

## Safety Data Sheet

acc. to OSHA HCS

Printing date 02/27/2021

Revision date 02/27/2021

### 1 Identification

- **Product identifier**
- **Trade name:** Carbazepine-d10
- **Synonym**  
5H-dibenz[b,f]azepine-1,2,3,4,6,7,8,9,10,11-d10-5-carboxamide  
Carbamazepine-d10
- **Article number:** 33486
- **CAS Number:**  
132183-78-9
- **EC number:**  
690-797-7
- **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**



GHS08 Health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

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

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



GHS07



GHS08

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- **Signal word** Danger
- **Hazard statements**
  - H302 Harmful if swallowed.
  - H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
  - H317 May cause an allergic skin reaction.
- **Precautionary statements**
  - Avoid breathing dust/fume/gas/mist/vapors/spray
  - Wash thoroughly after handling.
  - Do not eat, drink or smoke when using this product.
  - Contaminated work clothing must not be allowed out of the workplace.
  - Wear protective gloves.
  - [In case of inadequate ventilation] wear respiratory protection.
  - If swallowed: Call a poison center/doctor if you feel unwell.
  - Rinse mouth.
  - If on skin: Wash with plenty of water.
  - If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
  - If skin irritation or rash occurs: Get medical advice/attention.
  - Specific treatment (see on this label).
  - If experiencing respiratory symptoms: Call a poison center/doctor.
  - Wash contaminated clothing before reuse.
  - Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 2

Fire = 0

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

|            |   |
|------------|---|
| HEALTH     | 2 |
| FIRE       | 0 |
| REACTIVITY | 0 |

Health = \*2

Fire = 0

Reactivity = 0
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

## 3 Composition/information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description**
  - 132183-78-9 Carbazepine-d10
- **Identification number(s)**
- **EC number:** 690-797-7

## 4 First-aid measures

- **Description of first aid measures**
- **General information:**
  - Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

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- **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:** Immediately call a 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 to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Dispose contaminated material as waste according to item 13.
- **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:** Substance is not listed.
- **PAC-2:** Substance is not listed.
- **PAC-3:** Substance is not listed.

## 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**
- **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.

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- **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:** Not required.
- **Additional information:** The lists that were valid during the creation 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.
- **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.
- **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:              | Solid                                                           |
| Color:             | Not determined.                                                 |
| Odor:              | Characteristic                                                  |
| Structural Formula | C <sub>15</sub> H <sub>2</sub> D <sub>10</sub> N <sub>2</sub> O |
| Molecular Weight   | 246.3 g/mol                                                     |
| Odor threshold:    | Not determined.                                                 |

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

- **Change in condition**

|                              |               |
|------------------------------|---------------|
| Melting point/Melting range: | Undetermined. |
|------------------------------|---------------|

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|                                            |                                                                                              |
|--------------------------------------------|----------------------------------------------------------------------------------------------|
| Boiling point/Boiling range:               | Undetermined.                                                                                |
| · Flash point:                             | Not applicable.                                                                              |
| · Flammability (solid, gaseous):           | Product is not flammable.                                                                    |
| · Decomposition temperature:               | Not determined.                                                                              |
| · Auto igniting:                           | Not determined.                                                                              |
| · 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.                                                                              |
| · Vapor density                            | Not applicable.                                                                              |
| · Evaporation rate                         | Not applicable.                                                                              |
| · Solubility in / Miscibility with Water:  | Not determined.                                                                              |
| · Partition coefficient (n-octanol/water): | Not determined.                                                                              |
| · Viscosity:                               |                                                                                              |
| Dynamic:                                   | Not applicable.                                                                              |
| Kinematic:                                 | Not applicable.                                                                              |
| SOLUBILITY                                 | ~0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2); ~3 mg/ml in EtOH & DMSO; ~25 mg/ml in DMF |
| · 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** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** strong oxidizing agents
- **Hazardous decomposition products:** carbon oxides, nitrogen oxides

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:**  
Sensitization possible through inhalation.  
Sensitization possible through skin contact.

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- **Additional toxicological information:**
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)** Substance is not listed.
- **NTP (National Toxicology Program)** Substance is not listed.
- **OSHA-Ca (Occupational Safety & Health Administration)** Substance is not 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.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **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.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

## 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. |

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- |                                                                                  |                 |
|----------------------------------------------------------------------------------|-----------------|
| · <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**  
No further relevant information available.
- **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 not listed.
- **Hazardous Air Pollutants** Substance is not listed.
- **Proposition 65**
- **Chemicals known to cause cancer:** Substance is not 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.
- **Carcinogenic categories**
- **EPA (Environmental Protection Agency)** Substance is not listed.
- **TLV (Threshold Limit Value established by ACGIH)** Substance is not listed.
- **NIOSH-Ca (National Institute for Occupational Safety and Health)** Substance is not listed.
- **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** 02/27/2021 / -
- **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  
 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  
 Acute Tox. 4: Acute toxicity – Category 4  
 Resp. Sens. 1: Respiratory sensitisation – Category 1  
 Skin Sens. 1: Skin sensitisation – Category 1