

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

Printing date 30.10.2014

Version number 26

Revision: 30.10.2014

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

1.1 Product identifier

Product name: **Calcheck**

Catalog number: 00515659, (4)515650(BT), (4)515651(BT), 515653(0)

1.2 Relevant identified uses of the substance or mixture and uses advised against
No further relevant information available.

Application of the substance / the preparation: Reagent for water analysis

1.3 Details of the supplier of the safety data sheet

Supplier:

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

phone: +49 (0) 231 945100
E-Mail: sales@tintometer.de

Informing department:

e-mail: produktsicherheit@tintometer.de
Product Safety Department

Contact for technical details:

Technical Department
e-mail: technik@tintometer.de

1.4 Emergency telephone number:

Poison Center Berlin, Germany
phone: 0049-30 30686 790

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.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC



T; Toxic

R60-61: May impair fertility. May cause harm to the unborn child.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 The product is classified and labelled according to the CLP regulation.

Hazard pictograms GHS08

Signal word Danger

Hazard-determining components of labelling:

disodium tetraborate, anhydrous
boric acid

Hazard statements

H360FD May damage fertility. May damage the unborn child.

Precautionary statements

P281 Use personal protective equipment as required.
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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- **Additional information:**
Restricted to professional users.

SECTION 3: Composition/information on ingredients

- **3.2 Mixtures**
- **Description:** Mixture of organic and inorganic compounds

- **Dangerous components:**

CAS: 1330-43-4 EINECS: 215-540-4 Index number: 005-011-00-4 Reg.nr.: 01-2119490790-32-0003	disodium tetraborate, anhydrous	 T Repr. Cat. 2 R60-61  Repr. 1B, H360FD	10-20%
CAS: 10043-35-3 EINECS: 233-139-2 Index number: 005-007-00-2 Reg.nr.: 01-2119486683-25-0024	boric acid	 T Repr. Cat. 2 R60-61  Repr. 1B, H360FD	10-20%

- **REACH - Pre-registered substances** All components are REACH pre-registered.

- **SVHC**

1330-43-4	disodium tetraborate, anhydrous
10043-35-3	boric acid

- **Additional information** For the wording of the listed risk 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 or oxygen; call for doctor.
In case of unconsciousness bring patient into stable side position for transport.
- **After skin contact**
Instantly wash with water and soap and rinse thoroughly.
Seek immediate medical advice.
- **After eye contact**
Rinse opened eye for several minutes (at least 10 min) under running water.
Seek medical treatment.
- **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:**
after absorption:
irritations
sickness
vomiting
diarrhoea
After swallowing of large amounts:
drop in temperature
ataxia (impaired locomotor coordination)
fatigue
CNS disorders
cardiovascular disorders
cramps
- **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** Use fire fighting measures that suit the environment.
- **5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.

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- **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**

- Use breathing protection against the effects of fumes/dust/aerosol.

- Avoid causing dust.

- Ensure adequate ventilation

- **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:**

- Collect mechanically.

- Ensure adequate ventilation.

- Dispose of contaminated material as waste according to item 13.

- **6.4 Reference to other sections**

- See Section 7 for information on safe handling

- 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**

- Open and handle container with care.

- Prevent formation of dust.

- Ensure good ventilation/exhaustion at the workplace.

- **Information about protection against explosions and fires:** The product is not flammable

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

- **Storage**

- **Requirements to be met by storerooms and containers:** Store in cool location.

- **Information about storage in one common storage facility:** store away from solvents

- **Further information about storage conditions:**

- Protect from heat and direct sunlight.

- Store under dry conditions.

- Protect from humidity and keep away from water.

- Protect from the effects of light.

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

- **Recommended storage temperature:** 20 °C +/- 5 °C

- **Storage class** 6.1 D

- **7.3 Specific end use(s)** No further relevant information available.

* SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

- **8.1 Control parameters**

- **Components with limit values that require monitoring at the workplace:**

1330-43-4 disodium tetraborate, anhydrous (10-20%)

WEL (Great Britain) Long-term value: 1 mg/m ³
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- **Additional information:** The lists that were valid during the compilation were used as basis.

- **8.2 Exposure controls**

- **Personal protective equipment**

- **General protective and hygienic measures**

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

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Do not eat, drink or smoke while working.

- **Breathing equipment:** Use breathing protection against the effects of fumes/dust/aerosol.
- **Recommended filter device for short term use:** Filter P3
- **Protection of hands:**
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**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
Value for the permeation: Level = 1 (< 10 min)
- **Eye protection:**
Safety glasses
use against the effects of fumes / dust
- **Body protection:** Protective work clothing.

* SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties	
· Appearance:	
Form:	Tablets
Colour:	Pink
Odour:	Odourless
· pH-value (9 g/l) at 20 °C:	8.5
· Melting point/Melting range:	Not determined
· Boiling point/Boiling range:	300 °C
· Flash point:	Not applicable
· Danger of explosion:	Product is not explosive.
· Density	Not determined
· Vapour density	Not applicable.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with Water:	Soluble
· Solvent content:	
Organic solvents:	0.0 %
Solids content:	100.0 %
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- **Reactivity**
- **Thermal decomposition / conditions to be avoided:** To avoid thermal decomposition do not overheat.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:**
alkalis
reducing agents
- **Hazardous decomposition products:** see chapter 5

* SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**
Quantitative data on the toxicity of the preparation are not available.
The following statements refer to the individual components.

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LD/LC50 values that are relevant for classification:		
1330-43-4 disodium tetraborate, anhydrous		
Oral	LD50	1200 mg/kg (rat) (RTECS) - Merck
10043-35-3 boric acid		
Oral	LD50	2660 mg/kg (rat) (GESTIS)
Dermal	LD50	> 2000 mg/kg (rat) (RTECS)
	LD ₀	1500 mg/kg (child) (MERCK)
Inhalative	LC 50	>2.03 mg/l (rat) (MERCK)
	NOAEL	9.6 B mg/kg (rat) (NTP)

Primary irritant effect:

- **on the skin:** slight irritations possible

- **on the eye:** irritating effect possible

- **Sensitisation:** No sensitizing effect known.

Subacute to chronic toxicity:

CAS-No. 10043-35-3:

MERCK: Sensitisation test (guinea pig): negative (OECD 406)

Additional toxicological information:

Boric acid:

CAS 1330-43-4:

Absorption: gastro-intestinal tract, mucous membranes

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Product is suspected to cause injury to foetus.

Repr. 1B

SECTION 12: Ecological information

12.1 Toxicity**Aquatic toxicity:**

1330-43-4 disodium tetraborate, anhydrous	
LC50	1085-1402 mg/l/48h (Daphnia magna) (IUCLID) 340 mg/l/96h (fish) (IUCLID)
10043-35-3 boric acid	
EC50	133 mg/l/48h (Daphnia magna) (ECOTOX)
LC50	50-100 mg/l/96h (Oncorhynchus mykiss) (ECOTOX)

- **12.2 Persistence and degradability** No further relevant information available.

Other information:

Quantitative data on the ecological effect of this product are not available.

The following statements refer to the individual components.

- **12.3 Bioaccumulative potential** No further relevant information available.

Behaviour in environmental systems:

10043-35-3 boric acid	
log P(o/w)	0.76 (25 °C) (.) (IUCLID)

- **12.4 Mobility in soil** No further relevant information available.

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- **Ecotoxicological effects:**

- **Algae toxicity:**

1330-43-4 disodium tetraborate, anhydrous

IC50	158 mg/l/96 h (Desmodemus subspicatus) (IUCLID)
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- **Additional ecological information:**

- **General notes:**

Water hazard class 1 (German Regulation) (Self-assessment acc. VwVwS Annex 4): slightly hazardous for water.

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.

- **12.5 Results of PBT and vPvB assessment** no data available

- **vPvB assessments:** no data available

- **12.6 Other adverse effects** No further relevant information available.

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 dangerous substances, including mixtures of laboratory chemicals
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- **Uncleaned packagings:**

- **Recommendation:** Disposal must be made according to official regulations.

- **Recommended cleaning agent:** Water, if necessary with cleaning agent.

SECTION 14: Transport information

- **14.1 UN-Number**

· ADR, ADN, IMDG, IATA	Void
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- **14.2 UN proper shipping name**

· ADR, ADN, IMDG, IATA	Void
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- **14.3 Transport hazard class(es)**

· ADR, ADN, IMDG, IATA	Void
· Class	

- **14.4 Packing group**

· ADR, IMDG, IATA	Void
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- **14.5 Environmental hazards:**

· Marine pollutant:	No
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· 14.6 Special precautions for user	Not applicable.
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- **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

· Transport/Additional information:	Not dangerous according to the above specifications.
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SECTION 15: Regulatory information

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

- **Information about limitation of use:**

Observe employment restrictions for pregnant and nursing mothers according to the 'mother protection guideline' (92/85/EEC) .

Employment restrictions concerning young persons must be observed.

- **Substances of very high concern (SVHC) according to REACH, Article 57**

1330-43-4	disodium tetraborate, anhydrous
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10043-35-3 | boric acid

- **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.

- **Relevant phrases**

H360FD May damage fertility. May damage the unborn child.

R60 May impair fertility.

R61 May cause harm to the unborn child.

- **Abbreviations and acronyms:**

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

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

ICAO: International Civil Aviation Organisation

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

EC50: effective concentration, 50 percent (in vivo)

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

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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Repr. 1B: Reproductive toxicity, Hazard Category 1B

- **Sources**

NTP (National Toxicology Program)

RTECS (Registry of Toxic Effects of Chemical Substances)

ECOTOX Database

IUCLID (International Uniform Chemical Information Database)

International Chemical Safety Cards (ICSCs)

Data arise from reference works and literature.

- *** Data compared to the previous version altered.**