

Safety Data Sheet according to (EC) No 1907/2006 as amended

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

1.1. Product identifier

BONDERITE L-MR 71-2 known as Multan 71-2

BONDERITE L-MR 71-2 known as Multan 71-2

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

Intended use:

Water Soluble Cooling Lubricants for Metal Working

1.3. Details of the supplier of the safety data sheet

Henkel AG & Co. KGaA

Henkelstr. 67

40589 Düsseldorf

Germany

Phone: +49 211 797 0

For Safety Data Sheet updates please visit our website https://mysds.henkel.com/index.html#/appSelection or www.henkel-adhesives.com.

SDSinfo.Adhesive@henkel.com

1.4. Emergency telephone number

The Henkel information service also provides an around-the-clock telephone service on phone no.+49-(0)211-797-3350 for exceptional cases.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):

Skin irritation Category 2

H315 Causes skin irritation.

Serious eye damage Category 1

H318 Causes serious eye damage.

Toxic to reproduction Category 1B

H360FD May damage fertility. May damage the unborn child.

Chronic hazards to the aquatic environment Category 2

H411 Toxic to aquatic life with long lasting effects.

2.2. Label elements

Label elements (CLP):



Contains

Dicyclohexylamine

Ethanol, 2,2',2"-nitrilotris-, compd. with α -(carboxymethyl)- ω -[(9Z)-9-octadecen-1-yloxy]poly(oxy-1,2-ethanediyl) (1:1), 9EO

boric acid

Boric acid, compd. with 2-aminoethanol

Signal word:	Danger
Hazard statement:	H360FD May damage fertility. May damage the unborn child.
	H315 Causes skin irritation.
	H318 Causes serious eye damage.
	H411 Toxic to aquatic life with long lasting effects.
Supplemental information	Contains: 3-iodo-2-propynyl butylcarbamate May produce an allergic reaction.
	Restricted to professional users.
Precautionary statement:	P201 Obtain special instructions before use.
Prevention	P273 Avoid release to the environment.
	P280 Wear protective gloves/protective clothing/eye protection/face protection.
Precautionary statement:	P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove
Response	contact lenses, if present and easy to do. Continue rinsing.
	P308+P313 IF exposed or concerned: Get medical advice/attention.
	P310 Immediately call a POISON CENTER/doctor/

2.3. Other hazards

None if used properly.

Following substances are present in a concentration \geq the concentration limit for depiction in Section 3 and fulfill the criteria for PBT/vPvB, or were identified as endocrine disruptor (ED):

This mixture does not contain any substances in a concentration \geq the concentration limit for depiction in Section 3 that are assessed to be a PBT, vPvB or ED.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Declaration of the ingredients according to CLP (EC) No 1272/2008:

Hazardous components CAS-No. EC Number REACH-Reg No.	Concentration	Classification	Specific Conc. Limits, M- factors and ATEs	Add. Information
Boric acid, compd. with 2- aminoethanol 68425-67-2 270-367-1	5-< 10 %	Repr. 2, H361		
Fatty alcohol, C12-14, EO/PO 68439-51-0	1-< 5 %	Aquatic Chronic 3, H412		
Boric acid compound with dicyclohexylamine (1:1) 860382-11-2	1- < 3 %	Repr. 2, H361		
Dicyclohexylamine 101-83-7 202-980-7 01-2119493354-33	1- < 2,5 %	Acute Tox. 3, Oral, H301 Acute Tox. 3, Dermal, H311 Skin Corr. 1B, H314 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	M acute = 1 M chronic = 1	
FC C16-18/C18-unsatd., compds. with TEA 68424-19-1 270-279-3	1-< 5 %	Eye Irrit. 2, H319		
2-(2-butoxyethoxy)ethanol 112-34-5 203-961-6 01-2119475104-44	1-< 5%	Eye Irrit. 2, H319		EU OEL
Ethanol, 2,2',2"-nitrilotris-, compd. with α-(carboxymethyl)- ω-[(9Z)-9-octadecen-1- yloxy]poly(oxy-1,2-ethanediyl) (1:1), 9EO 2468016-06-8	1-< 3%	Eye Dam. 1, H318		
Ethanol, 2,2',2"-nitrilotris-, compd. with α-(carboxymethyl)- ω-(octyloxy)poly(oxy-1,2- ethanediyl) (1:1) 125431-62-1	1- < 3 %	Eye Dam. 1, H318		
boric acid 10043-35-3 233-139-2 01-2119486683-25	0,1-< 1 %	Repr. 1B, H360FD		SVHC
3-iodo-2-propynyl butylcarbamate 55406-53-6 259-627-5 01-2120762115-60	0,1-< 1 %	Aquatic Chronic 1, H410 STOT RE 1, H372 Acute Tox. 3, Inhalation, H331 Skin Sens. 1, H317 Eye Dam. 1, H318 Aquatic Acute 1, H400 Acute Tox. 4, Oral, H302 STOT SE 3, H335	M acute = 10 M chronic = 1	

If no ATE values are displayed, please refer to LD/LC50 values in Section 11. For full text of the H - statements and other abbreviations see section 16 "Other information".

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

Move to fresh air, consult doctor if complaint persists.

Skin contact:

IF ON SKIN: Wash with plenty of soap and water.

In case of adverse health effects seek medical advice.

Eye contact:

Immediately flush eyes with soft jet of water or eye rinse solution for at least 5 minutes. If pains remain (intensive smarting, sensitivity to light, visual disturbance) continue flushing and contact/seek doctor or hospital.

Ingestion:

Rinse mouth, drink 1-2 glasses of water, do not induce vomiting, consult a doctor.

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

SKIN: Redness, inflammation.

After eye contact: Corrosive, may cause permanent damage to eyes (impairment of vision).

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

See section: Description of first aid measures

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

All common extinguishing agents are suitable.

Extinguishing media which must not be used for safety reasons:

None known

5.2. Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating or in fires.

5.3. Advice for firefighters

Wear protective equipment.

Wear self-contained breathing apparatus.

Additional information:

Cool endangered containers with water spray jet.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid contact with skin and eyes.

6.2. Environmental precautions

Do not empty into drains / surface water / ground water.

6.3. Methods and material for containment and cleaning up

Dispose of contaminated material as waste according to Section 13.

Remove with liquid-absorbing material (sand, peat, sawdust).

6.4. Reference to other sections

See advice in section 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid skin and eye contact.

Ensure that workrooms are adequately ventilated.

See advice in section 8

Hygiene measures:

Wash hands before work breaks and after finishing work.

Do not eat, drink or smoke while working.

Take off contaminated clothing and wash before reuse.

The workplace should be equipped with an emergency shower and eye-rinsing facility.

7.2. Conditions for safe storage, including any incompatibilities

Store in sealed original container.

Store frost-free.

Keep away from heat and direct sunlight.

Temperatures between +5 °C and +40 °C

7.3. Specific end use(s)

Water Soluble Cooling Lubricants for Metal Working

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits

Valid for Germany

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit category / Remarks	Regulatory list
Dicyclohexylamine 101-83-7	0,7	5	Exposure limit(s):	If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).	TRGS 900
Dicyclohexylamine 101-83-7			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900
Dicyclohexylamine 101-83-7			Skin designation:	Can be absorbed through the skin.	TRGS 900
2,2',2"-Nitrilotriethanol 102-71-6			Short Term Exposure Classification:	Category I: substances for which the localized effect has an assigned OEL or for substances with a sensitizing effect in respiratory passages.	TRGS 900
2,2',2"-Nitrilotriethanol 102-71-6		1	Exposure limit(s):	If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).	TRGS 900
2-(2-Butoxyethoxy)ethanol 112-34-5 [2-(2-BUTOXYETHOXY)ETHANOL]	10	67,5	Time Weighted Average (TWA):	Indicative	ECTLV
2-(2-Butoxyethoxy)ethanol 112-34-5 [2-(2-BUTOXYETHOXY)ETHANOL]	15	101,2	Short Term Exposure Limit (STEL):	Indicative	ECTLV
2-(2-Butoxyethoxy)ethanol 112-34-5	10	67	Exposure limit(s):	1.5 If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).	TRGS 900
2-(2-Butoxyethoxy)ethanol 112-34-5			Short Term Exposure Classification:	Category I: substances for which the localized effect has an assigned OEL or for substances with a sensitizing effect in respiratory passages.	TRGS 900
Boric acid 10043-35-3			Short Term Exposure Classification:	Category I: substances for which the localized effect has an assigned OEL or for substances with a sensitizing effect in respiratory passages.	TRGS 900
Boric acid 10043-35-3		0,5	Exposure limit(s):	If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).	TRGS 900
3-Iodo-2-propynyl butylcarbamate 55406-53-6	0,005	0,058	Exposure limit(s):	If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).	TRGS 900
3-Iodo-2-propynyl butylcarbamate 55406-53-6			Short Term Exposure Classification:	Category I: substances for which the localized effect has an assigned OEL or for substances with a sensitizing effect in respiratory passages.	TRGS 900
3-Iodo-2-propynyl butylcarbamate 55406-53-6			Short Term Exposure Classification:	Category I: substances for which the localized effect has an assigned OEL or for	TRGS 900

			substances with a sensitizing effect in respiratory passages.	
3-Iodo-2-propynyl butylcarbamate 55406-53-6	0,005	0,058	2 If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).	TRGS 900

$\label{eq:predicted} \textbf{Predicted No-Effect Concentration (PNEC):}$

Name on list	Environmental Compartment	Exposure period	Value			Remarks	
	Compartment	F	mg/l	ppm	mg/kg	others	
Boric acid, compd. with 2-aminoethanol 68425-67-2	sewage treatment plant (STP)		10,000000 mg/l				
Boric acid, compd. with 2-aminoethanol 68425-67-2	aqua (intermittent releases)		0,26 mg/l				
Boric acid, compd. with 2-aminoethanol 68425-67-2	sediment (freshwater)				0,054 mg/kg		
Boric acid, compd. with 2-aminoethanol 68425-67-2	sediment (marine water)				0,0054 mg/kg		
Boric acid, compd. with 2-aminoethanol 68425-67-2	Soil				0,014 mg/kg		
Boric acid, compd. with 2-aminoethanol 68425-67-2	oral				66,7 mg/kg		
Boric acid, compd. with 2-aminoethanol 68425-67-2	aqua (freshwater)		0,026 mg/l				
Boric acid, compd. with 2-aminoethanol 68425-67-2	aqua (marine water)		0,0026 mg/l				
Dicyclohexylamine 101-83-7	aqua (freshwater)		0,002 mg/l				
Dicyclohexylamine 101-83-7	aqua (marine water)		0 mg/l				
Dicyclohexylamine 101-83-7	aqua (intermittent releases)		0,01 mg/l				
Dicyclohexylamine 101-83-7	sediment (freshwater)				0,075 mg/kg		
Dicyclohexylamine 101-83-7	sediment (marine water)				0,007 mg/kg		
Dicyclohexylamine 101-83-7	Soil				0,014 mg/kg		
Dicyclohexylamine 101-83-7	sewage treatment plant (STP)		21 mg/l				
Fatty acids, C16-18 and C18-unsatd., compds. with triethanolamine 68424-19-1	aqua (freshwater)		0,1 mg/l				
Fatty acids, C16-18 and C18-unsatd., compds. with triethanolamine 68424-19-1	aqua (intermittent releases)		10 mg/l				
Fatty acids, C16-18 and C18-unsatd., compds. with triethanolamine 68424-19-1	aqua (marine water)		0,1 mg/l				
Fatty acids, C16-18 and C18-unsatd., compds. with triethanolamine 68424-19-1	sewage treatment plant (STP)		0,184 mg/l				
Fatty acids, C16-18 and C18-unsatd., compds. with triethanolamine 68424-19-1	sediment (freshwater)				1,411 mg/kg		
Fatty acids, C16-18 and C18-unsatd., compds. with triethanolamine 68424-19-1	sediment (marine water)				1,411 mg/kg		
Fatty acids, C16-18 and C18-unsatd., compds. with triethanolamine 68424-19-1	Soil				0,163 mg/kg		
Fatty acids, C16-18 and C18-unsatd., compds. with triethanolamine 68424-19-1	Predator						no potential for bioaccumulation
2-(2-butoxyethoxy)ethanol 112-34-5	aqua (freshwater)		1,1 mg/l				
2-(2-butoxyethoxy)ethanol 112-34-5	aqua (marine water)		0,11 mg/l				
2-(2-butoxyethoxy)ethanol 112-34-5	Freshwater - intermittent		11 mg/l				
2-(2-butoxyethoxy)ethanol 112-34-5	sediment (freshwater)				4,4 mg/kg		
2-(2-butoxyethoxy)ethanol 112-34-5	sediment (marine water)				0,44 mg/kg		
2-(2-butoxyethoxy)ethanol	oral		1		56 mg/kg		

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112-34-5				
2-(2-butoxyethoxy)ethanol	Soil		0,32 mg/kg	
112-34-5				
boric acid	aqua	2,9 mg/l		
10043-35-3	(freshwater)			
boric acid	aqua (marine	2,9 mg/l		
10043-35-3	water)			
boric acid	Freshwater -	13,7 mg/l		
10043-35-3	intermittent			
boric acid	sewage	10 mg/l		
10043-35-3	treatment plant			
	(STP)			
boric acid	Soil		5,7 mg/kg	
10043-35-3				
3-Iodo-2-propynyl butylcarbamate	aqua	0,001 mg/l		
55406-53-6	(freshwater)			
3-Iodo-2-propynyl butylcarbamate	aqua (marine	0 mg/l		
55406-53-6	water)			
3-Iodo-2-propynyl butylcarbamate	sewage	0,44 mg/l		
55406-53-6	treatment plant			
	(STP)			
3-Iodo-2-propynyl butylcarbamate	sediment		0,017	
55406-53-6	(freshwater)		mg/kg	
3-Iodo-2-propynyl butylcarbamate	sediment		0,002	
55406-53-6	(marine water)		mg/kg	
3-Iodo-2-propynyl butylcarbamate	Soil		0,005	
55406-53-6			mg/kg	

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
Boric acid, compd. with 2-aminoethanol 68425-67-2	Workers	dermal	Long term exposure - systemic effects		3,3 mg/kg	
Boric acid, compd. with 2-aminoethanol 68425-67-2	Workers	Inhalation	Long term exposure - systemic effects		5,9 mg/m3	
Boric acid, compd. with 2-aminoethanol 68425-67-2	General population	dermal	Long term exposure - systemic effects		1,7 mg/kg	
Boric acid, compd. with 2-aminoethanol 68425-67-2	Workers	Inhalation	Long term exposure - systemic effects		1,4 mg/m3	
Boric acid, compd. with 2-aminoethanol 68425-67-2	General population	oral	Long term exposure - systemic effects		1,7 mg/kg	
Dicyclohexylamine 101-83-7	Workers	dermal	Long term exposure - systemic effects		0,1 mg/kg	
Dicyclohexylamine 101-83-7	Workers	Inhalation	Long term exposure - systemic effects		0,353 mg/m3	
2-(2-butoxyethoxy)ethanol 112-34-5	Workers	inhalation	Acute/short term exposure - local effects		101,2 mg/m3	
2-(2-butoxyethoxy)ethanol 112-34-5	Workers	inhalation	Long term exposure - local effects		67,5 mg/m3	
2-(2-butoxyethoxy)ethanol 112-34-5	General population	oral	Long term exposure - systemic effects		6,25 mg/kg	
boric acid 10043-35-3	Workers	inhalation	Long term exposure - systemic effects		8,3 mg/m3	
boric acid 10043-35-3	Workers	dermal	Long term exposure - systemic effects		392 mg/kg	
boric acid 10043-35-3	General population	inhalation	Long term exposure - systemic effects		4,15 mg/m3	
boric acid 10043-35-3	General population	dermal	Long term exposure - systemic effects		196 mg/kg	
boric acid 10043-35-3	General population	oral	Long term exposure - systemic effects		0,98 mg/kg	
boric acid 10043-35-3	General population	oral	Acute/short term exposure - systemic effects		0,98 mg/kg	
3-Iodo-2-propynyl butylcarbamate 55406-53-6	Workers	inhalation	Long term exposure - systemic effects		0,023 mg/m3	
3-Iodo-2-propynyl butylcarbamate 55406-53-6	Workers	inhalation	Acute/short term exposure - systemic effects		0,07 mg/m3	
3-Iodo-2-propynyl butylcarbamate 55406-53-6	Workers	inhalation	Long term exposure - local effects		1,16 mg/m3	
3-Iodo-2-propynyl butylcarbamate 55406-53-6	Workers	dermal	Long term exposure - systemic effects		2 mg/kg	
3-Iodo-2-propynyl butylcarbamate 55406-53-6	Workers	inhalation	Acute/short term exposure - local effects		1,16 mg/m3	

Biological Exposure Indices:

None

8.2. Exposure controls:

Engineering controls:

Ensure good ventilation/suction at the workplace.

Respiratory protection:

In case of aerosol formation, we recommend wearing of appropriate respiratory protection equipment with ABEK P2 filter (EN 14387).

This recommendation should be matched to local conditions.

Hand protection:

Chemical-resistant protective gloves (EN 374). Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374): Polychloroprene (CR; >= 1 mm thickness) or natural rubber (NR; >= 1 mm thickness) Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374): Polychloroprene (CR; >= 1 mm thickness) or natural rubber (NR; >= 1 mm thickness) This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

Eye protection:

Protective eye equipment should conform to EN166.

Goggles which can be tightly sealed.

Skin protection:

Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

Suitable protective clothing

Advices to personal protection equipment:

The information provided on personal protective equipment is for guidance purposes only. A full risk assessment should be conducted prior to using this product to determine the appropriate personal protective equipment to suit local conditions. Personal protective equipment should conform to the relevant EN standard.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Delivery form liquid

Colour reddish, Amber to yellowish

Odor amine-like Physical state liquid

Melting point Not applicable, Product is a liquid

Solidification temperature < 5 °C (< 41 °F) Initial boiling point 100 °C (212 °F)

Flammability The product is not flammable.

Explosive limits Not applicable, The product is not flammable.

Flash point $> 100 \,^{\circ}\text{C} (> 212 \,^{\circ}\text{F})$

Auto-ignition temperature Not applicable, The product is not flammable.

Decomposition temperature

Not applicable, Substance/mixture is not self-reactive, no organic peroxide and does not decompose under foreseen conditions of use

9,8 PH-value, potentiometer

(20 °C (68 °F); Conc.: 100 % product) Viscosity (kinematic) 107 - 137 mm2/s ;. Viscosity and density by Stabinger

(20 °C (68 °F);) Viscosimeter Solubility (qualitative) emulsifiable

(20 °C (68 °F); Solvent: Water)
Partition coefficient: n-octanol/water

Not applicable

Vapour pressure < 0.1 mbar < 0.0 mbar < 0.1 mbar < 0.0 mbar

Density 0,964 - 0,970 g/cm3 Viscosity and density by Stabinger

(20 °C (68 °F)) Viscosimeter Relative vapour density: < 1

(20 °C)

Particle characteristics

Not applicable Product is a liquid

9.2. Other information

Other information not applicable for this product

SECTION 10: Stability and reactivity

10.1. Reactivity

Reaction with strong acids.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

See section reactivity

10.4. Conditions to avoid

No decomposition if used according to specifications.

10.5. Incompatible materials

See section reactivity.

10.6. Hazardous decomposition products

None if used for intended purpose.

In case of fire toxic gases can be released.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute oral toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Species	Method
Fatty alcohol, C12-14, EO/PO 68439-51-0	LD50	> 2.000 mg/kg	rat	EU Method B.1 (Acute Toxicity (Oral))
Dicyclohexylamine 101-83-7	LD50	200 mg/kg	rat	not specified
FC C16-18/C18-unsatd., compds. with TEA 68424-19-1	LD50	> 2.000 mg/kg	rat	OECD Guideline 423 (Acute Oral toxicity)
2-(2- butoxyethoxy)ethanol 112-34-5	LD50	> 2.000 mg/kg	rat	EU Method B.1 (Acute Toxicity (Oral))
boric acid 10043-35-3	LD50	3.450 mg/kg	rat	not specified
3-iodo-2-propynyl butylcarbamate 55406-53-6	LD50	1.470 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)

Acute dermal toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances	Value	Value	Species	Method
CAS-No.	type			
Fatty alcohol, C12-14,	LD50	> 2.000 mg/kg		not specified
EO/PO				
68439-51-0				
Dicyclohexylamine	LD50	200 - 316	rabbit	not specified
101-83-7		mg/kg		
FC C16-18/C18-unsatd., compds. with TEA	LD50	> 2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
68424-19-1				
2-(2-	LD50	2.764 mg/kg	rabbit	OECD Guideline 402 (Acute Dermal Toxicity)
butoxyethoxy)ethanol				`
112-34-5				
boric acid	LD50	> 2.000 mg/kg	rabbit	not specified
10043-35-3				
3-iodo-2-propynyl	LD50	> 2.000 mg/kg	rabbit	EPA OPP 81-2 (Acute Dermal Toxicity)
butylcarbamate				
55406-53-6				

Acute inhalative toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances	Value	Value	Test atmosphere	Exposure	Species	Method
CAS-No.	type			time		
3-iodo-2-propynyl	LC50	0,68 mg/l	dust/mist	4 h	rat	equivalent or similar to OECD
butylcarbamate						Guideline 403 (Acute
55406-53-6						Inhalation Toxicity)

Skin corrosion/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
Fatty alcohol, C12-14, EO/PO 68439-51-0	slightly irritating	4 h	rabbit	EU Method B.4 (Acute Toxicity: Dermal Irritation / Corrosion)
Fatty alcohol, C12-14, EO/PO 68439-51-0	moderately irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
FC C16-18/C18-unsatd., compds. with TEA 68424-19-1	not irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
2-(2- butoxyethoxy)ethanol 112-34-5	not irritating		rabbit	Draize Test
boric acid 10043-35-3	not irritating		rabbit	not specified
3-iodo-2-propynyl butylcarbamate 55406-53-6	slightly irritating	4 h	rabbit	EPA OPP 81-5 (Acute Dermal Irritation)

Serious eye damage/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
Boric acid, compd. with 2-aminoethanol 68425-67-2	not irritating		rabbit	EPA OPPTS 870.2400 (Acute Eye Irritation)
Fatty alcohol, C12-14, EO/PO 68439-51-0	slightly irritating	24 h	rabbit	EU Method B.5 (Acute Toxicity: Eye Irritation / Corrosion)
Fatty alcohol, C12-14, EO/PO 68439-51-0	slightly irritating	24 h	rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
FC C16-18/C18-unsatd., compds. with TEA 68424-19-1	irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
2-(2- butoxyethoxy)ethanol 112-34-5	moderately irritating		rabbit	not specified
boric acid 10043-35-3	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
3-iodo-2-propynyl butylcarbamate 55406-53-6	Category 1 (irreversible effects on the eye)		rabbit	EPA OPP 81-4 (Acute Eye Irritation)

Respiratory or skin sensitization:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances	Result	Test type	Species	Method
CAS-No.			_	
Fatty alcohol, C12-14, EO/PO 68439-51-0	not sensitising	Guinea pig maximisation test	guinea pig	EU Method B.6 (Skin Sensitisation)
Fatty alcohol, C12-14, EO/PO 68439-51-0	not sensitising	Guinea pig maximisation test	guinea pig	Magnusson and Kligman Method
FC C16-18/C18-unsatd., compds. with TEA 68424-19-1	not sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
2-(2- butoxyethoxy)ethanol 112-34-5	not sensitising	Guinea pig maximisation test	guinea pig	Magnusson and Kligman Method
boric acid 10043-35-3	not sensitising	Buehler test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
3-iodo-2-propynyl butylcarbamate 55406-53-6	sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)

Germ cell mutagenicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Fatty alcohol, C12-14, EO/PO 68439-51-0	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
2-(2- butoxyethoxy)ethanol 112-34-5	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
boric acid 10043-35-3	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
boric acid 10043-35-3	negative	sister chromatid exchange assay in mammalian cells	with and without		not specified
boric acid 10043-35-3	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
3-iodo-2-propynyl butylcarbamate 55406-53-6	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		EPA OPP 84-2 (Mutagenicity Testing)
3-iodo-2-propynyl butylcarbamate 55406-53-6	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
boric acid 10043-35-3	negative	oral: gavage		mouse	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
3-iodo-2-propynyl butylcarbamate 55406-53-6	negative	oral: gavage		mouse	equivalent or similar to OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)

Carcinogenicity

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Sex	Method
3-iodo-2-propynyl butylcarbamate 55406-53-6	not carcinogenic	oral: unspecified	104 w daily	rat	male/female	equivalent or similar OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)

Reproductive toxicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result / Value	Test type	Route of application	Species	Method
boric acid 10043-35-3	NOAEL P 100 mg/kg NOAEL F1 100 mg/kg NOAEL F2 100 mg/kg	three- generation study	oral: feed	rat	not specified
3-iodo-2-propynyl butylcarbamate 55406-53-6	NOAEL P 300 ppm NOAEL F1 > 750 ppm NOAEL F2 > 750 ppm	two- generation study	oral: gavage	rat	equivalent or similar to OECD Guideline 416 (Two- Generation Reproduction Toxicity Study)

STOT-single exposure:

No data available.

STOT-repeated exposure:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result / Value	Route of application	Exposure time / Frequency of treatment	Species	Method
2-(2- butoxyethoxy)ethanol 112-34-5	NOAEL < 50 mg/kg	oral: gavage	90 days 5 days/week	rat	not specified
2-(2- butoxyethoxy)ethanol 112-34-5	NOAEL 2 - 6 ppm	inhalation	90 days	rat	not specified
2-(2- butoxyethoxy)ethanol 112-34-5	NOAEL > 2.000 mg/kg	dermal	13 weeks 6 hours/day, 5 days/week	rat	not specified
boric acid 10043-35-3	NOAEL 100 mg/kg	oral: feed	2 y daily	rat	not specified
3-iodo-2-propynyl butylcarbamate 55406-53-6	NOAEL 0,00116 mg/l	inhalation: dust	90 d 6 h/d, 5 d/w	rat	equivalent or similar to OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day)
3-iodo-2-propynyl butylcarbamate 55406-53-6	NOAEL 20 mg/kg	oral: feed	104 w daily	rat	equivalent or similar to OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
3-iodo-2-propynyl butylcarbamate 55406-53-6	NOAEL 200 mg/kg	dermal	91 d 6 h/d, 5 d/w	rat	OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study)

Aspiration hazard:

No data available.

11.2 Information on other hazards

not applicable

SECTION 12: Ecological information

General ecological information:

Do not empty into drains / surface water / ground water.

12.1. Toxicity

Toxicity (Fish):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

Hazardous substances	Value	Value	Exposure time	Species	Method
CAS-No.	type				
Fatty alcohol, C12-14, EO/PO	LC50	> 1 - 10 mg/l	96 h	Brachydanio rerio (new name:	OECD Guideline 203 (Fish,
68439-51-0				Danio rerio)	Acute Toxicity Test)
Dicyclohexylamine	LC50	62 mg/l	96 h	Brachydanio rerio (new name:	EU Method C.1 (Acute
101-83-7				Danio rerio)	Toxicity for Fish)
FC C16-18/C18-unsatd.,	LL50	> 1.800 mg/l	96 h	Scophthalmus maximus	OECD Guideline 203 (Fish,
compds. with TEA					Acute Toxicity Test)
68424-19-1					
2-(2-butoxyethoxy)ethanol	LC50	1.300 mg/l	96 h	Lepomis macrochirus	OECD Guideline 203 (Fish,
112-34-5					Acute Toxicity Test)
	LC50	> 1 - 10 mg/l	96 h	not specified	Weight of evidence
compd. with α-					
(carboxymethyl)-ω-[(9Z)-9-					
octadecen-1-yloxy]poly(oxy-					
1,2-ethanediyl) (1:1), 9EO					
2468016-06-8	T C50	455 /1	061	D' 1 1 1	.1 '11'
boric acid	LC50	455 mg/l	96 h	Pimephales promelas	other guideline:
10043-35-3	NOEG	26.6 //	24.1	D : : (OF CD C : 1 1' 210 (C 1
boric acid	NOEC	36,6 mg/l	34 d	Danio rerio (reported as	OECD Guideline 210 (fish
10043-35-3	T C50	0.067 //	0.6.1	Brachydanio rerio)	early lite stage toxicity test)
3-iodo-2-propynyl	LC50	0,067 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish,
butylcarbamate 55406-53-6					Acute Toxicity Test)
	NOEG	0.0004 //	25.1	D' 1 1 1	OF CD C : 1 1: 210 (C 1
3-iodo-2-propynyl	NOEC	0,0084 mg/l	35 d	Pimephales promelas	OECD Guideline 210 (fish
butylcarbamate					early lite stage toxicity test)
55406-53-6					

Toxicity (aquatic invertebrates):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Fatty alcohol, C12-14, EO/PO 68439-51-0		> 10 - 100 mg/l	24 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Dicyclohexylamine 101-83-7	EC50	8 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
FC C16-18/C18-unsatd., compds. with TEA 68424-19-1	EL50	> 1.000 mg/l	48 h	Acartia tonsa	other guideline:
2-(2-butoxyethoxy)ethanol 112-34-5	EC50	3.300 mg/l	24 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Ethanol, 2,2',2"-nitrilotris-, compd. with α- (carboxymethyl)-ω-[(9Z)-9- octadecen-1-yloxy]poly(oxy-1,2-ethanediyl) (1:1), 9EO 2468016-06-8	EC50	> 10 - 100 mg/l	48 h	not specified	Weight of evidence
boric acid 10043-35-3	EC50	520 mg/l	48 h	Ceriodaphnia dubia	other guideline:
3-iodo-2-propynyl butylcarbamate 55406-53-6	EC50	0,65 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

${\bf Chronic\ toxicity\ (aquatic\ invertebrates):}$

The table below presents the data of the classified substances present in the mixture.

Hazardous substances	Value	Value	Exposure time	Species	Method
CAS-No.	type				
Dicyclohexylamine	NOEC	0,016 mg/l	21 d	Daphnia magna	OECD Guideline 202
101-83-7		_			(Daphnia sp. Chronic
					Immobilisation Test)
boric acid	NOEC	61,6 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia
10043-35-3		_			magna, Reproduction Test)
3-iodo-2-propynyl	NOEC	0,05 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia
butylcarbamate					magna, Reproduction Test)
55406-53-6					

Toxicity (Algae):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
	EC10	> 0,1 - 1 mg/l	72 h	not specified	ISO 8692 (Water Quality)
Dicyclohexylamine 101-83-7	EC50	> 1 mg/l	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	EU Method C.3 (Algal Inhibition test)
Dicyclohexylamine 101-83-7	NOEC	0,016 mg/l	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	EU Method C.3 (Algal Inhibition test)
FC C16-18/C18-unsatd., compds. with TEA 68424-19-1	NOELR	> 1.000 mg/l	72 h	Skeletonema costatum	ISO 10253:2006 (Marine algal growth inhibition test)
FC C16-18/C18-unsatd., compds. with TEA 68424-19-1	EL50	> 1.000 mg/l	72 h	Skeletonema costatum	ISO 10253:2006 (Marine algal growth inhibition test)
2-(2-butoxyethoxy)ethanol 112-34-5	NOEC	> 100 mg/l	96 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
2-(2-butoxyethoxy)ethanol 112-34-5	EC50	> 100 mg/l	96 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Ethanol, 2,2',2"-nitrilotris-, compd. with α- (carboxymethyl)-ω-[(9Z)-9- octadecen-1-yloxy]poly(oxy-1,2-ethanediyl) (1:1), 9EO 2468016-06-8	EC50	> 100 mg/l	72 h	not specified	Weight of evidence
boric acid 10043-35-3	EC50	299,6 mg/l	72 h	Pseudokirchneriella subcapitata (reported as Raphidocelis subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
boric acid 10043-35-3	EC10	200,12 mg/l	72 h	Pseudokirchneriella subcapitata (reported as Raphidocelis subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
3-iodo-2-propynyl butylcarbamate 55406-53-6	EC50	0,053 mg/l	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
3-iodo-2-propynyl butylcarbamate 55406-53-6	EC10	0,013 mg/l	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)

Toxicity (microorganisms):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

Hazardous substances	Value	Value	Exposure time	Species	Method
CAS-No.	type				
Fatty alcohol, C12-14, EO/PO	EC0	> 100 mg/l	3 h	activated sludge	OECD Guideline 209
68439-51-0					(Activated Sludge,
					Respiration Inhibition Test)
Dicyclohexylamine	EC 50	712 mg/l	3 h	activated sludge	ISO 8192 (Test for
101-83-7					Inhibition of Oxygen
					Consumption by Activated
					Sludge)
2-(2-butoxyethoxy)ethanol	EC10	> 1.995 mg/l	30 min	activated sludge, industrial	OECD Guideline 209
112-34-5					(Activated Sludge,
					Respiration Inhibition Test)
boric acid	EC0	20 mg/l	16 h	Pseudomonas putida	DIN 38412, part 8
10043-35-3				_	(Pseudomonas
					Zellvermehrungshemm-
					Test)

12.2. Persistence and degradability

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Test type	Degradability	Exposure time	Method
Fatty alcohol, C12-14, EO/PO 68439-51-0	readily biodegradable	aerobic	> 60 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
Dicyclohexylamine 101-83-7	readily biodegradable	aerobic	96 %	20 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
FC C16-18/C18-unsatd., compds. with TEA 68424-19-1	readily biodegradable	aerobic	81 %	28 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
2-(2-butoxyethoxy)ethanol 112-34-5	inherently biodegradable	aerobic	100 %	9 d	OECD Guideline 302 B (Inherent biodegradability: Zahn- Wellens/EMPA Test)
2-(2-butoxyethoxy)ethanol 112-34-5	readily biodegradable	aerobic	> 60 %	28 d	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (1))
Ethanol, 2,2',2"-nitrilotris-, compd. with α- (carboxymethyl)-ω-[(9Z)-9- octadecen-1-yloxy]poly(oxy-1,2-ethanediyl) (1:1), 9EO 2468016-06-8	readily biodegradable	aerobic	> 60 %	28 d	Weight of evidence
3-iodo-2-propynyl butylcarbamate 55406-53-6	not readily biodegradable.	aerobic	25 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)

12.3. Bioaccumulative potential

The table below presents the data of the classified substances present in the mixture.

Hazardous substances	Bioconcentratio	Exposure time	Temperature	Species	Method
CAS-No.	n factor (BCF)				
boric acid	< 0,1	90 d	12 °C	Oncorhynchus	not specified
10043-35-3				tschawytscha	
3-iodo-2-propynyl	3,3 - 4,5			Carassius sp.	not specified
butylcarbamate					
55406-53-6					

12.4. Mobility in soil

The table below presents the data of the classified substances present in the mixture.

Hazardous substances	LogPow	Temperature	Method
CAS-No.			
Dicyclohexylamine 101-83-7	2,72	25 °C	EU Method A.8 (Partition Coefficient)
2-(2-butoxyethoxy)ethanol 112-34-5	1	20 °C	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
boric acid 10043-35-3	-1,09	22 °C	EU Method A.8 (Partition Coefficient)
3-iodo-2-propynyl butylcarbamate 55406-53-6	2,81		not specified

12.5. Results of PBT and vPvB assessment

The table below presents the data of the classified substances present in the mixture.

Hazardous substances	PBT / vPvB
CAS-No.	
Boric acid, compd. with 2-aminoethanol	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very
68425-67-2	Bioaccumulative (vPvB) criteria.
Fatty alcohol, C12-14, EO/PO	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very
68439-51-0	Bioaccumulative (vPvB) criteria.
Dicyclohexylamine	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very
101-83-7	Bioaccumulative (vPvB) criteria.
FC C16-18/C18-unsatd., compds. with TEA	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very
68424-19-1	Bioaccumulative (vPvB) criteria.
2-(2-butoxyethoxy)ethanol	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very
112-34-5	Bioaccumulative (vPvB) criteria.
boric acid	According to Annex XIII of regulation (EC) 1907/2006 a PBT and vPvB assessment shall not
10043-35-3	be conducted for inorganic substances.
3-iodo-2-propynyl butylcarbamate	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very
55406-53-6	Bioaccumulative (vPvB) criteria.

12.6. Endocrine disrupting properties

not applicable

12.7. Other adverse effects

If acidic or alkaline products are discharged into wastewater installations care must be taken that the discharged wastewater has a pH in the range pH 6 - 10, as pH variations could cause disorders in wastewater channels and biological sewage treatment plants. The local discharge regulations take precedence.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:

In consultation with the responsible local authority, must be subjected to special treatment.

Waste code

120109

The valid EWC waste code numbers are source-related. The manufacturer is therefore unable to specify EWC waste codes for the articles or products used in the various sectors. The EWC codes listed are intended as a recommendation for users. We will be happy to advise you.

SECTION 14: Transport information

14.1. UN number or ID number

ADR	3082
RID	3082
ADN	3082
IMDG	3082
IATA	3082

14.2. UN proper shipping name

ADR ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(Dicyclohexyl amine,3-iodo-2-propinylbutyl carbamate)

RID ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(Dicyclohexyl amine,3-iodo-2-propinylbutyl carbamate)

ADN ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(Dicyclohexyl amine,3-iodo-2-propinylbutyl carbamate)

IMDG ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(Dicyclohexyl amine,3-iodo-2-propinylbutyl carbamate)

IATA Environmentally hazardous substance, liquid, n.o.s. (Dicyclohexyl amine,3-iodo-2-

propinylbutyl carbamate)

14.3. Transport hazard class(es)

ADR	9
RID	9
ADN	9
IMDG	ç
IATA	C

14.4. Packing group

ADR	III
RID	III
ADN	III
IMDG	III
IATA	III

14.5. Environmental hazards

ADR	Environmentally Hazardous
RID	Environmentally Hazardous
ADN	Environmentally Hazardous

IMDG Marine Pollutant

IATA Environmentally Hazardous

14.6. Special precautions for user

ADR	not applicable
	Tunnelcode:
RID	not applicable
ADN	not applicable
IMDG	not applicable
IATA	not applicable

The transport classifications in this section apply generally to packed and bulk goods alike. For containers with a net volume of no more than 5 L for liquid substances or a net mass of no more than 5 kg for solid substances per individual or inner package, the exemptions SP 375 (ADR), A197 (IATA), 2.10.2.7 (IMDG) may be applied, which can result in a deviation from the transport classification for packed goods.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

Ozone Depleting Substance (ODS) (Regulation (EC) No 1005/2009): Not applicable Prior Informed Consent (PIC) (Regulation (EU) No 649/2012): Not applicable Persistent organic pollutants (Regulation (EU) 2019/1021): Not applicable

VOC content 0 %

(2010/75/EU)

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

National regulations/information (Germany):

WGK: WGK 2: significantly water endangering (Ordinance on facilities for handling

substances that are hazardous to water (AwSV)) Classification according to AwSV, Annex 1 (5.2)

Storage class according to TRGS 510: 6.1D

General remarks (DE): This product is in scope of the German regulation

"ChemikalienVerbotsVerordnung"

SECTION 16: Other information

The labelling of the product is indicated in Section 2. The full text

of all abbreviations indicated by codes in this safety data sheet are as follows:

H301 Toxic if swallowed.

H302 Harmful if swallowed.

H311 Toxic in contact with skin.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H331 Toxic if inhaled.

H335 May cause respiratory irritation.

H360FD May damage fertility. May damage the unborn child.

H361 Suspected of damaging fertility or 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.

ED: Substance identified as having endocrine disrupting properties

EU OEL:

EU EXPLD 1:

Substance with a Union workplace exposure limit

Substance listed in Annex I, Reg (EC) No. 2019/1148

EU EXPLD 2

Substance listed in Annex II, Reg (EC) No. 2019/1148

SVHC:

Substance of very high concern (REACH Candidate List)

PBT:

Substance fulfilling persistent, bioaccumulative and toxic criteria

PBT/vPvB: Substance fulfilling persistent, bioaccumulative and toxic plus very persistent and very

bioaccumulative criteria

vPvB: Substance fulfilling very persistent and very bioaccumulative criteria

Further information:

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