

**Safety Data Sheet**  
acc. to OSHA HCS



Printing date 02/13/2017

Reviewed on 02/10/2017

## 1 Identification

- **1.1 Product identifier**
- **Trade name:** 25-OH- Vitamin D3/D2 by HPLC, REAG 1
- **Article number:** 1956532
- **CAS Number:**  
76-03-9
- **EC number:**  
200-927-2
- **Index number:**  
607-004-00-7
- **Application of the substance / the mixture** In-Vitro-laboratory reagent or component
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Bio-Rad Laboratories, Inc  
4000 Alfred Nobel Drive  
Hercules, California 94547  
USA  
Phone: 510-724-7000  
Toll-Free: 1-800-2-BIORAD (800-224-6723)  
Fax: 510-741-6373
- **Information department:**  
Technical Support:  
Email: support@bio-rad.com
- **1.4 Emergency telephone number:**  
GBK Gefahrgut Büro GmbH  
Tel.: 0049(0)6123-84463

## 2 Hazard(s) identification

- **2.1 Classification of the substance or mixture**
  - **Classification according to Regulation (EC) No 1272/2008**  
Skin Corr. 1A H314 Causes severe skin burns and eye damage.  
Carc. 2 H351 Suspected of causing cancer.
  - **2.2 Label elements**
  - **Labelling according to Regulation (EC) No 1272/2008**  
The substance is classified and labeled according to the CLP regulation.
  - **Hazard pictograms**
- 


GHS05    GHS08
- **Signal word** Danger
  - **Hazard-determining components of labeling:**  
trichloroacetic acid
  - **Hazard statements**  
H314 Causes severe skin burns and eye damage.  
H351 Suspected of causing cancer.
  - **Precautionary statements**  
P260 Do not breathe dusts or mists.

(Contd. on page 2)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/10/2017

Trade name: 25-OH- Vitamin D3/D2 by HPLC, REAG 1

(Contd. of page 1)

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 4

Fire = 1

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 4

Fire = 1

Reactivity = 0

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

## 3 Composition/information on ingredients

· **3.1 Chemical characterization: Substances**

· **CAS No. Description**

76-03-9 trichloroacetic acid

· **Identification number(s)**

· **EC number:** 200-927-2

· **Index number:** 607-004-00-7

· **Dangerous components:** Void

## 4 First-aid measures

· **4.1 Description of first aid measures**

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

· **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:** Drink copious amounts of water and provide fresh air. Immediately call a doctor.

· **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

## 5 Fire-fighting 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** No further relevant information available.

(Contd. on page 3)

## Safety Data Sheet

acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/10/2017

Trade name: 25-OH- Vitamin D3/D2 by HPLC, REAG 1

(Contd. of page 2)

- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

### 6 Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**  
Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Use neutralizing agent.  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **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 disposal information.
- **Protective Action Criteria for Chemicals**

· PAC-1:

1.5 ppm

· PAC-2:

16 ppm

· PAC-3:

99 ppm

### 7 Handling and storage

- **7.1 Precautions for safe handling** Thorough dedusting.
- **Information about protection against explosions and fires:** No special measures required.
- **7.2 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:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

### 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:**

76-03-9 trichloroacetic acid

REL Long-term value: 7 mg/m<sup>3</sup>, 1 ppmTLV Long-term value: 3.34 mg/m<sup>3</sup>, 0.5 ppm

- **Additional information:** The lists that were valid during the creation were used as basis.

(Contd. on page 4)

US

## Safety Data Sheet

acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/10/2017

Trade name: 25-OH- Vitamin D3/D2 by HPLC, REAG 1

(Contd. of page 3)

- **8.2 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.  
 Avoid contact with the eyes and skin.
- **Breathing equipment:** Not required.
- **Protection of hands:**



Protective gloves

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:**



Tightly sealed goggles

- **Body protection:** Protective work clothing

## 9 Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

<b>Form:</b>	Solid
<b>Color:</b>	White
<b>Odor:</b>	Acidic
<b>Odor threshold:</b>	Not determined.

- **pH-value:** Not applicable.

- **Change in condition**

<b>Melting point/Melting range:</b>	54 °C (129 °F)
<b>Boiling point/Boiling range:</b>	196 °C (385 °F)

- **Flash point:** 113 °C (235 °F)

- **Flammability (solid, gaseous):** Product is not flammable.

- **Ignition temperature:**

<b>Decomposition temperature:</b>	Not determined.
-----------------------------------	-----------------

(Contd. on page 5)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/10/2017

Trade name: 25-OH- Vitamin D3/D2 by HPLC, REAG 1

(Contd. of page 4)

· <b>Auto igniting:</b>	Not determined.
· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
· <b>Explosion limits:</b>	
Lower:	Not determined.
Upper:	Not determined.
· <b>Vapor pressure at 20 °C (68 °F):</b>	0.1 hPa
· <b>Density at 20 °C (68 °F):</b>	1.62 g/cm <sup>3</sup> (13.5189 lbs/gal)
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not applicable.
· <b>Evaporation rate</b>	Not applicable.
· <b>Solubility in / Miscibility with Water at 20 °C (68 °F):</b>	1.200 g/l
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· <b>9.2 Other information</b>	No further relevant information available.

## 10 Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** Reacts with alkali (lyes).
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**  
Hydrogen chloride (HCl)  
Phosgene  
Carbon monoxide

## 11 Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:** Based on available data, the classification criteria are not met.
- **Primary irritant effect:**
- **on the skin:**  
Causes severe skin burns and eye damage.
- **on the eye:**  
Causes severe skin burns and eye damage.
- **Sensitization:** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)**

2B

(Contd. on page 6)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/10/2017

Trade name: 25-OH- Vitamin D3/D2 by HPLC, REAG 1

(Contd. of page 5)

· **NTP (National Toxicology Program)**

Substance is not listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

## 12 Ecological information

· **12.1 Toxicity**· **Aquatic toxicity:** No further relevant information available.· **12.2 Persistence and degradability** No further relevant information available.· **12.3 Bioaccumulative potential** No further relevant information available.· **12.4 Mobility in soil** No further relevant information available.· **Ecotoxicological effects:**· **Remark:** Very toxic for fish· **Additional ecological information:**· **General notes:**

Water hazard class 2 (Assessment by list): hazardous for water

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

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

Danger to drinking water if even small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

· **12.5 Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable.· **12.6 Other adverse effects** No further relevant information available.

## 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.

· **Uncleaned packagings:**· **Recommendation:** Disposal must be made according to official regulations.· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

## 14 Transport information

· **14.1 UN-Number**· **DOT, ADR, IMDG, IATA**

UN1839

· **14.2 UN proper shipping name**· **DOT**

Trichloroacetic acid

· **ADR**1839 Trichloroacetic acid, ENVIRONMENTALLY  
HAZARDOUS· **IMDG**

TRICHLOROACETIC ACID, MARINE POLLUTANT

· **IATA**

TRICHLOROACETIC ACID

(Contd. on page 7)

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/10/2017

**Trade name: 25-OH- Vitamin D3/D2 by HPLC, REAG 1**

(Contd. of page 6)

· **14.3 Transport hazard class(es)**

· **DOT**



· **Class** 8 Corrosive substances

· **Label** 8

· **ADR, IMDG**



· **Class** 8 Corrosive substances

· **Label** 8

· **IATA**



· **Class** 8 Corrosive substances

· **Label** 8

· **14.4 Packing group**

· **DOT, ADR, IMDG, IATA** II

· **14.5 Environmental hazards:**

· **Marine pollutant:** Yes  
Symbol (fish and tree)

· **Special marking (ADR):** Symbol (fish and tree)

· **14.6 Special precautions for user**

· **Danger code (Kemler):** Warning: Corrosive substances

· **EMS Number:** 80

· **Segregation groups** F-A,S-B

· **Stowage Category** Acids

· **Stowage Category** A

· **14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable.

· **Transport/Additional information:**

· **ADR**

· **Excepted quantities (EQ)** Code: E2  
Maximum net quantity per inner packaging: 30 g  
Maximum net quantity per outer packaging: 500 g

· **IMDG**

· **Limited quantities (LQ)** 1 kg  
· **Excepted quantities (EQ)** Code: E2  
Maximum net quantity per inner packaging: 30 g  
Maximum net quantity per outer packaging: 500 g

(Contd. on page 8)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/13/2017

Reviewed on 02/10/2017

Trade name: 25-OH- Vitamin D3/D2 by HPLC, REAG 1

(Contd. of page 7)

· UN "Model Regulation":

UN 1839 TRICHLOROACETIC ACID, 8, II,  
ENVIRONMENTALLY HAZARDOUS

## 15 Regulatory information

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

· Sara

· Section 355 (extremely hazardous substances):

Substance is not listed.

· Section 313 (Specific toxic chemical listings):

Substance is not listed.

· TSCA (Toxic Substances Control Act):

Substance is listed.

· Proposition 65

· Chemicals known to cause cancer:

Substance is listed.

· Chemicals known to cause reproductive toxicity for females:

Substance is not listed.

· Chemicals known to cause reproductive toxicity for males:

Substance is not listed.

· Chemicals known to cause developmental toxicity:

Substance is not listed.

· Cancerogenity categories

· EPA (Environmental Protection Agency)

SC

· TLV (Threshold Limit Value established by ACGIH)

A3

· NIOSH-Ca (National Institute for Occupational Safety and Health)

Substance is not listed.

· 15.2 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

· Date of preparation / last revision 02/13/2017 / 4

· 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)

(Contd. on page 9)



## Safety Data Sheet

*acc. to OSHA HCS*

Printing date 02/13/2017

Reviewed on 02/10/2017

**Trade name: 25-OH- Vitamin D3/D2 by HPLC, REAG 1**

(Contd. of page 8)

*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*  
*DOT: US Department of Transportation*  
*IATA: International Air Transport Association*  
*GHS: Globally Harmonised System of Classification and Labelling of Chemicals*  
*ACGIH: American Conference of Governmental Industrial Hygienists*  
*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)*  
*NFPA: National Fire Protection Association (USA)*  
*HMIS: Hazardous Materials Identification System (USA)*  
*PBT: Persistent, Bioaccumulative and Toxic*  
*vPvB: very Persistent and very Bioaccumulative*  
*NIOSH: National Institute for Occupational Safety*  
*OSHA: Occupational Safety & Health*  
*TLV: Threshold Limit Value*  
*PEL: Permissible Exposure Limit*  
*REL: Recommended Exposure Limit*  
*Skin Corr. 1A: Skin corrosion/irritation – Category 1A*  
*Carc. 2: Carcinogenicity – Category 2*

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

US