112 (WIC)

+1 872 5888271 (WIC)

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.
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. H336-May cause drowsiness or dizziness.

P210-Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P261-Avoid breathing vapours or spray. P280-Wear protective gloves and eye protection / face protection.

P303+P361+P353-IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. P305+P351+P338-IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P312-Call a POISON CENTRE / doctor if you feel unwell.

P403+P233-Store in a well-ventilated place. Keep container tightly closed.

Propan-2-ol

Titanium tetrabutanolat

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

Propan-2-ol	
Registration number (REACH)	01-2119457558-25-XXXX
Index	603-117-00-0
EINECS, ELINCS, NLP, REACH-IT List-No.	200-661-7

CAS	67-63-0
content %	90-<100
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
Titanium tetrabutanolat	
Registration number (REACH)	01-2119967423-33-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	227-006-8
CAS	5593-70-4
content %	1-<3
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336

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.

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.

Do not induce vomiting. 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.

Headaches

Dizziness

Effects/damages the central nervous system

Coordination disorders

Unconsciousness

4.3 Indication of any immediate medical attention and special treatment needed

n.c.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

CO2

Exinction powder

Water jet spray

Alcohol resistant foam

Unsuitable extinguishing media

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

Toxic gases

Explosive vapour/air or gas/air mixtures.

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.

Keep non-essential personnel away.

Remove possible causes of ignition - do not smoke.

Ensure sufficient supply of air.

Avoid inhalation, and 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) and dispose of according to Section 13.

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

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7.1.1 General recommendations

Avoid inhalation of the vapours.
 Ensure good ventilation.
 If applicable, suction measures at the workstation or on the processing machine necessary.
 Keep away from sources of ignition - Do not smoke.
 Take measures against electrostatic charging, if appropriate.
 Avoid contact with eyes or skin.
 Handle and open container with care.
 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.
 Not to be stored in gangways or stair wells.
 Store product closed and only in original packing.
 Observe special storage conditions.
 Do not store with flammable or self-igniting materials.
 Solvent resistant floor
 Protect from direct sunlight and warming.
 Store cool.
 Store in a dry place.

7.3 Specific end use(s)

No information available at present.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Chemical Name	Propan-2-ol		Content %:90- <100
WEL-TWA:	400 ppm (999 mg/m ³)	WEL-STEL:	500 ppm (1250 mg/m ³)
Monitoring procedures:	- Draeger - Alcohol 25/a i-Propanol (81 01 631) - Compur - KITA-122 SA(C) (549 277) - Compur - KITA-150 U (550 382) - DFG (D) (Lösungsmittelgemische), DFG (E) (Solvent mixtures 6) - 2013, 2002 - EU project BC/CEN/ENTR/000/2002-16 card 66-3 (2004) - NIOSH 1400 (ALCOHOLS I) - 1994 - NIOSH 2549 (VOLATILE ORGANIC COMPOUNDS (SCREENING)) - 1996 - Draeger - Alcohol 100/a (CH 29 701)		
BMGV:	---	Other information:	---

Propan-2-ol						
Area of application	Exposure route / Environmental compartment	Effect on health	Description	Value	Unit	Note
	Environment - freshwater		PNEC	140,9	mg/l	
	Environment - marine		PNEC	140,9	mg/l	
	Environment - sediment, freshwater		PNEC	552	mg/kg dw	
	Environment - sediment, marine		PNEC	552	mg/kg dw	
	Environment - soil		PNEC	28	mg/kg dw	
	Environment - sewage treatment plant		PNEC	225	mg/l	
	Environment - water, sporadic (intermittent) release		PNEC	140,9	mg/l	
	Environment - oral (animal feed)		PNEC	160	mg/kg feed	
Consumer	Human - dermal	Long term, systemic effects	DNEL	319	mg/kg bw/day	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	89	mg/m ³	
Consumer	Human - oral	Long term, systemic effects	DNEL	26	mg/kg bw/day	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	888	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	500	mg/m ³	

Titanium tetrabutanolat						
Area of application	Exposure route / Environmental compartment	Effect on health	Description	Value	Unit	Note
	Environment - freshwater		PNEC	0,08	mg/l	
	Environment - marine		PNEC	0,008	mg/l	
	Environment - sediment, freshwater		PNEC	0,0687	mg/kg	
	Environment - sediment, marine		PNEC	0,0069	mg/kg	
	Environment - sewage treatment plant		PNEC	65	mg/l	
	Environment - sporadic (intermittent) release		PNEC	2,25	mg/l	
	Environment - soil		PNEC	0,0168	mg/kg	
Consumer	Human - oral	Long term, systemic effects	DNEL	3,75	mg/kg	

Consumer	Human - dermal	Long term, systemic effects	DNEL	37,5	mg/kg
Consumer	Human - inhalation	Long term, systemic effects	DNEL	38	mg/m ³
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	127	mg/m ³

WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany). (8) = Inhalable fraction (Directive 2017/164/EU, Directive 2004/37/CE), (9) = Respirable fraction (Directive 2017/164/EU, Directive 2004/37/CE), (11) = Inhalable fraction (Directive 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 (Directive 2004/37/CE). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period). (8) = Inhalable fraction (2017/164/EU, 2017/2398/EU), (9) = Respirable fraction (2017/164/EU, 2017/2398/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. BGW = "Biologischer Grenzwert" (biological limit value, Germany) | Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage. ** = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision. (13) = The substance can cause sensitisation of the skin and of the respiratory tract (Directive 2004/37/CE), (14) = The substance can cause sensitisation of the skin (Directive 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:
 Solvent resistant protective gloves (EN ISO 374).
 If applicable
 Protective gloves in butyl rubber (EN ISO 374).
 Protective Neoprene® / polychloroprene gloves (EN ISO 374).
 Protective nitrile gloves (EN ISO 374).
 Minimum layer thickness in mm:
 >= 0,50
 Permeation time (penetration time) in minutes:
 >= 480
 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.
 Protective hand cream recommended.

Skin protection - Other:
 Solvent resistant protection clothing (EN 13034)

Respiratory protection:
 If OES or MEL is exceeded.
 Gas mask filter A (EN 14387), code colour brown
 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: Colourless
 Odour: Alcoholic
 Melting point/freezing point: -89,5 °C ((Particulars of main substances contained))
 Boiling point or initial boiling point and boiling range: 82 °C ((Particulars of main substances contained))
 Flammability: Flammable
 Lower explosion limit: 2 Vol-% (20°C, (Particulars of main substances contained))
 Upper explosion limit: 12 Vol-% (20°C, (Particulars of main substances contained))
 Flash point: 12 °C ((Particulars of main substances contained))
 Auto-ignition temperature: 425 °C ((Particulars of main substances contained))
 Decomposition temperature: There is no information available on this parameter.
 pH: 7 ((Particulars of main substances contained))
 Kinematic viscosity: There is no information available on this parameter.
 Solubility: Soluble
 Partition coefficient n-octanol/water (log value): Does not apply to mixtures.
 Vapour pressure: 48 hPa (20°C, (Particulars of main substances contained))
 Density and/or relative density: 0,79 g/cm³
 Relative vapour density: There is no information available on this parameter.
 Particle characteristics: Does not apply to liquids.

9.2 Other information

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Explosives: When using: development of explosive vapour/air mixture possible.
 Oxidising liquids: No

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

Heating, open flame, ignition sources
 Electrostatic charge

10.5 Incompatible materials

Avoid contact with strong oxidizing agents.
 Avoid contact with strong alkalis.
 Avoid contact with strong acids.

10.6 Hazardous decomposition products

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).

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Toxicity / effect	Endpo int	Value	Unit	Organis m	Test method	Notes
Acute toxicity, by oral route:						n.d.a.
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.

Propan-2-ol

Toxicity / effect	Endpo int	Value	Unit	Organis m	Test method	Notes
Acute toxicity, by oral route:	LD50	4570-5840	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	12800-13900	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	> 25	mg/l/6h	Rat	OECD 403 (Acute Inhalation Toxicity)	Vapours
Acute toxicity, by inhalation:	LC50	46600	mg/l/4h	Rat		Aerosol
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
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:				Mouse	OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative
Germ cell mutagenicity:					OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative
Germ cell mutagenicity:				Salmonella typhimurium	(Ames-Test)	Negative
Carcinogenicity:						Negative
Specific target organ toxicity - single exposure (STOT-SE):						STOT SE 3, H336
Specific target organ toxicity - repeated exposure (STOT-RE):						Target organ(s): liver
Aspiration hazard:						No

Symptoms:						
						breathing difficulties, unconsciousness, vomiting, headaches, fatigue, dizziness, nausea, eyes, reddened, watering eyes
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAE L	900	mg/kg	Rat	OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)	
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOAE L	5000	ppm	Rat		Vapours (OECD 451)

Titanium tetrabutanolat

Toxicity / effect	Endpo int	Value	Unit	Organis m	Test method	Notes
Acute toxicity, by oral route:	LD50	>2000	mg/kg	Rat	OECD 423 (Acute Oral Toxicity - Acute Toxic Class Method)	Analogous conclusion
Acute toxicity, by dermal route:	LD50	5300	mg/kg	Rabbit		
Acute toxicity, by inhalation:	LC50	20100	mg/l	Rat		
Skin corrosion/irritation:						Skin Irrit. 2
Serious eye damage/irritation:						Eye Dam. 1
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Germ cell mutagenicity:					OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative
Germ cell mutagenicity:					OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	Negative
Specific target organ toxicity - single exposure (STOT-SE):						Irritation of the respiratory tract
Symptoms:						headaches, dizziness, coughing, eyes, reddened, stomach pain
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAE L	125	mg/kg	Rat		
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOAE L	1520	mg/kg	Rat		Vapours

11.2. Information on other hazards

Toxicity / effect	Endpo int	Value	Unit	Organis m	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).

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Toxicity / effect	Endpo int	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.

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12.7. Other adverse effects:						No information available on other adverse effects on the environment.
Other information:						According to the recipe, contains no AOX.
Other information:						DOC-elimination degree (complexing organic substance) >= 80%/28d: n.a.

Propan-2-ol							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.3. Bioaccumulative potential:	BCF		3,2				Low
12.1. Toxicity to fish:	LC50	96h	>100	mg/l	Leuciscus idus		
12.1. Toxicity to fish:	LC50	96h	1400	mg/l	Lepomis macrochirus		
12.1. Toxicity to daphnia:	EC50	48h	2285	mg/l	Daphnia magna		
12.1. Toxicity to daphnia:	EC50	16d	141	mg/l	Daphnia magna		
12.1. Toxicity to algae:	EC50	72h	>100	mg/l	Desmodesmus subspicatus		
12.2. Persistence and degradability:		21d	95	%		OECD 301 E (Ready Biodegradability - Modified OECD Screening Test)	Readily biodegradable
12.2. Persistence and degradability:			99,9	%		OECD 303 A (Simulation Test - Aerobic Sewage Treatment - Activated Sludge Units)	Readily biodegradable
12.3. Bioaccumulative potential:	Log Pow		0,05			OECD 107 (Partition Coefficient (n-octanol/water) - Shake Flask Method)	Slight
12.4. Mobility in soil:	Koc		1,1				Expert judgement
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC50		>1000	mg/l	activated sludge		
Toxicity to bacteria:	EC10	16h	1050	mg/l	Pseudomonas putida		
Other information:	ThOD		2,4	g/g			
Other information:	BOD5		53	%			
Other information:	COD		96	%			References
Other information:	COD		2,4	g/g			
Other information:	BOD		1171	mg/g			

Titanium tetrabutanolat							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to daphnia:	LC50	48h	1300	mg/l	Daphnia magna	84/449/EEC C.2	Analogous conclusion
12.2. Persistence and degradability:							Inorganic products cannot be eliminated from water through biological purification methods., The organic component of the product is biologically degradable.

12.1. Toxicity to fish:	LC50	96h	1825	mg/l		
12.1. Toxicity to fish:	LC50	96h	1740	mg/l	Pimephales promelas	Analogous conclusion
12.1. Toxicity to daphnia:	EC50	48h	1300	mg/l	Daphnia magna	
12.1. Toxicity to daphnia:	NOEC/N OEL	21d	4	mg/l	Daphnia magna	
12.1. Toxicity to algae:	EC50	72h	225	mg/l		
12.2. Persistence and degradability:						84/449/EEC C.7
12.3. Bioaccumulative potential:						Not to be expected
12.5. Results of PBT and vPvB assessment						No PBT substance, No vPvB substance
Toxicity to bacteria:	EC10		650	mg/l		

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)
 07 01 04 other organic solvents, washing liquids and mother liquors
 14 06 03 other solvents and solvent mixtures
 20 01 29 detergents containing 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.
 Empty container completely.
 Uncontaminated packaging can be recycled.
 Dispose of packaging that cannot be cleaned in the same manner as the substance.
 Do not perforate, cut up or weld uncleaned container.
 Residues may present a risk of explosion.
 15 01 10 packaging containing residues of or contaminated by hazardous substances

SECTION 14: Transport information

General statements

14.1. UN number or ID number: 1993
Transport by road/by rail (ADR/RID)
 14.2. UN proper shipping name:
 UN 1993 FLAMMABLE LIQUID, N.O.S. (ISOPROPYL ALCOHOL, TITANIUM TETRABUTANOLATE) (SPECIAL PROVISION 640D)
 14.3. Transport hazard class(es): 3
 14.4. Packing group: II
 Classification code: F1
 LQ: 1 L
 14.5. Environmental hazards: Not applicable
 Tunnel restriction code: D/E
Transport by sea (IMDG-code)
 14.2. UN proper shipping name:
 FLAMMABLE LIQUID, N.O.S. (ISOPROPYL ALCOHOL, TITANIUM TETRABUTANOLATE)
 14.3. Transport hazard class(es): 3
 14.4. Packing group: II
 EmS: F-E, S-E
 n.a.
 Marine Pollutant: n.a.
 14.5. Environmental hazards: Not applicable
Transport by air (IATA)
 14.2. UN proper shipping name:
 Flammable liquid, n.o.s. (ISOPROPYL ALCOHOL, TITANIUM TETRABUTANOLATE)
 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
 Freight 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)!
 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): 98 %
REGULATION (EC) No 648/2004

(GB)

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Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
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 COSMO CL-310.110

Observe incident regulations.

15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

Revised sections: 1-16
 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.
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 (specified in Section 2 and 3).

H225 Highly flammable liquid and vapour.
 H226 Flammable liquid and vapour.
 H315 Causes skin irritation.
 H318 Causes serious eye damage.
 H319 Causes serious eye irritation.
 H335 May cause respiratory irritation.
 H336 May cause drowsiness or dizziness.

Flam. Liq. — Flammable liquid
 Eye Irrit. — Eye irritation
 STOT SE — Specific target organ toxicity - single exposure - narcotic effects
 Skin Irrit. — Skin irritation
 Eye Dam. — Serious eye damage
 STOT SE — Specific target organ toxicity - single exposure - respiratory tract 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
 bw body weight
 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
 dw dry weight
 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, EuCx, 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
 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. 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
 wwt wet weight

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

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