

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/03/2020

Revision date 05/03/2020

## 1 Identification

- **Product identifier**
- **Trade name:** **Benzodiazepine ELISA Monoclonal Antibody**
- **Article number:** 401802, 025352
- **Application of the substance / the mixture** For research use only - not for human or veterinary use.
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Cayman Chemical Co.  
1180 E. Ellsworth Rd.  
Ann Arbor, MI 48108  
USA
- **Information department:** Product safety department
- **Emergency telephone number:**  
During normal opening times: +1 (734) 971-3335  
US/CANADA: 800-424-9300  
Outside US/CANADA: 703-741-5970

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



Skin Sens. 1 H317 May cause an allergic skin reaction.

Aquatic Acute 3 H402 Harmful to aquatic life.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

- **Label elements**
- **GHS label elements**  
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



- **Signal word** Warning
- **Hazard-determining components of labeling:**  
5-Chloro-2-methyl-4-isothiazolin-3-one  
2-Methyl-4-isothiazolin-3-one
- **Hazard statements**  
May cause an allergic skin reaction.  
Harmful to aquatic life.  
Harmful to aquatic life with long lasting effects.
- **Precautionary statements**  
Avoid breathing dust/fume/gas/mist/vapors/spray

(Contd. on page 2)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/03/2020

Revision date 05/03/2020

## Trade name: Benzodiazepine ELISA Monoclonal Antibody

(Contd. from page 1)

Contaminated work clothing must not be allowed out of the workplace.  
 Avoid release to the environment.  
 Wear protective gloves.  
 If on skin: Wash with plenty of water.  
 If skin irritation or rash occurs: Get medical advice/attention.  
 Specific treatment (see on this label).  
 Wash contaminated clothing before reuse.  
 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**

HEALTH	0	Health = 0
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**

- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 7647-14-5 RTECS: VZ4725000	Sodium chloride	45.718%
CAS: 7758-11-4 RTECS: TC5580000	Potassium phosphate, dibasic	25.79%
CAS: 26172-55-4 RTECS: NX8156850	5-Chloro-2-methyl-4-isothiazolin-3-one	0.004%
CAS: 2682-20-4 RTECS: NX8157080	2-Methyl-4-isothiazolin-3-one	0.002%

- **Other ingredients**

CAS: 9048-46-8 RTECS: MT6446000	Albumin, bovine	21.492%
CAS: 7778-77-0 RTECS: TC6615500	Potassium phosphate, Monobasic	6.251%
CAS: 194491-31-1	EDTA, tetrasodium salt, hydrate	0.742%
	Mouse anti-benzodiazepine Antibody	<0.001%

US

(Contd. on page 3)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/03/2020

Revision date 05/03/2020

Trade name: Benzodiazepine ELISA Monoclonal Antibody

(Contd. from page 2)

## 4 First-aid measures

- **Description of first aid measures**

- **After inhalation:**

Supply fresh air and to be sure call for a doctor.

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.

- **After swallowing:** If symptoms persist consult doctor.

- **Information for doctor:**

- **Most important symptoms and effects, both acute and delayed**

May cause anemia, cough, CNS depression, drowsiness, headache, heart damage, lassitude (weakness, exhaustion), liver damage, narcosis, reproductive effects, teratogenic effects.

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 fighting measures that suit the environment.

A solid water stream may be inefficient.

- **Special hazards arising from the substance or mixture** No further relevant information available.

- **Advice for firefighters**

- **Protective equipment:** No special measures required.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.

- **Environmental precautions:**

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

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

- **Methods and material for containment and cleaning up:**

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

- **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:**

7758-11-4	Potassium phosphate, dibasic	13 mg/m <sup>3</sup>
7778-77-0	Potassium phosphate, Monobasic	9.6 mg/m <sup>3</sup>
26172-55-4	5-Chloro-2-methyl-4-isothiazolin-3-one	0.6 mg/m <sup>3</sup>

- **PAC-2:**

7758-11-4	Potassium phosphate, dibasic	140 mg/m <sup>3</sup>
7778-77-0	Potassium phosphate, Monobasic	110 mg/m <sup>3</sup>

(Contd. on page 4)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 05/03/2020

Revision date 05/03/2020

**Trade name: Benzodiazepine ELISA Monoclonal Antibody**

(Contd. from page 3)

26172-55-4	5-Chloro-2-methyl-4-isothiazolin-3-one	6.6 mg/m <sup>3</sup>
<b>· PAC-3:</b>		
7758-11-4	Potassium phosphate, dibasic	830 mg/m <sup>3</sup>
7778-77-0	Potassium phosphate, Monobasic	630 mg/m <sup>3</sup>
26172-55-4	5-Chloro-2-methyl-4-isothiazolin-3-one	40 mg/m <sup>3</sup>

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**  
Keep container tightly closed.  
Store in accordance with information listed on the product insert.
- **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:** None.
- **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.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**  
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.  
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.  
At this time, the remaining constituent has no known exposure limits.  
At this time, the other constituents have no known exposure limits.

<b>7647-14-5 Sodium chloride</b>	
PEL	Long-term value: 10 ppm
TLV	Long-term value: 10 mg/m <sup>3</sup> , 10 ppm
<b>7758-11-4 Potassium phosphate, dibasic</b>	
PEL	Short-term value: 10 mg/m <sup>3</sup> Long-term value: 10 ppm аэрозоль
TLV	Short-term value: 10 mg/m <sup>3</sup> Long-term value: 10 ppm аэрозоль

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.

(Contd. on page 5)

-US-

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 05/03/2020

Revision date 05/03/2020

**Trade name: Benzodiazepine ELISA Monoclonal Antibody**

(Contd. from page 4)

- **Breathing equipment:**  
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

- **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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **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:** Not required.

## 9 Physical and chemical properties

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

- **General Information**

- **Appearance:**

**Form:** lyophilized

**Color:** Not determined.

- **Odor:** Characteristic

- **Odor threshold:** Not determined.

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

- **Change in condition**

**Melting point/Melting range:** Undetermined.

**Boiling point/Boiling range:** Undetermined.

- **Flash point:** Not applicable.

- **Flammability (solid, gaseous):** Not determined.

- **Decomposition temperature:** Not determined.

- **Auto igniting:** Product is not selfigniting.

- **Danger of explosion:** Product does not present an explosion hazard.

- **Explosion limits:**

**Lower:** Not determined.

**Upper:** Not determined.

- **Vapor pressure:** Not applicable.

- **Density:** Not determined.

- **Relative density** Not determined.

(Contd. on page 6)

US

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 05/03/2020

Revision date 05/03/2020

**Trade name: Benzodiazepine ELISA Monoclonal Antibody**

(Contd. from page 5)

· <b>Vapor density</b>	Not applicable.
· <b>Evaporation rate</b>	Not applicable.
· <b>Solubility in / Miscibility with Water:</b>	Soluble.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not applicable.
<b>Kinematic:</b>	Not applicable.
· <b>Solvent content:</b>	
<b>VOC content:</b>	0.00 %
<b>Solids content:</b>	99.3 %
· <b>Other information</b>	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** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

### ATE (Acute Toxicity Estimate)

Oral	LD50	6,562 mg/kg (rat)
------	------	-------------------

### 7647-14-5 Sodium chloride

Oral	LDLO	1,000 mg/kg (man)
	TDLO	650 ml/kg (man)
	LD50	4,000 mg/kg (mouse) 3,000 mg/kg (rat)
Inhalative	LD50	4 g/kg (mouse)
	LC50	320 mg/m <sup>3</sup> (mouse)
	TCLO	0.63 mg/m <sup>3</sup> (hmn)
Irritation of skin	LCLO	29,300 mg/m <sup>3</sup> /7h (mouse)
	Irritation	500 mg/24h (rabbit)
	Irritation of eyes	Irritation
Intraperitoneal LD50		2,602 mg/kg (mouse)
	Subcutaneous LD50	31.6 mg/kg (rat)

(Contd. on page 7)

US

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 05/03/2020

Revision date 05/03/2020

**Trade name: Benzodiazepine ELISA Monoclonal Antibody**

(Contd. from page 6)

	Intravenous LD50	59.5 mg/kg (rat)
	Data	15 mg/3D (hmn)
	Subcutaneous LD50	3 g/kg (mouse)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Irritant

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

None of the ingredients is listed.

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**  
Water hazard class 2 (Self-assessment): hazardous for water  
Do not allow product to reach ground water, water course or sewage system.  
Danger to drinking water if even small quantities leak into the ground.  
Harmful to aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

(Contd. on page 8)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/03/2020

Revision date 05/03/2020

**Trade name: Benzodiazepine ELISA Monoclonal Antibody**

(Contd. from page 7)

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

## 14 Transport information

- |  |                 |
|--|-----------------|
| · <b>UN-Number</b>   |                 |
| · <b>DOT, IMDG, IATA</b>   | not regulated   |
| · <b>UN proper shipping name</b>   |                 |
| · <b>DOT, IMDG, IATA</b>   | not regulated   |
| · <b>Transport hazard class(es)</b>  |                 |
| · <b>DOT, ADN, IMDG, IATA</b>  |                 |
| · <b>Class</b>   | not regulated   |
| · <b>Packing group</b>   |                 |
| · <b>DOT, IMDG, IATA</b>   | not regulated   |
| · <b>Environmental hazards:</b>  | Not applicable. |
| · <b>Special precautions for user</b>  | Not applicable. |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable. |
| · <b>UN "Model Regulation":</b>  | not regulated   |

## 15 Regulatory information

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

7647-14-5	Sodium chloride	ACTIVE
7758-11-4	Potassium phosphate, dibasic	ACTIVE
9048-46-8	Albumin, bovine	ACTIVE
7778-77-0	Potassium phosphate, Monobasic	ACTIVE
26172-55-4	5-Chloro-2-methyl-4-isothiazolin-3-one	ACTIVE
2682-20-4	2-Methyl-4-isothiazolin-3-one	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)

-US



# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/03/2020

Revision date 05/03/2020

**Trade name: Benzodiazepine ELISA Monoclonal Antibody**

(Contd. from 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.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

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

None of the ingredients is listed.

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS07

· **Signal word** Warning

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

5-Chloro-2-methyl-4-isothiazolin-3-one

2-Methyl-4-isothiazolin-3-one

· **Hazard statements**

May cause an allergic skin reaction.

Harmful to aquatic life.

Harmful to aquatic life with long lasting effects.

· **Precautionary statements**

Avoid breathing dust/fume/gas/mist/vapors/spray

Contaminated work clothing must not be allowed out of the workplace.

Avoid release to the environment.

Wear protective gloves.

If on skin: Wash with plenty of water.

If skin irritation or rash occurs: Get medical advice/attention.

Specific treatment (see on this label).

Wash contaminated clothing before reuse.

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

· **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:** Environment protection department.

· **Contact:** -

· **Date of preparation / last revision** 05/03/2020 / -

(Contd. on page 10)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 05/03/2020

Revision date 05/03/2020

**Trade name: Benzodiazepine ELISA Monoclonal Antibody**

(Contd. from page 9)

**Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods  
DOT: US Department of Transportation  
IATA: International Air Transport Association  
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)  
VOC: Volatile Organic Compounds (USA, EU)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
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 Sens. 1: Skin sensitisation – Category 1  
Aquatic Acute 3: Hazardous to the aquatic environment - acute aquatic hazard – Category 3  
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

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

US