1 Identification

- Product identifier
- Trade name: Halazepam
- Synonym
  7-chloro-1,3-dihydro-5-phenyl-1-(2,2,2-trifluoroethyl)-2H-1,4-benzodiazepin-2-one
  SCH 12041
- Article number: 18290
- CAS Number: 23092-17-3
- EC number: 245-425-4
- 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
  GHS09 Environment
  Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

- GHS07
  Skin Irrit. 2 H315 Causes skin irritation.
  Eye Irrit. 2A H319 Causes serious eye irritation.
  Skin Sens. 1 H317 May cause an allergic skin reaction.
  Aquatic Acute 2 H401 Toxic to aquatic life.

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

· Signal word Warning
· Hazard statements
  H315 Causes skin irritation.
  H319 Causes serious eye irritation.
  H317 May cause an allergic skin reaction.
  H401 Toxic to aquatic life.
  H411 Toxic to aquatic life with long lasting effects.
· Precautionary statements
  Avoid breathing dust/fume/gas/mist/vapors/spray
  Wash thoroughly after handling.
  Contaminated work clothing must not be allowed out of the workplace.
  Avoid release to the environment.
  Wear protective gloves / eye protection / face protection.
  If on skin: Wash with plenty of water.
  If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  Take off contaminated clothing and wash it before reuse.
  If skin irritation or rash occurs: Get medical advice/attention.
  Specific treatment (see on this label).
  If eye irritation persists: Get medical advice/attention.
  Wash contaminated clothing before reuse.
  Collect spillage.
  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  Health = 2
  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: Substances
· CAS No. Description
  23092-17-3 Halazepam
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. If symptoms persist, consult a doctor.
  - **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:**
  - 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:**
  - Pick up mechanically.

- **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
    No special precautions are necessary if used correctly.
    Avoid breathing dust/fume/gas/mist/vapours/spray.
    Avoid prolonged or repeated exposure.
    Keep away from sources of ignition.
    Take precautionary measures against static discharge.
  · 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: Keep receptacle tightly sealed.
  · 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.
      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.
Trade name: Halazepam

9 Physical and chemical properties

- Information on basic physical and chemical properties
  - General Information
  - Appearance:
    - Form: Crystalline
    - Color: Not determined.
  - Odor: Characteristic
  - Structural Formula: C17H12ClF3N2O
  - Molecular Weight: 352.7 g/mol
  - 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): 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); ~10 mg/ml in EtOH & DMSO; ~25 mg/ml in DMF
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

- RTECS Number DF2376100
- Information on toxicological effects
  - Acute toxicity:
    - Primary irritant effect:
      - on the skin: Irritant to skin and mucous membranes.
      - on the eye: Irritating effect.
    - Sensitization: Sensitization possible through skin contact.
  - 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.
  - Ecotoxical effects:
  - Remark: Toxic for 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.
      - Also poisonous for fish and plankton in water bodies.
      - Toxic for aquatic organisms
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.
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

- UN-Number
  - DOT, IMDG, IATA: not regulated
- UN proper shipping name
  - DOT, IMDG, IATA: not regulated
- Transport hazard class(es)
  - DOT, ADN, IMDG, IATA: not regulated
- Packing group
  - DOT, IMDG, IATA: not regulated
- Environmental hazards: Environmentally hazardous substance, solid
- Special precautions for user
  - Not applicable.
- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
  - Not applicable.
- UN "Model Regulation": 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 listed.
- Carcinogenic categories
- EPA (Environmental Protection Agency): Substance is not listed.
- TLV (Threshold Limit Value established by ACGIH): Substance is not listed.
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- 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 02/08/2021 / -
- 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
  - Skin Irrit. 2: Skin corrosion/irritation – Category 2
  - Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
  - Skin Sens. 1: Skin sensitisation – Category 1
  - Aquatic Acute 2: Hazardous to the aquatic environment - acute aquatic hazard – Category 2
  - Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2