Lovibond[®] Water Testing

Tintometer® Group



Safety Data Sheet

acc. to OSHA HCS (HazCom 2012)

Printing date 04/24/2024

1 Identification

- · Product identifier
- · Trade name: QAC-Test
- · Catalogue number: 00515411, 515410BT, 515411BT, 00515419BT
- · Application of the substance / the mixture: Reagent for water analysis
- Manufacturer/Supplier: Tintometer Inc. 6456 Parkland Drive Sarasota, FL 34243 USA phone: (941) 756-6410 fax: (941) 727-9654 www.lovibond.us Made in Germany
- · Emergency telephone number: + 1 866 928 0789 (English, French, Spanish)

2 Hazard(s) identification

· Classification of the substance or mixture



GHS08 Health hazard

Toxic to Reproduction 1B H360 May damage fertility or the unborn child.



H319 Causes serious eye irritation.

· Label elements

• GHS label elements The product is classified and labeled according to the Hazard Communication Standard (HCS). • Hazard pictograms



- · Signal word Danger
- · Hazard-determining components of labeling: boric acid Hazard statements H319 Causes serious eye irritation. H360 May damage fertility or 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. · Other hazards No further relevant information available.

Reviewed on 04/22/2024

Printing date 04/24/2024

Trade name: QAC-Test

Reviewed on 04/22/2024

(Contd. of page 1)

3 Composition/information on ingredients

· Chemical characterization: Mixtures

- · Description: Mixture of organic and inorganic compounds
- Composition and Information on Ingredients:

Percent ranges are used due to the confidential product information.

CAS: 9004-34-6 EINECS: 232-674-9 RTECS: FJ5691460	cellulose	20–30%
CAS: 10043-35-3	boric acid	0.1–≤2.5%
EINECS: 233-139-2	🚸 Toxic to Reproduction 1B, H360	
Index number: 005-007-00-2		
RTECS: ED 4550000		
CAS: 151-21-3	sodium dodecyl sulphate	1–<2.5%
EINECS: 205-788-1	♦ Flammable Solids 2, H228; ♦ Eye Damage 1, H318; ♦ Acute Toxicity - Oral 4, H302; Acute Toxicity - Inhalation 4, H332; Skin Irritation 2, H315; Specific Target	
RTECS: WT1050000		
	Organ Toxicity - Single Exposure 3, H335; Aquatic Chronic 3, H412	
Additional informations For	the wording of the listed bezord phrases refer to section 16	

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

4 First-aid measures

· Description of first aid measures

· General information: Immediately remove any clothing soiled by the product.

- After inhalation:
- Supply fresh air.

Get medical advice/attention.

· After skin contact:

Immediately 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 a doctor.
- After swallowing:

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

- Seek medical treatment.
- Most important symptoms and effects, both acute and delayed
- irritations
- resorption
- after inhalation:

mucosal irritations, cough, breathing difficulty

- after swallowing:
- sickness
- vomiting

diarrhoea

after absorption of large amounts: cardiovascular disorders

CNS disorders

CINS disorders

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

5 Fire-fighting measures

- Extinguishing media
- Suitable extinguishing agents:
- Carbon dioxide (CO₂), Foam, Fire-extinguishing powder Water sprav
- · For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture
- Can burn in fire.

Formation of toxic gases is possible during heating or in case of fire. In case of fire, the following can be released:

- Carbon monoxide (CO) and carbon dioxide (CO_2)
- Advice for firefighters
- · Protective equipment:

Wear self-contained respiratory protective device.

Printing date 04/24/2024

Trade name: QAC-Test

- Wear fully protective suit.
- Additional information
- Collect contaminated fire fighting water separately. It must not enter the sewage system.
- Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
- Ambient fire may liberate hazardous vapours.

6 Accidental release measures

· 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 · Environmental precautions: Do not allow product to reach sewage system or any water course.

- · Methods and material for containment and cleaning up:
- Ensure adequate ventilation. Pick up mechanically.
- Dispose contaminated material as waste according to section 13.
- Reference to other sections See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

7 Handling and storage

- 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 before breaks and at the end of work.
- Do not eat, drink or smoke when using this product.
- · Conditions for safe storage, including any incompatibilities
- · Requirements to be met by storerooms and receptacles: Store in a cool location.
- · Information about storage in one common storage facility: see chapter 10
- · Further information about storage conditions:

Store locked up or with access restricted to technical experts or their assistants.

Ensure that persons do not handle until all safety precautions have been read and understood.

Store in cool, dry conditions in well sealed receptacles.

Protect from heat and direct sunlight.

Protect from exposure to the light.

Protect from humidity and water.

- · Recommended storage temperature: 20°C +/- 5°C (approx. 68°F)
- · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- · Control parameters
- Components with limit values that require monitoring at the workplace:

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.

CAS: 9004-3	4-6 cellulose
	Long-term value: 15* 5** mg/m³ *total dust **respirable fraction
REL (USA)	Long-term value: 10* 5** mg/m³ *total dust **respirable fraction
TLV (USA)	Long-term value: 10 mg/m ³

(Contd. of page 2)

Reviewed on 04/22/2024

Printing date 04/24/2024

Reviewed on 04/22/2024

Trade name: QAC-Test

		(Contd. of page 3)
EL (Canada)	Long-term value: 10* 3** mg/m³ *total dust, **respirable fraction	
EV (Canada)	Long-term value: 10 mg/m³ paper fibre, total dust	
CAS: 10043-3	35-3 boric acid	
TLV (USA)	Short-term value: 6* mg/m³ Long-term value: 2* mg/m³ *as inhalable fraction, A4	
EL (Canada)	Short-term value: 6 mg/m³ Long-term value: 2 mg/m³	
EV (Canada)	Short-term value: 6 mg/m³ Long-term value: 2 mg/m³ inorganic, inhalable	

 \cdot Additional information: The lists that were valid during the creation were used as basis.

· Engineering measures:

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

· Personal protective equipment:

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

- · Breathing equipment: Use respiratory protective device against the effects of fume/dust/aerosol.
- · Recommended filter device for short term use: Filter P3
- · Protection of hands:
- 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 \leq 1 (10 min)

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

· Eye protection:

Safety glasses

Use protective goggles that have been tested and approved in accordance with government standards (like NIOSH).

· Body protection: Protective work clothing

· Limitation and supervision of exposure into the environment:

Do not allow product to reach sewage system or any water course.

9 Physical and chemical properties

 Information on basic physical and che Appearance: 	emical properties
· Form / Physical state:	Tablets
· Color:	Grey
· Odor:	Odorless
· Odor threshold:	Not applicable.
[.] pH-value (8 g/l) at 20°C (68°F):	5.5
Melting point/freezing point:	Not determined.
Initial boiling point and boiling range:	Not determined.
· Flash point:	260°C (500°F) (CAS: 9004-34-6 cellulose)
 Flammability (solid, gas): 	Can burn in fire.
· Auto igniting:	Not applicable (solid).
Decomposition temperature:	Not determined.
 Auto-ignition temperature: 	Product is not self-igniting.
Danger of explosion:	As the product is supplied it is not capable of dust explosion; however enrichment with
	fine dust causes risk of dust explosion.
 Flammability or explosive limits: 	
Lower:	Not determined.

Printing date 04/24/2024

Reviewed on 04/22/2024

Trade name: QAC-Test

		(Contd. of page 4)
Upper:	Not applicable (solid).	
Oxidizing properties:	none	
Vapor Pressure:	Not applicable (solid).	
Density:	Not determined.	
· Relative density:	Not determined.	
· Vapor density:	Not applicable.	
Evaporation rate:	Not applicable.	
Solubility(ies)		
Water:	Partly soluble.	
· Partition coefficient (n-octan	ol/water): Not applicable (mixture).	
· Viscosity:	Not applicable.	
· Kinematic:	Not applicable (solid).	
 Other information 		
 Solids content: 	100 %	

10 Stability and reactivity

· Reactivity Dust can combine with air to form an explosive mixture.

- · Chemical stability Stable at ambient temperature (room temperature).
- Possibility of hazardous reactions
- Reacts with oxidizing agents.
- --> Forms heat.
- · Conditions to avoid Strong heating (decomposition)
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: see section 5

11 Toxicological information

· Information on toxicological effects

· Acute toxicity: Based on available data, the classification criteria are not met.

Acute toxicity estimate (ATE _(MIX)) - Calculation method:		
Inhalative GHS ATE _(MX) 69 mg/l/4h (dust)		
· LD/LC50	values that	at are relevant for classification:
CAS: 9004	4-34-6 cel	lulose
Oral	LD50.	>5000 mg/kg (rat)
Dermal	LD50.	>2000 mg/kg (rabbit) (RTECS, limit test)
Inhalative	LC50/4h	>5.8 mg/l /4h (rat)
CAS: 1004	43-35-3 bo	pric 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 sod	um 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)
		(Contd. on page 6)

US —

(Contd. of page 5)

Safety Data Sheet acc. to OSHA HCS (HazCom 2012)

Printing date 04/24/2024

Reviewed on 04/22/2024

Trade name: QAC-Test

· Primary irritant effect:

on the eye: Causes serious eye irritation.

 \cdot on the skin: Based on available data, the classification criteria are not met.

 Information 	on component	S:
CAS: 9004-	34-6 cellulose	
Irritation of s	kin OECD 404	(rabbit: no irritation)
Irritation of e	eyes OECD 492	(rabbit: no irritation)
CAS: 10043	-35-3 boric acid	
Irritation of s	kin OECD 404	(rabbit: no irritation) (Registrant, ECHA)
Irritation of e	eyes OECD 492	(rabbit: slight irritation) (IUCLID)
CAS: 151-2	1-3 sodium dod	ecyl sulphate
Irritation of s	kin OECD 404	(rabbit: no irritation)
Irritation of e	eyes OECD 492	(rabbit: irritation)
		ailable data, the classification criteria are not met.
	on component	S:
	34-6 cellulose	
		uinea pig: negative)
	-35-3 boric acid	
		uinea pig: negative)
	1-3 sodium dod	
	(0	uinea pig: negative) (EPA OPP 81-6: Guinea pig maximisation test)
-	ic categories	
		/ for Research on Cancer)
	ingredients is list	
•	nal Toxicology I	
	ingredients is list	
•		afety & Health Administration)
	ingredients is list	
· Other infor	mation: see sect	tion 8 / 15
 Synergistic 	Products: None	9
The followin		r, mutagenicity and toxicity for reproduction): er to the mixture:
· Germ cell r	nutagenicity Bas	sed on available data, the classification criteria are not met.
		available data, the classification criteria are not met. damage fertility or the unborn child.
		n toxicity) -single exposure Based on available data, the classification criteria are not met. n toxicity) -repeated exposure Based on available data, the classification criteria are not met.
· Aspiration	h azard Based or	n available data, the classification criteria are not met.
· Informatior	on component	s:
CAS 10043	35-3: evaluation	for carcinogenicity: negative in animals (NTP)
	Teratogenicity te	
	Mutagenicity test	ting Serm cell mutagenicity testing
	-35-3 boric acid	
		erial Reverse Mutation Test - Ames test)
OECD 471 OECD 476		tro Mammalian Cell Gene Mutation Test)
	(mouse lymphon	
OECD 414	(negative) (oral,	rat)
		nt: no evidence of developmental toxicity up to 55 mg/kg bw. At 76 mg/kg bw there was reduced , short and wavy ribs, and these effects disappeared during the postnatal period.)

Printing date 04/24/2024

Reviewed on 04/22/2024

Trade name: QAC-Test

	(Contd. of page
	(negative) (in vivo, mice)
CAS: 151-21	1-3 sodium dodecyl sulphate
	(negative) (Bacterial Reverse Mutation Test - Ames test) (Samonella typhimurium)
OECD 476	(negative) (In Vitro Mammalian Cell Gene Mutation Test)
Additional t	oxicological information:
	35-3: Absorption through gastro-intestinal tract, mucous membranes
	Borate may cause developmental changes based on published data, at doses many times in excess of those that
	through inhalation of dust in occupational settings.
	-35-3 boric acid
. (source: G	GESTIS)
Main toxic	
Acute: Slig	htly irritating to the eyes and skin; gastrointestinal disturbances, CNS-effects and (later) skin damage after massiv
poisoning	
Chronic: Ir	ritation to the mucous membranes following inhalative exposure, effects to the gastrointestinal tract and CNS
Further Inf	ormation (Merck):
"Toxicity re	eported for borates in humans: ingestion or absorption may cause nausea, vomiting, diarrhea, abdominal cramps, matous lesions on the skin and mucous membranes.
	ptoms include: circulatory collapse, tachycardia, cyanosis, delirium, convulsions, and coma.
	been reported to occur in infants from less than 5 grams and in adults from 5 to 20 grams."
"Liver - Irre	egularities - Based on Human Evidence"

12 Ecological information

· Toxicity

TOXICI	y .			
· Aquatic toxicity:				
CAS: 1	0043-35-3 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)			
EC50	53 mg/l/72h (Desmodesmus subspicatus) (DIN 38412) (IUCLID)			
LC50	29 mg/l/96h (fathhead minnow) (OECD 203) (ECHA)			
· Bacter	ial toxicity:			
CAS: 1	51-21-3 sodium dodecyl sulphate			
	0.46 mg/l (Photobacterium phosphoreum) (30 min) (IUCLID)			
· Persist	tence and degradability			
CAS: 1	51-21-3 sodium dodecyl sulphate			
OECD	301 B 95 % / 28 d (readily biodegradable) (CO2 Evolution Test)			
Pow =	umulative potential n-octanol/wasser partition coefficient y 1-3 = Not worth-mentioning accumulating in organisms			

log Pow 1-3 = Not worth-mentioning accumulating in organisms. log Pow < 1 =Does not accumulate in organisms.

Printing date 04/24/2024

Trade name: QAC-Test

Reviewed on 04/22/2024

(Contd. of page 7)

	043-35-3 boric acid
log Pow	-1.09 (.) (OECD 107, 22°C) (Merck)
	1-21-3 sodium dodecyl sulphate
	1 C () (a) (a a mine a m tal)

log Pow 1.6 (.) (experimental)

· Mobility in soil No further relevant information available.

· Other adverse effects Avoid transfer into the environment.

13 Disposal considerations

· Waste treatment methods

· Recommendation:

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

· Recommendation: Disposal must be made according to official regulations.

· Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information	
· UN-Number · DOT, IMDG, IATA	none
· UN proper shipping name · DOT, IMDG, IATA	none
· Transport hazard class(es)	
· DOT, IMDG, IATA · Class	none
· Packing group · DOT, IMDG, IATA	none
· Environmental hazards:	Not applicable.
· Special precautions for user	Not applicable.
 Transport in bulk according to Annex II of MARPOL and the IBC Code 	73/78 Not applicable.
· Transport/Additional information:	Not dangerous according to the above specifications.

15 Regulatory information

 $^\circ$ Safety, health and environmental regulations/legislation specific for the substance or mixture $^\circ$ Sara

· Section 355 (Extremely hazardous substances):
None of the ingredients is listed.
· Section 313 (Specific toxic chemical listings):
None of the ingredients is listed.
· TSCA (Toxic Substances Control Act):
All components have the value ACTIVE.
· Hazardous Air Pollutants
None of the ingredients is listed.
· Proposition 65
· Chemicals known to cause cancer:
None of the ingredients is listed.

(Contd. on page 9)

[·] Uncleaned packagings:

US -

Printing date 04/24/2024

Reviewed on 04/22/2024

Trade name: QAC-Test

	(Contd. of page 8
· Chemicals known to cause reproductive toxicity for females:	
None of the ingredients is listed.	
· Chemicals known to cause reproductive toxicity for males:	
None of the ingredients is listed.	
· Chemicals known to cause developmental toxicity:	
None of the ingredients is listed.	
· New Jersey Right-to-Know List:	
CAS: 9004-34-6 cellulose	
· New Jersey Special Hazardous Substance List:	
None of the ingredients is listed.	
· Pennsylvania Right-to-Know List:	
CAS: 9004-34-6 cellulose	
· Pennsylvania Special Hazardous Substance List:	
None of the ingredients is listed.	
· EPA (Environmental Protection Agency)	
CAS: 10043-35-3 boric acid	l (oral)
· NIOSH-Ca (National Institute for Occupational Safety and Health)	
None of the ingredients is listed.	

 Information about limitation of use: Observe national regulations where applicable:

Employment restrictions concerning young persons must be observed.

Employment restrictions concerning pregnant and lactating women must be observed.

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

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· 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.
- H360 May damage fertility or the unborn child.
- H412 Harmful to aquatic life with long lasting effects.

· Recommended restriction of use: professional/industrial use only

· Version number / date of revision: 18 / 04/22/2024

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 effective concentration
NOEL or NOEC: No Observed Effect Level or Concentration
ACGIH* - American Conference of Governmental Industrial Hygienists
•A1 - Confirmed human carcinogen
•A2 - Suspected human carcinogen
•A3 - Confirmed animal carcinogen with unknown relevance to humans
•A4 - Not classifiable as a human carcinogen
IAC - International Agency for Research on Cancer
•Group 2A - Probably carcinogenic to humans
•Group 2B - Possibly carcinogenic to humans
•Group 4 - Probably not carcinogenic to humans

NTP - National Toxicology Program, U.S. Department of Health and Human Services

•Group K - Known to be Human Carcinogens

•Group R - Reasonably Anticipated to be Human Carcinogens

IMDG: International Maritime Code for Dangerous Goods

Printing date 04/24/2024

Trade name: QAC-Test

DOT: US Department of Transportation IATA: International Air Transport Association 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) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit Flammable Solids 2: Flammable solids - Category 2 Acute Toxicity - Oral 4: Acute toxicity - Category 4 Skin Irritation 2: Skin corrosion/irritation - Category 2 Eye Damage 1: Serious eye damage/eye irritation – Category 1 Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A Toxic to Reproduction 1B: Reproductive toxicity – Category 1B Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) – Category 3 Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3 · Sources Data arise from safety data sheets, reference works and literature. IUCLID (International Uniform Chemical Information Database)

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) NTP (National Toxicology Program)

• * Data compared to the previous version altered.

(Contd. of page 9)

US

Reviewed on 04/22/2024