

Safety Data Sheet

according to WHS Regulations

Printing date 13.02.2017

Version number 42

Revision: 10.02.2017

Hazardous according to criteria of Australian Safety and Compensation Council.

1 Identification

- **Product identifier**
- **Trade name:** KETOCHROME/17-OHCS by Column Test, REAG A
- **Article number:** 1843012
- **CAS Number:**
16940-66-2
- **EC number:**
241-004-4
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** In-Vitro-laboratory reagent or component
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Bio-Rad Laboratories Pty., Ltd.
Level 5, 446 Victoria Road
Gladesville, New South Wales 2111
Phone: +61 (2) 9914-2800
Fax: +61 (2) 9914-2888
- **Further information obtainable from:**
Technical Support:
E-mail: TechSupport.ANZCDG@bio-rad.com
- **Emergency telephone number:**
GBK Gefahrgut Büro GmbH
Tel.: 0049(0)6123-84463

2 Hazard(s) Identification

- **Classification of the substance or mixture**
Water-react. 1 H260 In contact with water releases flammable gases which may ignite spontaneously.
Acute Tox. 3 H301 Toxic if swallowed.
Acute Tox. 3 H311 Toxic in contact with skin.
Skin Corr. 1B H314 Causes severe skin burns and eye damage.
Eye Dam. 1 H318 Causes serious eye damage.

· Label elements

· GHS label elements

The substance is classified and labelled according to the Globally Harmonised System (GHS).

· Hazard pictograms



GHS02 GHS05 GHS06

· Signal word Danger

· Hazard-determining components of labelling:

sodium tetrahydroborate

· Hazard statements

In contact with water releases flammable gases which may ignite spontaneously.

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*Toxic if swallowed or in contact with skin.**Causes severe skin burns and eye damage.***· Precautionary statements***Do not allow contact with water.**IF SWALLOWED: Immediately call a POISON CENTER/ doctor.**IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.**IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.***· Other hazards****· Results of PBT and vPvB assessment****· PBT:** Not applicable.**· vPvB:** Not applicable.

3 Composition and Information on Ingredients

· Chemical characterisation: Substances**· CAS No. Description***16940-66-2 sodium tetrahydroborate***· Identification number(s)****· EC number:** 241-004-4**· Dangerous components:** Void

4 First Aid Measures

· Description of first aid measures**· General information:***Immediately remove any clothing soiled by the product.**In case of irregular breathing or respiratory arrest provide artificial respiration.***· After inhalation:** *In case of unconsciousness place patient stably in side position for transportation.***· After skin contact:** *Immediately wash with water and soap and rinse thoroughly.***· After eye contact:** *Rinse opened eye for several minutes under running water. Then consult a doctor.***· After swallowing:***Do not induce vomiting; call for medical help immediately.**Drink plenty of water and provide fresh air. Call for a doctor immediately.***· Information for doctor:****· Most important symptoms and effects, both acute and delayed** *No further relevant information available.***· Indication of any immediate medical attention and special treatment needed***No further relevant information available.*

5 Fire Fighting Measures

· Extinguishing media**· Suitable extinguishing agents:** *Use fire extinguishing methods suitable to surrounding conditions.***· For safety reasons unsuitable extinguishing agents:** *Water***· Special hazards arising from the substance or mixture** *No further relevant information available.***· Advice for firefighters****· Protective equipment:** *Wear self-contained respiratory protective device.*
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6 Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Use neutralising agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
- **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 disposal information.

7 Handling and Storage

- **Handling:**
- **Precautions for safe handling** Thorough dedusting.
- **Information about fire - and explosion protection:** Keep ignition sources away - Do not smoke.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:**
Do not store together with oxidising and acidic materials as well as heavy-metal compounds.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls and personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the eyes and skin.
- **Respiratory protection:** Not required.
- **Protection of hands:**



Protective gloves

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The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **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.

· **Eye protection:**

Safety glasses



Tightly sealed goggles

· **Body protection:** Protective work clothing

9 Physical and Chemical Properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Solid

Colour: White

· **Odour:** Characteristic

· **Odour threshold:** Not determined.

· **pH-value:** 11

· **Change in condition**

Melting point/freezing point: 500 °C

Initial boiling point and boiling range: Undetermined.

· **Flash point:** Not applicable.

· **Flammability (solid, gas):** Contact with water liberates extremely flammable gases.

· **Ignition temperature:** 220 °C

· **Decomposition temperature:** Not determined.

· **Auto-ignition temperature:** Not determined.

· **Explosive properties:** Not determined.

· **Explosion limits:**

Lower: Not determined.

Upper: Not determined.

· **Vapour pressure:** Not applicable.

· **Density at 20 °C:** 1.07 g/cm³

· **Bulk density at 20 °C:** 400-500 kg/m³

· **Relative density:** Not determined.

· **Vapour density:** Not applicable.

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· Evaporation rate	Not applicable.
· Solubility in / Miscibility with water at 25 °C:	550 g/l
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
· Dynamic:	Not applicable.
· Kinematic:	Not applicable.
· Other information	No further relevant information available.

10 Stability and Reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions**
Reacts with strong acids and oxidising agents.
Reacts with heavy metals.
Contact with water releases flammable gases.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** Hydrogen

11 Toxicological Information

- **Information on toxicological effects**
- **Acute toxicity**
- **Primary irritant effect:**
- **Skin corrosion/irritation** Caustic effect on skin and mucous membranes.
- **Serious eye damage/irritation** Strong caustic effect.
- **Respiratory or skin sensitisation** No sensitising effects known.
- **Additional toxicological information:**
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

12 Ecological Information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Must not reach sewage water or drainage ditch undiluted or unneutralised.
Danger to drinking water if even small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.

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- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· UN-Number	UN1426
· ADG, IMDG, IATA	
· UN proper shipping name	1426 SODIUM BOROHYDRIDE
· ADG	SODIUM BOROHYDRIDE
· IMDG, IATA	
· Transport hazard class(es)	
· ADG, IMDG, IATA	
	
· Class	4.3 Substances which, in contact with water, emit flammable gases.
· Label	4.3
· Packing group	I
· ADG, IMDG, IATA	
· Environmental hazards:	No
· Marine pollutant:	
· Special precautions for user	Warning: Substances which, in contact with water, emit flammable gases.
· Danger code (Kemler):	-
· EMS Number:	F-G,S-O
· Stowage Category	E
· Handling Code	H1 Keep as dry as reasonably practicable
· Segregation Code	SG26 In addition: from goods of classes 2.1 and 3 when stowed on deck of a containership a minimum distance of two container spaces athwartship shall be maintained, when stowed on ro-ro ships a distance of 6 m athwartship shall be maintained. SG35 Stow "separated from" acids.
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.

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· **Transport/Additional information:**

· **ADG**

· **Limited quantities (LQ)**

0

· **Excepted quantities (EQ)**

Code: E0

Not permitted as Excepted Quantity

· **Transport category**

1

· **Tunnel restriction code**

E

· **IMDG**

· **Limited quantities (LQ)**

0

· **Excepted quantities (EQ)**

Code: E0

Not permitted as Excepted Quantity

· **UN "Model Regulation":**

UN 1426 SODIUM BOROHYDRIDE, 4.3, I

15 Regulatory information

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

· **Australian Inventory of Chemical Substances**

Substance is listed.

· **Standard for the Uniform Scheduling of Medicines and Poisons**

Substance is not listed.

· **GHS label elements**

The substance is classified and labelled according to the Globally Harmonised System (GHS).

· **Hazard pictograms**



GHS02 GHS05 GHS06

· **Signal word** *Danger*

· **Hazard-determining components of labelling:**

sodium tetrahydroborate

· **Hazard statements**

In contact with water releases flammable gases which may ignite spontaneously.

Toxic if swallowed or in contact with skin.

Causes severe skin burns and eye damage.

· **Precautionary statements**

Do not allow contact with water.

IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I** Substance is not listed.

· **Seveso category O2** Substances and mixtures which in contact with water emit flammable gases

· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t

· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t

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· **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.

· **Department issuing SDS:**

Bio-Rad Laboratories GmbH
Heidemannstrasse 164
D-80939 Munich

· **Contact:**

Technical Support:
E-Mail: cts-ce@bio-rad.com

· **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)
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
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)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Water-react. 1: Substances and mixtures which in contact with water emit flammable gases – Category 1
Acute Tox. 3: Acute toxicity – Category 3
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Eye Dam. 1: Serious eye damage/eye irritation – Category 1

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

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