SAFETY DATA SHEET

TEKNOL 1889-11 - All variants

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

1.1 Product identifier

Product name : TEKNOL 1889-11 - All variants

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

Product use : Paint.

1.3 Details of the supplier of the safety data sheet

Teknos Group Oy, Takkatie 3, FI-00370 HELSINKI, FINLAND. Tel. +358 9 506 091.

e-mail address of person responsible for this SDS : Prod-safe@teknos.com

National contact

Teknos (UK) Limited, 7 Longlands Rd, Bicester, Oxfordshire OX26 5AH, United Kingdom. Tel. +44 (0) 1869 208005.

1.4 Emergency telephone number

National advisory body/Poison Centre

Telephone number : NHS: 111

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to UK CLP/GHS

Skin Sens. 1, H317
Aquatic Chronic 3, H412

The product is classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : H317 - May cause an allergic skin reaction.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention : P280 - Wear protective gloves.
P273 - Avoid release to the environment.
P261 - Avoid breathing vapour.

Response : P362 + P364 - Take off contaminated clothing and wash it before reuse.
P302 + P352 - IF ON SKIN: Wash with plenty of water.

Storage : Not applicable.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

SECTION 2: Hazards identification

Supplemental label elements : Contains biocidal products for in-can preservation: IPBC and BIT and Bronopol and MIT and OIT and DTBMA and MBIT. Risk of skin sensitisation.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification : None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification	Type
2-Butoxyethanol	REACH #: 01-2119475108-36 EC: 203-905-0 CAS: 111-76-2 Index: 603-014-00-0	≤3	Acute Tox. 4, H302 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319	[1] [2]
Propan-2-ol	REACH #: 01-2119457558-25 EC: 200-661-7 CAS: 67-63-0 Index: 603-117-00-0	<1	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336	[1] [2]
3-iodo-2-propynyl-butyl carbamate	EC: 259-627-5 CAS: 55406-53-6 Index: 616-212-00-7	<1	Acute Tox. 4, H302 Acute Tox. 3, H331 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT RE 1, H372 (larynx) Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=1)	[1]
Dipropyleneglycolmethylether	REACH #: 01-2119450011-60 EC: 252-104-2 CAS: 34590-94-8	≤0.3	Not classified.	[2]
Cobalt bis(2-ethylhexanoate)	REACH #: 01-2119524678-29 EC: 205-250-6 CAS: 136-52-7	<0.1	Eye Irrit. 2, H319 Skin Sens. 1A, H317 Repr. 1B, H360F Aquatic Acute 1, H400 (M=1) Aquatic Chronic 3, H412	[1] [2]
2-ethylhexanoic acid, zirconium salt	REACH #: 01-2119979088-21 EC: 245-018-1 CAS: 22464-99-9	≤0.1	Repr. 2, H361d	[1] [2]
2-Methylpentane-2,4-diol	REACH #: 01-2119539582-35 EC: 203-489-0 CAS: 107-41-5 Index: 603-053-00-3	≤0.1	Skin Irrit. 2, H315 Eye Irrit. 2, H319	[1] [2]
iso-butanol	REACH #: 01-2119484609-23	≤0.1	Flam. Liq. 3, H226 Skin Irrit. 2, H315	[1] [2]

SECTION 3: Composition/information on ingredients

	EC: 201-148-0 CAS: 78-83-1 Index: 603-108-00-1		Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336	
2-methyl-2H-isothiazol-3-one	EC: 220-239-6 CAS: 2682-20-4	<0.01	Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 2, H330 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=1) EUH071	[1]
Ammonia	REACH #: 01-2119488876-14 EC: 215-647-6 CAS: 1336-21-6 Index: 007-001-01-2	<0.1	Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Acute 1, H400 (M=1)	[1] [2]
2-Octyl-2H-isothiazol-3-one	EC: 247-761-7 CAS: 26530-20-1 Index: 613-112-00-5	≤0.0099	Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 2, H330 Skin Corr. 1, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=100) EUH071	[1]
2-Ethoxyethanol	EC: 203-804-1 CAS: 110-80-5 Index: 603-012-00-X	<0.1	Flam. Liq. 3, H226 Acute Tox. 4, H302 Acute Tox. 3, H331 Repr. 1B, H360FD	[1] [2]
Propylene glycol	REACH #: 01-2119456809-23 EC: 200-338-0 CAS: 57-55-6	≤0.1	Not classified. **See Section 16 for the full text of the H statements declared above.**	[2]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard
[2] Substance with a workplace exposure limit

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

SECTION 4: First aid measures

Skin contact : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous combustion products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

5.3 Advice for firefighters

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

: Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

6.3 Methods and material for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

6.4 Reference to other sections

: See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

7.3 Specific end use(s)

SECTION 7: Handling and storage

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

2-Butoxyethanol	**EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.** STEL: 50 ppm 15 minutes. TWA: 25 ppm 8 hours. STEL: 246 mg/m³ 15 minutes. TWA: 123 mg/m³ 8 hours.
Propan-2-ol	**EH40/2005 WELs (United Kingdom (UK), 1/2020).** STEL: 1250 mg/m³ 15 minutes. STEL: 500 ppm 15 minutes. TWA: 999 mg/m³ 8 hours. TWA: 400 ppm 8 hours.
Dipropyleneglycolmethylether	**EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.** TWA: 308 mg/m³ 8 hours. TWA: 50 ppm 8 hours.
Cobalt bis(2-ethylhexanoate)	**EH40/2005 WELs (United Kingdom (UK), 1/2020). [cobalt and cobalt compounds as Co] Inhalation sensitiser.** TWA: 0.1 mg/m³, (as Co) 8 hours.
2-ethylhexanoic acid, zirconium salt	**EH40/2005 WELs (United Kingdom (UK), 1/2020). [zirconium compounds as Zr]** STEL: 10 mg/m³, (as Zr) 15 minutes. TWA: 5 mg/m³, (as Zr) 8 hours.
2-Methylpentane-2,4-diol	**EH40/2005 WELs (United Kingdom (UK), 1/2020).** STEL: 123 mg/m³ 15 minutes. STEL: 25 ppm 15 minutes. TWA: 123 mg/m³ 8 hours. TWA: 25 ppm 8 hours.
iso-butanol	**EH40/2005 WELs (United Kingdom (UK), 1/2020).** STEL: 231 mg/m³ 15 minutes. STEL: 75 ppm 15 minutes. TWA: 154 mg/m³ 8 hours. TWA: 50 ppm 8 hours.
Ammonia	**EH40/2005 WELs (United Kingdom (UK), 1/2020). [ammonia anhydrous]** STEL: 25 mg/m³ 15 minutes. Form: anhydrous STEL: 35 ppm 15 minutes. Form: anhydrous TWA: 25 ppm 8 hours. Form: anhydrous TWA: 18 mg/m³ 8 hours. Form: anhydrous
2-Ethoxyethanol	**EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.** TWA: 2 ppm 8 hours. TWA: 8 mg/m³ 8 hours.
Propylene glycol	**EH40/2005 WELs (United Kingdom (UK), 1/2020).** TWA: 10 mg/m³ 8 hours. Form: Particulate TWA: 474 mg/m³ 8 hours. Form: total vapour and particulates TWA: 150 ppm 8 hours. Form: total vapour and particulates

Biological exposure indices

Product/ingredient name	Exposure indices
2-Butoxyethanol	**EH40/2005 BMGVs (United Kingdom (UK), 8/2018)** BGV: 240 mmol/mol creatinine, butoxyacetic acid [in urine]. Sampling time: post shift.

Recommended monitoring procedures : Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

SECTION 8: Exposure controls/personal protection

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
2-Butoxyethanol	DNEL	Long term Oral	6.3 mg/kg bw/day	General population	Systemic
	DNEL	Short term Oral	26.7 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	59 mg/m³	General population	Systemic
	DNEL	Long term Inhalation	98 mg/m³	Workers	Systemic
	DNEL	Short term Inhalation	147 mg/m³	General population	Local
	DNEL	Short term Inhalation	246 mg/m³	Workers	Local
	DNEL	Short term Inhalation	426 mg/m³	General population	Systemic
	DNEL	Short term Inhalation	1091 mg/m³	Workers	Systemic
Propan-2-ol	DNEL	Long term Oral	26 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	89 mg/m³	General population	Systemic
	DNEL	Long term Dermal	319 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	500 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	888 mg/kg bw/day	Workers	Systemic
3-iodo-2-propynyl-butyl carbamate	DNEL	Long term Inhalation	0.023 mg/m³	Workers	Systemic
	DNEL	Short term Inhalation	0.07 mg/m³	Workers	Systemic
	DNEL	Short term Inhalation	1.16 mg/m³	Workers	Local
	DNEL	Long term Inhalation	1.16 mg/m³	Workers	Local
	DNEL	Long term Dermal	2 mg/kg bw/day	Workers	Systemic
Dipropyleneglycolmethylether	DNEL	Long term Oral	36 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	37.2 mg/m³	General population	Systemic
	DNEL	Long term Dermal	121 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	283 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	308 mg/m³	Workers	Systemic
Cobalt bis(2-ethylhexanoate)	DNEL	Long term Inhalation	37 µg/m³	General population	Local
	DNEL	Long term Oral	175 µg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	235.1 µg/m³	Workers	Local
2-ethylhexanoic acid, zirconium salt	DNEL	Long term Inhalation	2.5 mg/m³	General population	Systemic
	DNEL	Long term Oral	2.5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	3.25 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	5 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	6.49 mg/kg bw/day	Workers	Systemic
2-Methylpentane-2,4-diol	DNEL	Long term Oral	1.5 mg/kg	General	Systemic

			bw/day	population	
	DNEL	Long term Inhalation	7.8 mg/m³	General population	Systemic
	DNEL	Long term Dermal	15 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	25 mg/m³	General population	Local
	DNEL	Long term Dermal	42 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	44.4 mg/m³	Workers	Systemic
	DNEL	Short term Inhalation	49 mg/m³	General population	Local
	DNEL	Long term Inhalation	49 mg/m³	Workers	Local
	DNEL	Short term Inhalation	98 mg/m³	Workers	Local
iso-butanol	DNEL	Long term Inhalation	55 mg/m³	General population	Local
	DNEL	Long term Inhalation	310 mg/m³	Workers	Local
2-methyl-2H-isothiazol-3-one	DNEL	Long term Inhalation	0.021 mg/m³	General population	Local
	DNEL	Long term Inhalation	0.021 mg/m³	Workers	Local
	DNEL	Long term Oral	0.027 mg/kg bw/day	General population	Systemic
	DNEL	Short term Inhalation	0.043 mg/m³	General population	Local
	DNEL	Short term Inhalation	0.043 mg/m³	Workers	Local
	DNEL	Short term Oral	0.053 mg/kg bw/day	General population	Systemic
2-Ethoxyethanol	DNEL	Long term Inhalation	83 µg/m³	Workers	Systemic
	DNEL	Long term Dermal	0.3 mg/kg bw/day	Workers	Systemic
Propylene glycol	DNEL	Long term Inhalation	10 mg/m³	General population	Local
	DNEL	Long term Inhalation	10 mg/m³	Workers	Local
	DNEL	Long term Inhalation	50 mg/m³	General population	Systemic
	DNEL	Long term Inhalation	168 mg/m³	Workers	Systemic

PNECs

No PNECs available

8.2 Exposure controls

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

SECTION 8: Exposure controls/personal protection

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Recommendations : Wear suitable gloves tested to EN374.

> 8 hours (breakthrough time): Nitrile gloves. thickness > 0.3 mm

Not recommended polyvinyl alcohol (PVA) gloves

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Filter type (spray application): A P

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid.

Colour : Clear.

Odour : Slight

Odour threshold : Not available.

Melting point/freezing point : Not available.

Initial boiling point and boiling range :

Ingredient name	°C	°F	Method
water	100	212	
2-Butoxyethanol	171 to 171.5	339.8 to 340.7	IP 123-93

Flammability (solid, gas) : Not available.

Upper/lower flammability or explosive limits : Lower: Not applicable.
Upper: Not applicable.

Flash point : Closed cup: >100°C (>212°F)

Auto-ignition temperature :

Ingredient name	°C	°F	Method
2-Propanol, 1-(2-butoxy-1-methylethoxy)	194	381.2	EU A.15
2-Butoxyethanol	230	446	DIN 51794

SECTION 9: Physical and chemical properties

Decomposition temperature : Not available.

pH : 7.7 to 8.5 [Conc. (% w/w): 100%]

Viscosity : Not available.

Solubility(ies) :

Not available.

Solubility in water : Not available.

Partition coefficient: n-octanol/ water : Not applicable.

Vapour pressure :

	Vapour Pressure at 20°C			Vapour pressure at 50°C		
Ingredient name	**mm Hg**	**kPa**	**Method**	**mm Hg**	**kPa**	**Method**
water	17.5	2.3				
2-Butoxyethanol	0.75006	0.1				

Relative density : Not available.

Density : 1 g/cm³

Vapour density : Not available.

Explosive properties : Not available.

Oxidising properties : Not available.

Particle characteristics

Median particle size : Not applicable.

SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : The product is stable.

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : No specific data.

10.5 Incompatible materials : No specific data.

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Propan-2-ol	LD50 Dermal	Rabbit	12800 mg/kg	-
	LD50 Oral	Rat	5000 mg/kg	-
3-iodo-2-propynyl-butyl carbamate	LC50 Inhalation Dusts and mists	Rat	0.67 g/m³	4 hours
	LC50 Inhalation Dusts and mists	Rat	0.763 mg/l	4 hours
	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	400 mg/kg	-
Cobalt bis(2-ethylhexanoate)	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	1.22 g/kg	-
2-ethylhexanoic acid,	LD50 Dermal	Rabbit	>5 g/kg	-

SECTION 11: Toxicological information

zirconium salt				
	LD50 Oral	Rat	>5 g/kg	-
2-Methylpentane-2,4-diol	LD50 Oral	Rat	3700 mg/kg	-
iso-butanol	LC50 Inhalation Vapour	Rat	19200 mg/m³	4 hours
	LD50 Dermal	Rabbit	3400 mg/kg	-
	LD50 Oral	Rat	2460 mg/kg	-
2-methyl-2H-isothiazol-3-one	LC50 Inhalation Dusts and mists	Rat	0.11 mg/l	4 hours
Ammonia	LD50 Oral	Rat	350 mg/kg	-
2-Octyl-2H-isothiazol-3-one	LD50 Dermal	Rabbit	690 mg/kg	-
	LD50 Oral	Rat	550 mg/kg	-
2-Ethoxyethanol	LD50 Dermal	Rabbit	3.6 g/kg	-
	LD50 Dermal	Rat	3900 mg/kg	-
	LD50 Oral	Rat	2125 mg/kg	-
Propylene glycol	LD50 Dermal	Rabbit	20800 mg/kg	-
	LD50 Oral	Rat	20 g/kg	-

Conclusion/Summary : Based on available data, the classification criteria are not met.

Acute toxicity estimates

Route	ATE value
Oral	67290.35 mg/kg
Inhalation (vapours)	616.83 mg/l
Inhalation (dusts and mists)	223.11 mg/l

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
2-Butoxyethanol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Eyes - Severe irritant	Rabbit	-	100 mg	-
	Skin - Mild irritant	Rabbit	-	500 mg	-
Propan-2-ol	Eyes - Moderate irritant	Rabbit	-	10 mg	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Eyes - Severe irritant	Rabbit	-	100 mg	-
	Skin - Mild irritant	Rabbit	-	500 mg	-
3-iodo-2-propynyl-butyl carbamate	Eyes - Severe irritant	Rabbit	-	-	-
Dipropyleneglycolmethylether	Eyes - Mild irritant	Human	-	8 mg	-
	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	500 mg	-
2-Methylpentane-2,4-diol	Skin - Mild irritant	Rabbit	-	465 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-
Ammonia	Eyes - Severe irritant	Rabbit	-	0.5 minutes 1 mg	-
	Eyes - Severe irritant	Rabbit	-	250 ug	-
2-Octyl-2H-isothiazol-3-one	Eyes - Severe irritant	Rabbit	-	100 mg	-
2-Ethoxyethanol	Eyes - Mild irritant	Guinea pig	-	10 ug	-
	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Eyes - Moderate irritant	Rabbit	-	50 mg	-
	Skin - Mild irritant	Rabbit	-	500 mg	-
Propylene glycol	Eyes - Mild irritant	Rabbit	-	100 mg	-
	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Human	-	168 hours 500 mg	-
	Skin - Mild irritant	Woman	-	96 hours 30 %	-
	Skin - Moderate irritant	Child	-	96 hours 30 % C	-
	Skin - Moderate irritant	Human	-	72 hours 104 mg l	-

SECTION 11: Toxicological information

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

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

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

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

Sensitisation

Product/ingredient name	Route of exposure	Species	Result
3-iodo-2-propynyl-butyl carbamate	skin	Guinea pig	Not sensitizing

Conclusion/Summary May cause an allergic skin reaction.

Skin : May produce an allergic reaction.

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

Mutagenicity

Product/ingredient name	Test	Experiment	Result
3-iodo-2-propynyl-butyl carbamate	-	Experiment: In vitro Subject: Bacteria	Negative

Conclusion/Summary : Based on available data, the classification criteria are not met.

Carcinogenicity

Conclusion/Summary : Based on available data, the classification criteria are not met.

Reproductive toxicity

Product/ingredient name	Maternal toxicity	Fertility	Developmental toxin	Species	Dose	Exposure
3-iodo-2-propynyl-butyl carbamate	Negative	-	Negative	Rabbit - Female	Oral: 20 mg/kg	13 days; 7 days per week
	Positive	-	Negative	Rabbit - Female	Oral: 50 mg/kg	13 days; 7 days per week

Conclusion/Summary : Based on available data, the classification criteria are not met.

Teratogenicity

Product/ingredient name	Result	Species	Dose	Exposure
3-iodo-2-propynyl-butyl carbamate	Negative - Oral	Rabbit - Female	50 mg/kg	-

Conclusion/Summary : Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Propan-2-ol	Category 3	-	Narcotic effects
iso-butanol	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects
Ammonia	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
3-iodo-2-propynyl-butyl carbamate	Category 1	-	larynx

Aspiration hazard

Not available.

SECTION 11: Toxicological information

Information on likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : May cause an allergic skin reaction.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

Conclusion/Summary : Based on available data, the classification criteria are not met.

General : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

Other information : Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
2-Butoxyethanol	Acute EC50 >1000 mg/l Fresh water	Daphnia - Water flea - *Daphnia magna*	48 hours
	Acute LC50 800000 µg/l Marine water	Crustaceans - Common shrimp, sand shrimp - *Crangon crangon*	48 hours
	Acute LC50 1250000 µg/l Marine water	Fish - Inland silverside - *Menidia beryllina*	96 hours
Propan-2-ol	Acute EC50 10100 mg/l Fresh water	Daphnia - Water flea - *Daphnia magna*	48 hours
	Acute LC50 1400000 µg/l Marine water	Crustaceans - Common shrimp, sand shrimp - *Crangon crangon*	48 hours
	Acute LC50 4200000 µg/l Fresh water	Fish - Harlequinfish, red rasbora - *Rasbora heteromorpha*	96 hours
3-iodo-2-propynyl-butyl carbamate	Acute EC50 0.022 mg/l Fresh water	Algae - Algae - *Scenedemus subspicatus*	72 hours

SECTION 12: Ecological information

	Acute EC50 0.16 mg/l Fresh water	Daphnia - Daphnia - *Daphnia magna*	48 hours
	Acute LC50 0.067 mg/l Fresh water	Fish - Trout - *Oncorhynchus mykiss*	96 hours
	Acute NOEC 0.049 mg/l Fresh water	Fish - Trout - *Oncorhynchus mykiss*	96 hours
	Chronic NOEC 0.05 mg/l Fresh water	Daphnia - Daphnia - *Daphnia Magna*	21 days
2-Methylpentane-2,4-diol	Acute EC50 2800000 µg/l Fresh water	Crustaceans - Water flea - *Ceriodaphnia reticulata* - Larvae	48 hours
	Acute EC50 3200000 µg/l Fresh water	Daphnia - Water flea - *Daphnia magna* - Larvae	48 hours
	Acute LC50 8000000 µg/l Marine water	Fish - Bleak - *Alburnus alburnus*	96 hours
iso-butanol	Acute LC50 600 mg/l Marine water	Crustaceans - Brine shrimp - *Artemia salina*	48 hours
	Acute LC50 1030000 µg/l Fresh water	Daphnia - Water flea - *Daphnia magna* - Neonate	48 hours
	Acute LC50 1330000 µg/l Fresh water	Fish - Rainbow trout,donaldson trout - *Oncorhynchus mykiss*	96 hours
2-methyl-2H-isothiazol-3-one	Acute EC50 0.18 ppm Fresh water	Daphnia - Water flea - *Daphnia magna*	48 hours
	Acute LC50 0.07 ppm Fresh water	Fish - Rainbow trout,donaldson trout - *Oncorhynchus mykiss*	96 hours
Ammonia	Acute LC50 37 ppm Fresh water	Fish - Western mosquitofish - *Gambusia affinis* - Adult	96 hours
2-Octyl-2H-isothiazol-3-one	Acute EC50 107 ppb Fresh water	Daphnia - Water flea - *Daphnia magna*	48 hours
	Acute LC50 47 ppb Fresh water	Fish - Rainbow trout,donaldson trout - *Oncorhynchus mykiss*	96 hours
	Chronic NOEC 74 ppb Fresh water	Daphnia - Water flea - *Daphnia magna*	21 days
	Chronic NOEC 8.5 ppb	Fish - Fathead minnow - *Pimephales promelas*	35 days
2-Ethoxyethanol	Acute LC50 >10000000 µg/l Fresh water	Fish - Bluegill - *Lepomis macrochirus*	96 hours
Propylene glycol	Acute EC50 19300 mg/l Fresh water	Algae - Algae	96 hours
	Acute EC50 43500 mg/l Fresh water	Daphnia - Daphnia - *Daphnia magna*	48 hours
	Acute LC50 18340000 µg/l Fresh water	Crustaceans - Water flea - *Ceriodaphnia dubia*	48 hours
	Acute LC50 40613 mg/l Fresh water	Fish - Trout - *Oncorhynchus mykiss*	96 hours

Conclusion/Summary : Harmful to aquatic life with long lasting effects.

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
iso-butanol	-	74 % - Readily - 28 days	-	-

Conclusion/Summary : This product has not been tested for biodegradation.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
3-iodo-2-propynyl-butyl carbamate	-	-	Not readily
iso-butanol	-	-	Readily
Propylene glycol	-	-	Readily

12.3 Bioaccumulative potential

SECTION 12: Ecological information

Product/ingredient name	$LogP_{ow}$	BCF	Potential
2-Butoxyethanol	0.81	-	Low
Propan-2-ol	0.05	-	Low
3-iodo-2-propynyl-butyl carbamate	>1	-	Low
Dipropyleneglycolmethylether	0.004	-	Low
Cobalt bis(2-ethylhexanoate)	-	15600	High
2-ethylhexanoic acid, zirconium salt	-	2.96	Low
2-Methylpentane-2,4-diol	0.58	-	Low
iso-butanol	1	-	Low
2-Octyl-2H-isothiazol-3-one	2.45	-	Low
2-Ethoxyethanol	-0.32	-	Low
Propylene glycol	-1.07	-	Low

12.4 Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

European waste catalogue (EWC) : 080111*

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-	-

SECTION 14: Transport information

14.3 Transport hazard class(es)	-	-	-	-
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to IMO instruments : Not relevant/applicable due to nature of the product.

SECTION 15: Regulatory information

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

UK (GB)/REACH

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

Intrinsic property	Ingredient name	Status	Reference number	Date of revision
Toxic to reproduction	2-ethoxyethanol	Candidate	-	12/15/2010

Ozone depleting substances

Not listed.

Prior Informed Consent (PIC)

Not listed.

Persistent Organic Pollutants

Not listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

No listed substance

Seveso Directive

This product is not controlled under the Seveso Directive.

National regulations

Product/ingredient name	List name	Name on list	Classification	Notes
Cobalt bis(2-ethylhexanoate)	UK Occupational Exposure Limits EH40 - WEL	cobalt and cobalt compounds as Co	Carc.	-

EU regulations

Industrial emissions (integrated pollution prevention and control) - Air : Not listed

SECTION 15: Regulatory information

Industrial emissions (integrated pollution prevention and control) - Water : Not listed

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

15.2 Chemical safety assessment : This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
GB CLP = UK CLP (EC No 1272/2008) on the Classification, Labelling and Packaging of Substances and Mixtures as amended by (EU Exit) Regulations 2019 No. 720 and amendments
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = GB CLP-specific Hazard statement
N/A = Not available
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
SGG = Segregation Group
vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification

Classification	Justification
Skin Sens. 1, H317 Aquatic Chronic 3, H412	Calculation method Calculation method

Full text of abbreviated H statements

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
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.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H360F	May damage fertility.
H360FD	May damage fertility. May damage the unborn child.

SECTION 16: Other information

H361d	Suspected of damaging the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH071	Corrosive to the respiratory tract.

Full text of classifications

Acute Tox. 2	ACUTE TOXICITY - Category 2
Acute Tox. 3	ACUTE TOXICITY - Category 3
Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
Aquatic Chronic 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Liq. 2	FLAMMABLE LIQUIDS - Category 2
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
Repr. 1B	REPRODUCTIVE TOXICITY - Category 1B
Repr. 2	REPRODUCTIVE TOXICITY - Category 2
Skin Corr. 1	SKIN CORROSION/IRRITATION - Category 1
Skin Corr. 1B	SKIN CORROSION/IRRITATION - Category 1B
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITISATION - Category 1
Skin Sens. 1A	SKIN SENSITISATION - Category 1A
STOT RE 1	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 1
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

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Version : 1.01

Notice to reader

The information in this SDS is based on the present state of our knowledge and on current laws. The product is not to be used for purposes other than those specified under section 1 without first obtaining written handling instructions. It is always the responsibility of the user to take all necessary steps to fulfil the demands set out in the local rules and legislation. The information in this SDS is meant to be a description of the safety requirements for our product. It is not to be considered a guarantee of the product's properties.