1 Identification

- Product identifier
- Trade name: Fomepizole
- Synonym
  - 4-Methylpyrazole
  - 4-methyl-1H-pyrazole
- Article number: 17851
- CAS Number: 7554-65-6
- EC number: 231-445-0
- Application of the substance / the mixture
  - This product is for research use - Not for human or veterinary diagnostic or therapeutic 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

  - GHS05 Corrosion

    Skin Corrosion 1C H314 Causes severe skin burns and eye damage.
    Eye Damage 1 H318 Causes serious eye damage.

  - GHS07

    Acute Toxicity - Oral 4 H302 Harmful if swallowed.
    Acute Toxicity - Dermal 4 H312 Harmful in contact with skin.

- Label elements
- GHS label elements
  - The substance is classified and labeled according to the Globally Harmonized System (GHS).
Trade name: Fomepizole

- Hazard pictograms
  
  GHS05  GHS07

- Signal word Danger

- Hazard statements
  
  H302+H312 Harmful if swallowed or in contact with skin.
  H314 Causes severe skin burns and eye damage.

- Precautionary statements
  
  P260 Do not breathe dusts or mists.
  P264 Wash thoroughly after handling.
  P270 Do not eat, drink or smoke when using this product.
  P280 Wear protective gloves/protective clothing/eye protection/face protection.
  P301+P312 If swallowed: Call a poison center/doctor if you feel unwell.
  P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.
  P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
  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.
  P321 Specific treatment (see on this label).
  P362+P364 Take off contaminated clothing and wash it before reuse.
  P363 Wash contaminated clothing before reuse.
  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 = 3  Fire = 1  Reactivity = 0

  HMIS-ratings (scale 0 - 4)
  
  HEALTH 3  FIRE 1  REACTIVITY 0

  Health = *3  Fire = 1  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
    
    7554-65-6 Fomepizole
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.
  · After inhalation: Supply fresh air; consult doctor in case of complaints.
  · After skin contact: Generally the product does not irritate the skin.
  · After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
  · After swallowing: Immediately call a doctor.
· 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:
    CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· 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
  · 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 neutralizing agent. Dispose contaminated material as waste according to section 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: Thorough dedusting.
· 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: Store in accordance with information listed on the product insert.
· 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 section 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.
    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
## 9 Physical and chemical properties

### General Information

- **Appearance:**
  - **Form:** neat oil
  - **Color:** Not determined.
- **Odor:** Characteristic
- **Structural Formula:** C4H6N2
- **Molecular Weight:** 82.1 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:** 96 °C (204.8 °F)

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

- **Decomposition temperature:** Not determined.

- **Ignition temperature:** 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**
    - DMF: 50 mg/ml; DMSO: 50 mg/ml; Ethanol: 50 mg/ml; PBS (pH 7.2): 10 mg/ml

- **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.
Trade name: Fomepizole

- Conditions to avoid: No further relevant information available.
- Incompatible materials: Strong oxidizing agents
- Hazardous decomposition products: Carbon oxides, nitrogen oxides

### 11 Toxicological information

- RTECS Number UQ7350000
- Information on toxicological effects
  - Acute toxicity:
    - LD/LC50 values that are relevant for classification:
      | Oral LD50 | 640 mg/kg (mouse) |
      |          | 534 mg/kg (rat)   |
      | TDLO     | 15 mg/kg (human)  |
      | Intrapertoneal TDLO | 90 mg/kg (rat) |
  - Primary irritant effect:
    - on the skin: No irritant effect.
    - on the eye: Strong irritant with the danger of severe eye injury.
  - Sensitization: No sensitizing effects known.
  - 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 (Assessment by list): Slightly hazardous for water
      - Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
      - Must not reach bodies of water or drainage ditch undiluted or unneutralized.
    - 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.
### 14 Transport information

<table>
<thead>
<tr>
<th>· UN-Number</th>
<th>UN1759</th>
</tr>
</thead>
<tbody>
<tr>
<td>· UN proper shipping name</td>
<td></td>
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<tr>
<td>· DOT</td>
<td>Corrosive solids, n.o.s. (Fomepizole)</td>
</tr>
<tr>
<td>· IMDG</td>
<td>CORROSIVE SOLID, N.O.S. (Fomepizole)</td>
</tr>
<tr>
<td>· IATA</td>
<td>Corrosive solid, n.o.s. (Fomepizole)</td>
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<tr>
<td>· Transport hazard class(es)</td>
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<td>· IMDG, IATA</td>
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<tr>
<td>· Class</td>
<td>8 Corrosive substances</td>
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<tr>
<td>· Label</td>
<td>8</td>
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<tr>
<td>· Packing group</td>
<td></td>
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<tr>
<td>· DOT, IMDG, IATA</td>
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<tr>
<td>· Environmental hazards:</td>
<td>Not applicable.</td>
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<tr>
<td>· Special precautions for user</td>
<td>Warning: Corrosive substances</td>
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<tr>
<td>· Hazard identification number (Kemler code):</td>
<td>88</td>
</tr>
<tr>
<td>· EMS Number:</td>
<td>F-A,S-B</td>
</tr>
<tr>
<td>· Stowage Category</td>
<td>B</td>
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</tbody>
</table>

| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · Transport/Additional information: |  |
| · DOT |  |
| · Quantity limitations | On passenger aircraft/rail: 1 kg  
On cargo aircraft only: 25 kg  |
| · IMDG |  |
| · Limited quantities (LQ) | 0 |
| · Excepted quantities (EQ) | Code: E0  
Not permitted as Excepted Quantity |
Safety Data Sheet
acc. to OSHA HCS

Trade name: Fomepizole

- IATA
- Remarks: When sold in quantities of less than or equal to 1 mL, or 1 g, with an Excepted Quantity Code of E1, E2, E4, or E5, this item meets the De Minimis Quantities exemption, per IATA 2.6.10. Therefore packaging does not have to be labeled as Dangerous Goods/Excepted Quantity.

- UN "Model Regulation": UN 1759 CORROSIVE SOLID, N.O.S. (FOMEPIZOLE), 8, I

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) 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

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes no responsibility for incidental or consequential damages, including lost profits, arising from the use of these data. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy of the information contained herein.

- Department issuing SDS: Environment protection department.
- Contact: -
- Date of preparation / last revision 10/09/2023
- Abbreviations and acronyms:
  IMDG: International Maritime Code for Dangerous Goods
  DOT: US Department of Transportation
  IATA: International Air Transport Association
  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)
  LC50: Lethal concentration, 50 percent

(Contd. on page 9)
**Trade name: Fomepizole**

<table>
<thead>
<tr>
<th><strong>LD50:</strong> Lethal dose, 50 percent</th>
<th><strong>PBT:</strong> Persistent, Bioaccumulative and Toxic</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Data compared to the previous version altered.</em></td>
<td></td>
</tr>
</tbody>
</table>

* 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 Toxicity - Oral 4: Acute toxicity – Category 4  
* Skin Corrosion 1C: Skin corrosion/irritation – Category 1C  
* Eye Damage 1: Serious eye damage/eye irritation – Category 1  

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*Data compared to the previous version altered.*