

**Safety Data Sheet**

according to UK REACH Regulation

**Flux REGI-007-VOC**

Revision date: 08.10.2021

Product code: 950329

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Flux REGI-007-VOC

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

Fluxes for soft soldering

**Uses advised against**

Any non-intended use.

**1.3. Details of the supplier of the safety data sheet****Manufacturer**

Company name:	Cobar Europe BV	
Street:	Aluminiumstraat 2	
Place:	NL-4823 AL Breda	
Telephone:	+31 76 5445566	Telefax: +31 76 5445577
e-mail:	info@Cobar.com	

**Supplier**

Company name:	Balver Zinn Josef Jost GmbH & Co. KG	
Street:	Blintroper Weg 11	
Place:	D-58802 Balve	
Telephone:	+49 2375 915-0	Telefax: +49 2375 915-114
Responsible Department:	cia@BalverZinn.com	

**1.4. Emergency telephone number:** +49 (0) 700 24 112 112 (Contract-ID: BZW) or +1 872 5888-271 (Contract-ID: BZW)

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****GB CLP Regulation**

Hazard categories:

Flammable liquid: Flam. Liq. 2

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Specific target organ toxicity - single exposure: STOT SE 3

Hazard Statements:

Highly flammable liquid and vapour.

Causes skin irritation.

Causes serious eye irritation.

May cause drowsiness or dizziness.

**2.2. Label elements****GB CLP Regulation****Hazard components for labelling**

propan-2-ol; isopropyl alcohol; isopropanol

**Signal word:** Danger**Pictograms:**

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**Hazard statements**

- H225 Highly flammable liquid and vapour.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H336 May cause drowsiness or dizziness.

**Precautionary statements**

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 Keep container tightly closed.
- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
- P280 Wear protective gloves/protective clothing/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 CENTER/doctor if you feel unwell.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P403+P235 Store in a well-ventilated place. Keep cool.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**Special labelling of certain mixtures**

- EUH208 Contains 2,4,7,9-tetramethyldec-5-yne-4,7-diol. May produce an allergic reaction.

**2.3. Other hazards**

In use, may form flammable/explosive vapour-air mixture.  
The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

**SECTION 3: Composition/information on ingredients**

**3.2. Mixtures**

**Hazardous components**

CAS No	Chemical name	Quantity
	EC No	
	Index No	
	REACH No	
	GHS Classification	
67-63-0	propan-2-ol; isopropyl alcohol; isopropanol	>90 %
	200-661-7	
	603-117-00-0	
	01-2119457558-25	
	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336	
110-94-1	glutaric acid	1-5 %
	203-817-2	
	01-2120264127-58	
	Skin Corr. 1A; H314	
124-04-9	adipic acid	1-3 %
	204-673-3	
	607-144-00-9	
	01-2119457561-38	
	Eye Irrit. 2; H319	
95-14-7	Benzotriazole	1-3 %
	202-394-1	
	01-2119979079-20	
	Acute Tox. 4, Eye Irrit. 2, Aquatic Chronic 2; H302 H319 H411	
126-86-3	2,4,7,9-tetramethyldec-5-yne-4,7-diol	<1 %
	204-809-1	
	Eye Dam. 1, Skin Sens. 1B, Aquatic Chronic 3; H318 H317 H412	

Full text of H and EUH statements: see section 16.

**Specific Conc. Limits, M-factors and ATE**

CAS No	EC No	Chemical name	Quantity
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	Specific Conc. Limits, M-factors and ATE		
67-63-0	200-661-7	propan-2-ol; isopropyl alcohol; isopropanol	>90 %
	dermal: LD50 = > 5000 mg/kg; oral: LD50 = 5840 mg/kg		
124-04-9	204-673-3	adipic acid	1-3 %
	inhalation: LC50 = > 7,7 mg/l (dusts or mists); dermal: LD50 = 5010 mg/kg; oral: LD50 = 5560 mg/kg		
95-14-7	202-394-1	Benzotriazole	1-3 %
	dermal: LD50 = > 2000 mg/kg; oral: LD50 = 500 mg/kg		
126-86-3	204-809-1	2,4,7,9-tetramethyldec-5-yne-4,7-diol	<1 %
	dermal: LD50 = >2000 mg/kg		

**Further Information**

Product does not contain listed SVHC substances > 0,1 % according to Regulation (EC) No. 1907/2006 Article 59 (REACH)

**SECTION 4: First aid measures****4.1. Description of first aid measures****General information**

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Take off immediately all contaminated clothing.

First aider: Pay attention to self-protection!

**After inhalation**

Remove person to fresh air and keep comfortable for breathing. In case of respiratory tract irritation, consult a physician.

**After contact with skin**

Take off immediately all contaminated clothing. Wash with plenty of water. In case of skin irritation, seek medical treatment.

**After contact with eyes**

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

**After ingestion**

Rinse mouth thoroughly with water. Let water be drunken in little sips (dilution effect). Do NOT induce vomiting. Never give anything by mouth to an unconscious person or a person with cramps. In all cases of doubt, or when symptoms persist, seek medical advice.

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

No information available.

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

Treat symptomatically.

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Carbon dioxide (CO<sub>2</sub>). Dry extinguishing powder. alcohol resistant foam.  
In case of major fire and large quantities: Atomized water.

**Unsuitable extinguishing media**

High power water jet.

**5.2. Special hazards arising from the substance or mixture**

Can be released in case of fire: Gas/vapours, irritant. Carbon monoxide Carbon dioxide (CO<sub>2</sub>).

**5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus. In case of fire and/or explosion do not breathe fumes.

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**Additional information**

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. Use water spray jet to protect personnel and to cool endangered containers.

In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures****General measures**

Do not breathe gas/vapour/aerosol. Avoid contact with skin, eyes and clothes.

**For non-emergency personnel**

Remove persons to safety. Remove all sources of ignition. Ventilate affected area.

Wear personal protection equipment. (See section 8.)

**For emergency responders**

No special measures are necessary.

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains. Danger of explosion! Cover drains. Prevent spread over a wide area (e.g. by containment or oil barriers). In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

**6.3. Methods and material for containment and cleaning up****For containment**

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Ventilate affected area.

Treat the recovered material as prescribed in the section on waste disposal.

**For cleaning up**

Clean contaminated objects and areas thoroughly observing environmental regulations.

**6.4. Reference to other sections**

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

**SECTION 7: Handling and storage****7.1. Precautions for safe handling****Advice on safe handling**

Provide adequate ventilation as well as local exhaust at critical locations.

Do not breathe gas/vapour/aerosol. Avoid contact with skin, eyes and clothes.

Wear suitable protective clothing. (See section 8.)

**Advice on protection against fire and explosion**

Keep away from sources of ignition. - No smoking. Take precautionary measures against static discharges.

Flammable vapours can accumulate in head space of closed systems. In use, may form flammable/explosive vapour-air mixture. Heating causes rise in pressure with risk of bursting.

**Advice on general occupational hygiene**

The usual precautions for handling chemicals should be considered.

Keep away from food, drink and animal feedingstuffs.

Always close containers tightly after the removal of product. When using do not eat, drink, smoke, sniff. Wash hands before breaks and after work. Protect skin by using skin protective cream. Take off contaminated clothing and wash it before reuse.

**Further information on handling**

General protection and hygiene measures: See section 8.

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

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**Requirements for storage rooms and vessels**

Keep container tightly closed in a cool, well-ventilated place. Protect against direct sunlight.  
Ensure adequate ventilation of the storage area.  
Make sure spills can be contained (e.g. sump pallets or kerbed areas).

**Hints on joint storage**

Do not store together with: Gas. Explosives. Flammable solids. Pyrophoric liquids and solids. Self-heating substances and mixtures. Substances and mixtures which, in contact with water, emit flammable gases. Oxidizing liquids. Oxidizing solids. ammonium nitrate. Self-reactive substances and mixtures. Organic peroxides. Non-combustible toxic substances. Radioactive substances. Infectious substances.

**Further information on storage conditions**

Keep the packing dry and well sealed to prevent contamination and absorption of humidity.  
Protect against: UV-radiation/sunlight. heat. Humidity frost.  
storage temperature: 15-25°C

**7.3. Specific end use(s)**

See section 1.

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

**Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
67-63-0	Propan-2-ol	400	999		TWA (8 h)	WEL
		500	1250		STEL (15 min)	WEL

**DNEL/DMEL values**

CAS No	Substance	DNEL type	Exposure route	Effect	Value
67-63-0	propan-2-ol; isopropyl alcohol; isopropanol	Worker DNEL, long-term	inhalation	systemic	500 mg/m <sup>3</sup>
		Consumer DNEL, long-term	inhalation	systemic	89 mg/m <sup>3</sup>
		Worker DNEL, long-term	dermal	systemic	888 mg/kg bw/day
		Consumer DNEL, long-term	oral	systemic	26 mg/kg bw/day
		Consumer DNEL, long-term	dermal	systemic	319 mg/kg bw/day
110-94-1	glutaric acid	Worker DNEL, long-term	inhalation	systemic	11,52 mg/m <sup>3</sup>
		Worker DNEL, long-term	dermal	systemic	3,27 mg/kg bw/day
		Consumer DNEL, long-term	inhalation	systemic	2,84 mg/m <sup>3</sup>
		Consumer DNEL, long-term	dermal	systemic	1,63 mg/kg bw/day
		Worker DNEL, acute	inhalation	systemic	69,12 mg/m <sup>3</sup>
		Worker DNEL, acute	dermal	systemic	19,6 mg/kg bw/day
		Consumer DNEL, acute	inhalation	systemic	17,04 mg/m <sup>3</sup>
		Consumer DNEL, long-term	oral	systemic	1,63 mg/kg bw/day
		Consumer DNEL, acute	oral	systemic	9,8 mg/kg bw/day
124-04-9	adipic acid				

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Worker DNEL, long-term	inhalation	systemic	264 mg/m <sup>3</sup>
Worker DNEL, acute	inhalation	systemic	264 mg/m <sup>3</sup>
Worker DNEL, long-term	inhalation	local	5 mg/m <sup>3</sup>
Worker DNEL, acute	inhalation	local	5 mg/m <sup>3</sup>
Worker DNEL, long-term	dermal	systemic	38 mg/kg bw/day
Worker DNEL, acute	dermal	systemic	38 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	65 mg/m <sup>3</sup>
Consumer DNEL, acute	inhalation	systemic	65 mg/m <sup>3</sup>
Consumer DNEL, long-term	dermal	systemic	19 mg/kg bw/day
Consumer DNEL, acute	dermal	systemic	19 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic	19 mg/kg bw/day
Consumer DNEL, acute	oral	systemic	19 mg/kg bw/day
95-14-7	Benzotriazole		
Consumer DNEL, acute	oral	systemic	0,54 mg/kg bw/day
Worker DNEL, long-term	inhalation	systemic	19 mg/m <sup>3</sup>
Worker DNEL, long-term	dermal	systemic	1,08 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	9,55 mg/m <sup>3</sup>
Consumer DNEL, long-term	dermal	systemic	0,54 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic	0,54 mg/kg bw/day
126-86-3	2,4,7,9-tetramethyldec-5-yne-4,7-diol		
Worker DNEL, long-term	dermal	systemic	0,5 mg/kg bw/day

**PNEC values**

CAS No	Substance	Value
Environmental compartment		Value
67-63-0	propan-2-ol; isopropyl alcohol; isopropanol	
Freshwater		140,9 mg/l
Freshwater (intermittent releases)		140,9 mg/l
Marine water		140,9 mg/l
Freshwater sediment		552 mg/kg
Marine sediment		552 mg/kg
Secondary poisoning		160 mg/kg
Micro-organisms in sewage treatment plants (STP)		2251 mg/l
Soil		28 mg/kg
110-94-1	glutaric acid	
Freshwater		0,12 mg/l
Marine water		0,012 mg/l
Freshwater sediment		0,097 mg/kg
Marine sediment		0,01 mg/kg
Soil		0,002 mg/kg
124-04-9	adipic acid	
Freshwater		0,126 mg/l

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Marine water	0,0126 mg/l
Freshwater sediment	0,484 mg/kg
Marine sediment	0,0484 mg/kg
Micro-organisms in sewage treatment plants (STP)	59,1 mg/l
Soil	0,0228 mg/kg
95-14-7	Benzotriazole
Freshwater	0,019 mg/l
Freshwater (intermittent releases)	0,158 mg/l
Marine water	0,019 mg/l
Freshwater sediment	0,004 mg/kg
Marine sediment	0,004 mg/kg
Micro-organisms in sewage treatment plants (STP)	0,1 mg/l
Soil	0,003 mg/kg
126-86-3	2,4,7,9-tetramethyldec-5-yne-4,7-diol
Freshwater	0.04 mg/l

**8.2. Exposure controls**



**Appropriate engineering controls**

Technical measures and the application of suitable work processes have priority over personal protection equipment.

Provide adequate ventilation as well as local exhaust at critical locations.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**

Recommended eye protection brand: Tightly sealed safety glasses. (BS/EN 166)

**Hand protection**

In case of prolonged or frequently repeated skin contact: Wear suitable gloves.

Suitable material: Butyl rubber.

Thickness of glove material: 0,5 mm

Breakthrough time  $\geq$  480 min. penetration time (maximum wearing period): ~ 120 min. (estimated)

In the case of wanting to use the gloves again, clean them before taking off and air them well. Before using check leak tightness / impermeability.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

The selected protective gloves have to satisfy the specifications of EU Directive EC/2016/425 and the standard EN 374 derived from it.

**Skin protection**

Wear fire/flame resistant/retardant clothing.

Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500 (D).

**Respiratory protection**

With correct and proper use, and under normal conditions, breathing protection is not required.

Respiratory protection necessary at:

Generation/formation of aerosols

Exceeding exposure limit values

Insufficient ventilation

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Suitable respiratory protective equipment: Combination filtering device (EN 14387) Type: A/P1-3  
The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.

**Environmental exposure controls**

Do not allow uncontrolled discharge of product into the environment.

**SECTION 9: Physical and chemical properties**

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

Physical state: liquid  
Colour: colourless clear  
Odour: alcoholic

**Changes in the physical state**

Melting point/freezing point: not applicable  
Boiling point or initial boiling point and boiling range: 82 (Isopropanol) °C  
Flash point: 0-21 °C

**Explosive properties**

In use, may form flammable/explosive vapour-air mixture.

Lower explosion limits: not determined  
Upper explosion limits: not determined  
Auto-ignition temperature: not determined  
Decomposition temperature: not determined

**Oxidizing properties**

none.

pH-Value: not determined  
Viscosity / dynamic: (at 40 °C) not determined  
Viscosity / kinematic: (at 20 °C) not determined  
Flow time: not determined  
Water solubility: soluble

**Solubility in other solvents**

not determined

Partition coefficient n-octanol/water: SECTION 12: Ecological information  
Vapour pressure: (at 20 °C) not determined  
Density: 0,8 g/cm³  
Relative vapour density: not determined

**9.2. Other information**

**Other safety characteristics**

Solvent separation test: not determined  
Solvent content: not determined  
Solid content: not determined  
Evaporation rate: not determined

**Further Information**



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No information available.

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

No information available.

**10.2. Chemical stability**

The mixture is chemically stable under recommended conditions of storage, use and temperature.

**10.3. Possibility of hazardous reactions**

No hazardous reaction when handled and stored according to provisions.

Refer to chapter 10.5.

**10.4. Conditions to avoid**

Keep away from heat. Danger of explosion!

In use may form flammable/explosive vapour-air mixture.

Heating causes rise in pressure with risk of bursting.

**10.5. Incompatible materials**

Materials to avoid: Oxidizing agents, strong. Reducing agents, strong. Strong acid. strong alkalis.

**10.6. Hazardous decomposition products**

Does not decompose when used for intended uses.

Can be released in case of fire: Gas/vapours, irritant. Carbon monoxide Carbon dioxide (CO<sub>2</sub>).

**SECTION 11: Toxicological information**

**11.1. Information on hazard classes as defined in GB CLP Regulation**

**Toxicokinetics, metabolism and distribution**

No data available.

**Acute toxicity**

Based on available data, the classification criteria are not met.

CAS No	Chemical name					
	Exposure route	Dose		Species	Source	Method
67-63-0	propan-2-ol; isopropyl alcohol; isopropanol					
	oral	LD50 mg/kg	5840	Rat	ECHA dossier	
	dermal	LD50 mg/kg	> 5000	Rabbit	ECHA dossier	
124-04-9	adipic acid					
	oral	LD50 mg/kg	5560	Ratte	ECHA Dossier	
	dermal	LD50 mg/kg	5010	Ratte	ECHA Dossier	
	inhalation (4 h) aerosol	LC50 mg/l	> 7,7	Ratte	ECHA Dossier	
95-14-7	Benzotriazole					
	oral	LD50 mg/kg	500	Rat	ECHA Dossier	
	dermal	LD50 mg/kg	> 2000	Rabbit	ECHA Dossier	OECD Guideline 402
126-86-3	2,4,7,9-tetramethyldec-5-yne-4,7-diol					
	dermal	LD50 mg/kg	>2000	Rat (OECD 402)	ECHA Dossier	

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**Irritation and corrosivity**

Causes skin irritation.

Causes serious eye irritation.

**Sensitising effects**

Contains 2,4,7,9-tetramethyldec-5-yne-4,7-diol. May produce an allergic reaction.

**Carcinogenic/mutagenic/toxic effects for reproduction**

Based on available data, the classification criteria are not met.

propan-2-ol; isopropyl alcohol; isopropanol (CAS-No.: 67-63-0):

OECD Guideline 471 (Bacterial Reverse Mutation Assay) = negative., Literature information: ECHA dossier;

OECD Guideline 474: Mammalian Erythrocyte Micronucleus Test = negative., Literature information: ECHA

dossier; No indications of human carcinogenicity exist., Literature information: ECHA dossier; Reproductive

toxicity: Method: OECD Guideline 415 (One-Generation Reproduction Toxicity Study); Species: Rat ; Result:

NOAEL = 853 mg/kg; Literature information: ECHA dossier; Developmental toxicity/teratogenicity: Method:

(oral. ) OECD Guideline 414 (Prenatal Developmental Toxicity Study); Species: Rabbit ; Result: NOAEL = 480

mg/kg; Literature information: ECHA dossier

adipic acid:

In-vitro mutagenicity:

Method: OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)

Result: negative. Literature information: ECHA Dossier

Carcinogenicity:

Method: -

Species: Rat

Exposure duration: 2 years

Result: NOAEL = 750 mg/kg; Literature information: ECHA Dossier

Reproductive toxicity:

Method: -

Species: Rat

Result: NOAEL = 750 mg/kg; Literature information: ECHA Dossier

Developmental toxicity/teratogenicity

Method: -

Species: Rat.

Exposure route: oral.

Result: NOAEL = 288 mg/kg; Literature information: ECHA Dossier

**STOT-single exposure**

May cause drowsiness or dizziness. (propan-2-ol; isopropyl alcohol; isopropanol)

**STOT-repeated exposure**

Based on available data, the classification criteria are not met.

propan-2-ol; isopropyl alcohol; isopropanol (CAS-No.: 67-63-0):

Chronic inhalative toxicity (Rat): NOAEC = 5000 ppm (OECD 451), Literature information: ECHA dossier

adipic acid:

Chronic oral toxicity:

Species: Rat.

Exposure time: ~730d

Result: NOAEL = 750 mg/kg

Literature information: ECHA Dossier

**Aspiration hazard**

Based on available data, the classification criteria are not met.

**Specific effects in experiment on an animal**

No data available.

**11.2. Information on other hazards**

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**Endocrine disrupting properties**

No data available.

**SECTION 12: Ecological information**

**12.1. Toxicity**

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
67-63-0	propan-2-ol; isopropyl alcohol; isopropanol					
	Acute fish toxicity	LC50 10000 mg/l	96 h	Pimephales promelas	ECHA dossier	OECD 203
	Acute algae toxicity	ErC50 1800 mg/l		Scenedesmus quadricauda	ECHA dossier	
	Acute crustacea toxicity	EC50 >10000 mg/l	48 h	Daphnia magna (24h)	ECHA dossier	OECD 202
110-94-1	glutaric acid					
	Acute crustacea toxicity	EC50 6840 mg/l	48 h	Daphnia magna	ECHA	OECD 202
124-04-9	adipic acid					
	Acute fish toxicity	LC50 1000 mg/l	96 h	Danio rerio (OECD 203)	ECHA Dossier	
	Acute algae toxicity	ErC50 59 mg/l	72 h	Pseudokirchnerella subcapitata (IUCLID)	ECHA Dossier	
	Acute crustacea toxicity	EC50 46 mg/l	48 h	Daphnia magna (OECD 202)	ECHA Dossier	
	Fish toxicity	NOEC 6,3 mg/l	21 d	Daphnia magna (OECD 211)	ECHA Dossier	
	Acute bacteria toxicity	7910 g O2/g	3 h	OECD 209 activated sludge	ECHA Dossier	
95-14-7	Benzotriazole					
	Acute fish toxicity	LC50 > 100 mg/l	96 h	Danio rerio	ECHA Dossier	OECD Guideline 203
	Acute algae toxicity	ErC50 75 mg/l	72 h	Pseudokirchneriella subcapitata	ECHA Dossier	OECD Guideline 201
	Acute crustacea toxicity	EC50 15,8 mg/l	48 h	Daphnia galeata	Environ Sci Pollut Res 19:1781-1790 (201)	OECD Guideline 202
	Crustacea toxicity	NOEC 0,97 mg/l	21 d	Daphnia magna (EC 10)	ECHA Dossier	OECD Guideline 211
	Acute bacteria toxicity	(940 mg/l)	3 h	activated sludge of a predominantly domestic sewage	ECHA Dossier	OECD Guideline 209
126-86-3	2,4,7,9-tetramethyldec-5-yne-4,7-diol					
	Acute fish toxicity	LC50 36 mg/l	96 h	Pimephales promelas (OECD 203)	ECHA Dossier	
	Acute algae toxicity	ErC50 15 mg/l	72 h	Pseudokirchnerella subcapitata (OECD 201)	ECHA Dossier	
	Acute crustacea toxicity	EC50 88 mg/l	48 h	Daphnia magna (OECD 202)	ECHA Dossier	
	Acute bacteria toxicity	(630 mg/l)	0,5 h	activated sludge (OECD 209)	ECHA Dossier	

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**12.2. Persistence and degradability**

CAS No	Chemical name	Method	Value	d	Source
		Evaluation			
67-63-0	propan-2-ol; isopropyl alcohol; isopropanol	EU Method C.5/ EU Method C.6	53%	5	ECHA dossier
	Easily biodegradable (concerning to the criteria of the OECD)				
110-94-1	glutaric acid	OECD 301D / EEC 92/69 annex V, C.4-E	73%	28	ECHA
	readily biodegradable				
124-04-9	adipic acid	OECD Guideline 301 D	83%	30	ECHA Dossier
	Readily biodegradable (according to OECD criteria).				
95-14-7	Benzotriazole	OECD Guideline 302 A	0,8	28	ECHA Dossier
	Not easily bio-degradable (according to OECD-criteria).				
		OECD Guideline 301 D	0	28	ECHA Dossier
	Not easily bio-degradable (according to OECD-criteria).				
126-86-3	2,4,7,9-tetramethyldec-5-yne-4,7-diol	OECD 301B / ISO 9439 / EEC 92/69 annex V, C.4-C	5%	29	ECHA Dossier
	Product is not easily biodegradable.				

**12.3. Bioaccumulative potential**

**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
67-63-0	propan-2-ol; isopropyl alcohol; isopropanol	0,05
110-94-1	glutaric acid	-0,256
124-04-9	adipic acid	0,093
95-14-7	Benzotriazole	22,8

**BCF**

CAS No	Chemical name	BCF	Species	Source
124-04-9	adipic acid	3,162	QSAR	ECHA Dossier
95-14-7	Benzotriazole	4.147	BCFBAF v.3.00	

**12.4. Mobility in soil**

No data available.

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

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

**12.6. Endocrine disrupting properties**

No data available.

**12.7. Other adverse effects**

No data available.

**Further information**

Do not allow to enter into surface water or drains.

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

**Disposal recommendations**

Dispose of waste according to applicable legislation. Consult the local waste disposal expert about waste

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disposal. Non-contaminated packages may be recycled. According to (EWC) European Waste Catalogue, allocation of waste identity numbers/waste descriptions must be carried out in a specific way for every industry and process.

Control report for waste code/ waste marking according to (EWC) European Waste Catalogue:

**List of Wastes Code - residues/unused products**

160305 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused products; organic wastes containing hazardous substances; hazardous waste

**List of Wastes Code - used product**

160305 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused products; organic wastes containing hazardous substances; hazardous waste

**List of Wastes Code - contaminated packaging**

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

**Contaminated packaging**

Handle contaminated packages in the same way as the substance itself.

**SECTION 14: Transport information****Land transport (ADR/RID)**

**14.1. UN number or ID number:** UN 1219  
**14.2. UN proper shipping name:** ISOPROPANOL (ISOPROPYL ALCOHOL)  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** II  
Hazard label: 3



Classification code: F1  
Special Provisions: 601  
Limited quantity: 1 L  
Excepted quantity: E2  
Transport category: 2  
Hazard No: 33  
Tunnel restriction code: D/E

**Inland waterways transport (ADN)**

**14.1. UN number or ID number:** UN 1219  
**14.2. UN proper shipping name:** ISOPROPANOL (ISOPROPYL ALCOHOL)  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** II  
Hazard label: 3



Classification code: F1  
Special Provisions: 601  
Limited quantity: 1 L  
Excepted quantity: E2

**Marine transport (IMDG)**

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**14.1. UN number or ID number:** UN 1219  
**14.2. UN proper shipping name:** ISOPROPANOL (ISOPROPYL ALCOHOL)  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** II  
 Hazard label: 3



Marine pollutant: NO  
 Special Provisions: -  
 Limited quantity: 1 L  
 Excepted quantity: E2  
 EmS: F-E, S-D

**Air transport (ICAO-TI/IATA-DGR)**

**14.1. UN number or ID number:** UN 1219  
**14.2. UN proper shipping name:** ISOPROPANOL  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** II  
 Hazard label: 3



Special Provisions: A180  
 Limited quantity Passenger: 1 L  
 Passenger LQ: Y341  
 Excepted quantity: E2  
 IATA-packing instructions - Passenger: 353  
 IATA-max. quantity - Passenger: 5 L  
 IATA-packing instructions - Cargo: 364  
 IATA-max. quantity - Cargo: 60 L

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**14.6. Special precautions for user**

See section 8.

**14.7. Maritime transport in bulk according to IMO instruments**

not relevant.

**SECTION 15: Regulatory information**

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

**EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 3

2010/75/EU (VOC): not determined  
 2004/42/EC (VOC): not determined  
 Information according to 2012/18/EU (SEVESO III): P5c FLAMMABLE LIQUIDS

**Additional information**

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The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

UK REACH Appendix XVII, No (mixture): 3, 40

**National regulatory information**

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (D): 1 - slightly hazardous to water

**15.2. Chemical safety assessment**

For the following substances of this mixture a chemical safety assessment has been carried out:

propan-2-ol; isopropyl alcohol; isopropanol

adipic acid

Benzotriazole

**SECTION 16: Other information****Changes**

Rev. 1.00; Initial release 08.10.2021

**Abbreviations and acronyms**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

CAS: Chemical Abstracts Service

CLP: Classification, Labelling and Packaging of substances and mixtures

DNEL: Derived No Effect Level

d: day(s)

EINECS: European INventory of Existing Commercial chemical Substances

ELINCS: European List of Notified Chemical Substances

ECHA: European Chemicals Agency

EWC: European Waste Catalogue

IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)

h: hour

LOAEL: Lowest observed adverse effect level

LOAEC: Lowest observed adverse effect concentration

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

NOAEL: No observed adverse effect level

NOAEC: No observed adverse effect concentration

NLP: No-Longer Polymers

N/A: not applicable

OECD: Organisation for Economic Co-operation and Development

PNEC: predicted no effect concentration

PBT: Persistent bioaccumulative toxic

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail )

REACH: Registration, Evaluation, Authorisation of Chemicals

SVHC: substance of very high concern

TRGS: Technische Regeln für Gefahrstoffe

UN: United Nations

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VOC: Volatile Organic Compounds

**Classification for mixtures and used evaluation method according to GB CLP Regulation**

Classification	Classification procedure
Flam. Liq. 2; H225	On basis of test data
Skin Irrit. 2; H315	Calculation method
Eye Irrit. 2; H319	Calculation method
STOT SE 3; H336	Calculation method

**Relevant H and EUH statements (number and full text)**

H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH208	Contains 2,4,7,9-tetramethyldec-5-yne-4,7-diol. May produce an allergic reaction.

**Further Information**

Classification according to Regulation (EC) No 1272/2008 [CLP] - Classification procedure:

Health hazards: Calculation method.

Environmental hazards: Calculation method.

Physical hazards: On basis of test data and / or calculated and / or estimated.

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*