Tintometer[®] Group Water Testing



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

Printing date 22.04.2024 Version number 18 (replaces version 17) Revision: 22.04.2024

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

- · 1.1 Product identifier
- Product name: QAC-Test
- · Catalog number: 00515411, 515410BT, 515411BT, 00515419BT
- 1.2 Relevant identified uses of the substance or mixture and uses advised against
- · Application of the substance / the preparation: Reagent for water analysis
- · 1.3 Details of the supplier of the safety data sheet
- · Supplier:

Tintometer GmbH Schleefstraße 8-12 44287 Dortmund Made in Germany www.lovibond.com

The Tintometer Limited Lovibond® House Sun Rise Way Amesbury Wiltshire SP4 7GR United Kingdom

· Informing department: e-mail: sds@lovibond.com Product Safety Department

· 1.4 Emergency telephone number:

+44 1235 239670 Languages: English

SECTION 2: Hazards identification

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



GHS08 health hazard

Repr. 1B H360FD May damage fertility. May damage the unborn child.



GHS07

Eye Irrit. 2 H319 Causes serious eye irritation.

- · 2.2 Label elements
- · Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the GB CLP regulation.

· Hazard pictograms





GHS07 GHS08

· Signal word Danger

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Product name: QAC-Test

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· Hazard-determining components of labelling:

boric acid

· Hazard statements

H319 Causes serious eye irritation.

H360FD May damage fertility. May damage the unborn child.

Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection.

P201 Obtain special instructions before use.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to

do. Continue rinsing.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P405 Store locked up.

· Additional information:

Restricted to professional users.

· 2.3 Other hazards No further relevant information available.

· Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.

Determination of endocrine-disrupting properties

The product does not contain substances with endocrine disrupting properties.

SECTION 3: Composition/information on ingredients

· 3.2 Mixtures

· Description: Mixture of organic and inorganic compounds

· Dangerous components:			
CAS: 10043-35-3	boric acid	0.3–≤2.5%	
EINECS: 233-139-2	♦ Repr. 1B, H360FD		
Index No: 005-007-00-2			
Reg.nr.: 01-2119486683-25-XXXX			
CAS: 151-21-3	sodium dodecyl sulphate	1-<2.5%	
EINECS: 205-788-1	♦ Flam. Sol. 2, H228; ♦ Eye Dam. 1, H318; ↑ Acute Tox. 4, H302; Acute Tox. 4, H302; Acute Tox. 4, H332; Skin Irrit. 2, H315; STOT SE 3, H335; Aquatic Chronic 3, H412		
Reg.nr.: 01-21119489461-32-XXXX	Tox. 4, H332; Skin Irrit. 2, H315; STOT SE 3, H335; Aquatic Chronic 3, H412		

·SVHC

CAS: 10043-35-3 boric acid

· SVHC (UK)

CAS: 10043-35-3 boric acid

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

SECTION 4: First aid measures

· 4.1 Description of first aid measures

· General information Instantly remove any clothing soiled by the product.

· After inhalation

Supply fresh air.

Get medical advice/attention.

· After skin contact

Instantly wash with water and soap and rinse thoroughly.

Get medical advice/attention.

· After eye contact Rinse opened eye for several minutes (at least 15 min) under running water. Then consult doctor.

After swallowing

Rinse out mouth and then drink 1-2 glasses of water.

Seek medical treatment.

· 4.2 Most important symptoms and effects, both acute and delayed:

irritations

absorption

after inhalation:

mucosal irritations, cough, shortness of breath

after swallowing:

sickness

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vomiting

diarrhoea

after absorption of large amounts:

cardiovascular disorders

CNS disorders

• 4.3 Indication of any immediate medical attention and special treatment needed: No further relevant information available.

SECTION 5: Firefighting measures

- · 5.1 Extinguishing media
- Suitable extinguishing agents

Carbon dioxide (CO₂), Foam, Fire-extinguishing powder

Water spray jet

- · For safety reasons unsuitable extinguishing agents Water with a full water jet.
- 5.2 Special hazards arising from the substance or mixture

combustible

Formation of toxic gases is possible during heating or in case of fire.

Can be released in case of fire:

Carbon monoxide (CO) and carbon dioxide (CO₂)

- 5.3 Advice for firefighters
- · Protective equipment:

Wear self-contained breathing apparatus.

Wear full protective suit.

Additional information

Collect contaminated fire fighting water separately. It must not enter drains.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

Ambient fire may liberate hazardous vapours.

SECTION 6: Accidental release measures

- · 6.1 Personal precautions, protective equipment and emergency procedures
- · Advice for non-emergency personnel:

Wear protective equipment. Keep unprotected persons away.

Avoid substance contact.

Ensure adequate ventilation

- · Advice for emergency responders: Protective equipment: see section 8
- 6.2 Environmental precautions: Do not allow product to reach sewage system or water bodies.
- 6.3 Methods and material for containment and cleaning up:

Ensure adequate ventilation.

Collect mechanically.

Dispose of contaminated material as waste according to item 13.

6.4 Reference to other sections

See Section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

SECTION 7: Handling and storage

- · 7.1 Precautions for safe handling
- · Advice on safe handling: Provide suction extractors if dust is formed.
- Hygiene measures:

Do not get in eyes, on skin, or on clothing.

Take off immediately all contaminated clothing.

Store protective clothing separately.

Wash hands during breaks and at the end of the work.

Do not eat, drink or smoke when using this product.

- · 7.2 Conditions for safe storage, including any incompatibilities
- Requirements to be met by storerooms and containers: Store in cool location.
- · Information about storage in one common storage facility: see chapter 10
- Further information about storage conditions:

Store in a locked cabinet or with access restricted to technical experts or their assistants.

Store in cool, dry conditions in well sealed containers.

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Product name: QAC-Test

Protect from heat and direct sunlight.

Protect from the effects of light.

Protect from humidity and keep away from water.

- · Recommended storage temperature: 20°C +/- 5°C
- · 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

· 8.1 Control parameters

CAS: 9004-34-6 cellulose

WEL (Great Britain) | Short-term value: 20* mg/m³ | Long-term value: 10* 4** mg/m³ | *inhalable dust **respirable

· Regulatory information WEL (Great Britain): EH40/2020

· DNELs

Derived No Effect Level (DNEL)

Bontou no Enest Ester (Brizz)			
CAS: 1004	43-35-3	boric acid	
Oral	DNEL	0.98 mg/kg (Consumer / acute / systemic effects)	
		0.98 mg/kg (Consumer / long-term / systemic effects)	
Dermal	DNEL	392 mg/kg (Worker / long-term /systemic effects)	
		196 mg/kg (Consumer / long-term / systemic effects)	
Inhalative	DNEL	8.3 mg/m³ (Worker / long-term /systemic effects)	
		4.15 mg/m³ (Consumer / long-term / systemic effects)	
CAS: 151-21-3 sodium dodecyl sulphate			
Dermal	DNEL	4060 mg/kg (Worker / long-term /systemic effects)	
Inhalative	DNEL	285 mg/m³ (Worker / long-term /systemic effects)	

· DNFCs

Predicted No Effect Concentration (PNEC)

(· · · · · · · · · · · · · · · · · · ·			
CAS: 10043-35-3 boric acid			
PNEC	10 mg/l (Sewage treatment plant)		
	2.02 mg/l (Marine water)		
	13.7 mg/l (Aquatic intermittent release)		
	2.02 mg/l (Fresh water)		
PNEC	5.4 mg/kg (Soil)		
CAS: 151-21-3 sodium dodecyl sulphate			
PNEC	1084 mg/l (Sewage treatment plant)		
	0.0137 mg/l (Marine water)		
	0.055 mg/l (Aquatic intermittent release)		
PNEC	0.882 mg/kg (Soil)		
	0.482 mg/kg (Marine sediment)		
	4.82 mg/kg (Fresh water sediment)		

- · Additional information: The lists that were valid during the compilation were used as basis.
- · 8.2 Exposure controls
- · Engineering measures:

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. See item 7.

· Individual protection measures, such as personal protective equipment

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled.

· Eye/face protection

Safety glasses

Use safety glasses that have been tested and approved in accordance with government standards such as EN 166.

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· Hand protection

Protective gloves.

Preventive skin protection by use of skin-protecting agents is recommended.

After use of gloves apply skin-cleaning agents and skin cosmetics.

Material of gloves nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.11 mm

· Penetration time of glove material

Value for the permeation: Level = 1 (< 10 min)

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

- · Other skin protection (body protection): Protective work clothing.
- · Breathing equipment: Use breathing protection against the effects of fumes/dust/aerosol.
- · Recommended filter device for short term use: Filter P3
- · Environmental exposure controls Do not allow product to reach sewage system or water bodies.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties · Physical state Solid. · Form: **Tablets** · Colour: Grey · Odour: Odourless · Odour threshold: Not applicable. · Melting point/Freezing point: Not determined. · Boiling point or initial boiling point and boiling range Not determined. · Flammability combustible

• Explosive properties: The product is not capable of dust explosion in the form supplied;

enrichment with fine dust causes risk of dust explosion

· Lower and upper explosion limit

Lower: Not determined. **Upper:** Not applicable (solid).

• Flash point: 260°C (CAS: 9004-34-6 cellulose)

Auto-ignition temperature:
 Decomposition temperature:
 Not applicable (solid).
 Not determined.

pH (8 g/l) at 20°C 5.5

Kinematic viscosity Not applicable (solid).

· Solubility

· Water: Partly soluble

Partition coefficient n-octanol/water (log value)
 Vapour pressure:
 Not applicable (mixture).
 Not applicable (solid).

Density and/or relative density

Density: Not determined.
 Relative density: Not determined.
 Relative gas density Not applicable (solid).
 Particle characteristics Not determined.

· 9.2 Other information

· Information with regard to physical hazard classes

· Corrosive to metals Void

Other safety characteristics

· Oxidising properties: none

Additional information

· Solids content: 100 %

SECTION 10: Stability and reactivity

- · 10.1 Reactivity Dust can combine with air to form an explosive mixture.
- 10.2 Chemical stability Stable at ambient temperature (room temperature).
- · 10.3 Possibility of hazardous reactions

Reacts with oxidizing agents

--> forms heat

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- · 10.4 Conditions to avoid Strong heating (decomposition)
- 10.5 Incompatible materials: No further relevant information available.
- · 10.6 Hazardous decomposition products: see section 5

SECTION 11: Toxicological information

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

	Action to North Dascu on available data, the diastincation official are not met.			
LD/LC50	· LD/LC50 values that are relevant for classification:			
CAS: 100	CAS: 10043-35-3 boric acid			
Oral	LD50	2660 mg/kg (rat) (OECD 401) (GESTIS, ECHA registrant)		
Dermal	LD50.	>2000 mg/kg (rat) (ECHA, registrant: no deaths occurred.)		
	LD₀	1500 mg/kg (child) (MERCK)		
	NOAEL	9.6 mg/kg (rat) (NTP)		
CAS: 151-21-3 sodium dodecyl sulphate				
Oral	LD50	1200 mg/kg (rat) (OECD 404) ECHA: LD50=1427 mg/kg (rat, male); LD50=977 mg/kg (rat, female)> 1200 mg/kg bw (male, female)		
Dermal	LD50.	>2000 mg/kg (rat) (OECD 402) (Registrant, ECHA: read across CAS 142-31-4, limit test, no mortality occured)		
Inhalative	LC50/4h	1.5 mg/l (dust) (ATE)		
	LC50	>3.9 mg/l/1h (rat) (RTECS)		

- · Skin corrosion/irritation Based on available data, the classification criteria are not met.
- · Serious eye damage/irritation Causes serious eye irritation.

		· · · · · · · · · · · · · · · · · · ·
· Information on components:		
CAS: 10043-35-3 boric acid		
Irritation of skin	OECD 404	(rabbit: no irritation)
		(Registrant, ECHA)
Irritation of eyes	OECD 405	(rabbit: slight irritation)
CAS: 151-21-3 sodium dodecyl sulphate		
Irritation of skin	OECD 404	(rabbit: no irritation)
Irritation of eyes	OECD 405	(rabbit: irritation)

- · Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- · Information on components:

CAS: 10043-35-3 boric acid

Sensitisation OECD 406 (guinea pig: negative)

CAS: 151-21-3 sodium dodecyl sulphate

Sensitisation | OECD 406 | (guinea pig: negative) (EPA OPP 81-6: Guinea pig maximisation test)

- · Germ cell mutagenicity Based on available data, the classification criteria are not met.
- Carcinogenicity Based on available data, the classification criteria are not met.
- Reproductive toxicity May damage fertility. May damage the unborn child.
- · Information on components:

OECD 414: Teratogenicity testing

OECD 473: Mutagenicity testing

OECD 471, 474, 476, 487: Germ cell mutagenicity testing

CAS: 10043-35-3 boric acid

OECD 471 (negative) (Bacterial Reverse Mutation Test - Ames test)

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(Contd. of page 6) OECD 476 (negative) (In Vitro Mammalian Cell Gene Mutation Test) (mouse lymphomea test) **OECD 414** (negative) (oral, rat) (ECHA, registrant: no evidence of developmental toxicity up to 55 mg/kg bw. At 76 mg/kg bw there was reduced fetal bodyweight, short and wavy ribs, and these effects disappeared during the postnatal period.) OECD 474 (negative) (in vivo, mice) CAS: 151-21-3 sodium dodecyl sulphate OECD 471 (negative) (Bacterial Reverse Mutation Test - Ames test) (Samonella typhimurium) (negative) (In Vitro Mammalian Cell Gene Mutation Test) **OECD 476**

- · STOT (specific target organ toxicity) -single exposure Based on available data, the classification criteria are not met.
- STOT (specific target organ toxicity) -repeated exposure Based on available data, the classification criteria are not met.
- · Aspiration hazard Based on available data, the classification criteria are not met.

· Information on likely routes of exposure

"Under occupational conditions, the main intake pathway for boric acid (CAS 10043-35-3) proceeds via the respiratory tract. Furthermore, the uptake of the solid or its concentrated solutions should be expected following contact with damaged or inflamed skin." (GESTIS)

Additional toxicological information:

CAS 10043-35-3: Absorption through gastro-intestinal tract, mucous membranes

CAS: 10043-35-3 boric acid

(source: GESTIS)

Main toxic effects:

Acute: Slightly irritating to the eyes and skin; gastrointestinal disturbances, CNS-effects and (later) skin damage after massive poisoning

Chronic: Irritation to the mucous membranes following inhalative exposure, effects to the gastrointestinal tract and CNS

Further Information (Merck):

"Toxicity reported for borates in humans: ingestion or absorption may cause nausea, vomiting, diarrhea, abdominal cramps, anderythematous lesions on the skin and mucous membranes.

Other symptoms include: circulatory collapse, tachycardia, cyanosis, delirium, convulsions, and coma.

Death has been reported to occur in infants from less than 5 grams and in adults from 5 to 20 grams."

"Liver - Irregularities - Based on Human Evidence"

- · 11.2 Information on other hazards
- · Endocrine disrupting properties The product does not contain substances with endocrine disrupting properties.
- Other information

According to the information available to us, the chemical, physical and toxicological properties of the substances mentioned in Chapter 3 have not been thoroughly investigated.

SECTION 12: Ecological information

· 12.1 Toxicity

· Aquati	· Aquatic toxicity:		
CAS: 1	CAS: 10043-35-3 boric acid		
EC50	133 mg/l/48h (Daphnia magna) (ECOTOX)		
LC50	50–100 mg/l/96h (rainbow trout) (ECOTOX)		
CAS: 1	51-21-3 sodium dodecyl sulphate		
EC50	6 mg/l/48h (Daphnia magna) (IUCLID)		
EC10	3.6 mg/l (fathhead minnow) (28d, OECD 210) (ECHA)		
NOEC	1.357 mg/l (fathhead minnow) (42 d) (ECHA)		
	(Contd. on page 8)		

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EC50 53 mg/l/72h (Desmodesmus subspicatus) (DIN 38412)

(IUCLID)

LC50 29 mg/l/96h (fathhead minnow) (OECD 203)

(ECHA)

· Bacterial toxicity:

CAS: 151-21-3 sodium dodecyl sulphate

EC50 0.46 mg/l (Photobacterium phosphoreum) (30 min) (IUCLID)

· 12.2 Persistence and degradability

CAS: 151-21-3 sodium dodecyl sulphate

OECD 301 B 95 % / 28 d (readily biodegradable) (CO2 Evolution Test)

· 12.3 Bioaccumulative potential

Pow = n-octanol/wasser partition coefficient

log Pow 1-3 = Not worth-mentioning accumulating in organisms.

log Pow < 1 = Does not accumulate in organisms.

CAS: 10043-35-3 boric acid

log Pow | -1.09 (.) (OECD 107, 22°C) (Merck)

CAS: 151-21-3 sodium dodecyl sulphate

log Pow 1.6 (.) (experimental)

- · 12.4 Mobility in soil No further relevant information available.
- 12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.

- 12.6 Endocrine disrupting properties The product does not contain substances with endocrine disrupting properties.
- 12.7 Other adverse effects Avoid transfer into the environment.
- · Water hazard:

Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.

Must not reach sewage water or drainage ditch undiluted or unneutralised.

SECTION 13: Disposal considerations

- · 13.1 Waste treatment methods
- Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Hand over to disposers of hazardous waste.

European waste catalogue

16 05 06* laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals

· Uncleaned packagings:

SECTION 44: Tra

- · Recommendation: Disposal must be made according to official regulations.
- Recommended cleaning agent: Water, if necessary with cleaning agent.

SECTION 14. ITALIS	Jort Illiorniation
· 14.1 UN number or ID nu	ımber

· ADR, IMDG, IATA	Void

14.2 UN proper shipping name

· ADR, IMDG, IATA Void

· 14.3 Transport hazard class(es)

· ADR, IMDG, IATA

· Class Void

· 14.4 Packing group

· ADR, IMDG, IATA Void

• 14.5 Environmental hazards: Not applicable.

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• 14.6 Special precautions for user Not applicable.

· 14.7 Maritime transport in bulk according to IMO

instruments Not applicable.

• Transport/Additional information: Not dangerous according to the above specifications.

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Poisons Act UK
- · Regulated explosives precursors

None of the ingredients is listed.

Regulated poisons

None of the ingredients is listed.

· Reportable explosives precursors

None of the ingredients is listed.

· Reportable poisons

None of the ingredients is listed.

- · Regulation (EU) 2019/1148 on the marketing and use of explosives precursors not regulated
- Regulation (EU) No 649/2012 concerning the export and import of hazardous chemicals (PIC)

None of the ingredients is listed.

Regulation (EC) No 1334/2000 setting up a Community regime for the control of exports of dual-use items and technology:

None of the ingredients is listed.

Regulation (EC) No 273/2004 on drug precursors

None of the ingredients is listed.

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

None of the ingredients is listed.

· Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:

None of the ingredients is listed.

REGULATION (EU) 2019/1021 on persistent organic pollutants (POP)

None of the ingredients is listed.

· LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)

None of the ingredients is listed.

- · Substances of very high concern (SVHC) according to REACH, Article 57 see item 3 SVHC
- Substances of very high concern (SVHC) according to UK REACH see item 3 SVHC
- · Directive 2012/18/EU (SEVESO III):
- · Named dangerous substances ANNEX I None of the ingredients is listed.
- · REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 30
- · Information about limitation of use:

Employment restrictions concerning young persons must be observed (94/33/EC).

Employment restrictions concerning pregnant and lactating women must be observed (92/85/EEC).

· 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

This Safety Data Sheets is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

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Training hints Provide adequate information, instruction and training for operators.

· Relevant phrases

H228 Flammable solid. H302 Harmful if swallowed. H315 Causes skin irritation.

H318 Causes serious eye damage.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

H360FD May damage fertility. May damage the unborn child.

Harmful to aquatic life with long lasting effects. H412

Abbreviations and acronyms:

OECD: Organisation for Economic Co-operation and Development

STOT: specific target organ toxicity

SE: single exposure RE: repeated exposure

EC50: half maximal effective concentration IC50: half maximal inhibitory concentration

NOEL or NOEC: No Observed Effect Level or Concentration

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

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

Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (UK REACH)
PNEC: Predicted No-Effect Concentration (UK REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic SVHC: Substances of Very High Concern vPvB: very Persistent and very Bioaccumulative Flam. Sol. 2: Flammable solids - Category 2

Acute Tox. 4: Acute toxicity - Category 4 Skin Irrit. 2: Skin corrosion/irritation - Category 2

Eye Dam. 1: Serious eye damage/eye irritation - Category 1

Eye Irrit. 2: Serious eye damage/eye irritation - Category 2

Repr. 1B: Reproductive toxicity - Category 1B

STOT SE 3: Specific target organ toxicity (single exposure) - Category 3

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard - Category 3

Data arise from safety data sheets, reference works and literature.

IUCLID (International Uniform Chemical Information Database)

RTECS (Registry of Toxic Effects of Chemical Substances)

ECHA: European CHemicals Agency http://echa.europa.eu

ECOTOX Database

GESTIS- Stoffdatenbank (Substance Database, Germany)

* Data compared to the previous version altered.