

1 Identification

- **Product identifier**
- **Trade name:** Doxycycline hyclate
- **Article number:** A2951
- **CAS Number:**
24390-14-5
- **EC number:**
234-198-7
- **Application of the substance / the mixture**
For lab use only. Not for drug, household or other uses.
Laboratory chemical
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
AppliChem GmbH
Ottoweg 4
D-64291 Darmstadt
- **Information department:** Dept. Compliance
- **Emergency telephone number:** +49(0)6151 93570 (Inside normal business hours)

Tel.: +49 (0)6151 93570
Fax.: +49 (0)6151 935711
msds@applichem.com

2 Hazard(s) identification

- **Classification of the substance or mixture**

Acute Tox. 4 H302	Harmful if swallowed.
Acute Tox. 4 H332	Harmful if inhaled.
Skin Irrit. 2 H315	Causes skin irritation.
Eye Irrit. 2A H319	Causes serious eye irritation.
Repr. 2 H361-H362	Suspected of damaging fertility or the unborn child. May cause harm to breast-fed children.
STOT SE 3 H335	May cause respiratory irritation.

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



GHS07 GHS08

- **Signal word** Warning
- **Hazard statements**

H302+H332	Harmful if swallowed or if inhaled.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H361-H362	Suspected of damaging fertility or the unborn child. May cause harm to breast-fed children.
H335	May cause respiratory irritation.
- **Precautionary statements**
P260 Do not breathe dust/fume/gas/mist/vapors/spray.

(Contd. on page 2)

Trade name: Doxycycline hyclate

(Contd. of page 1)

P263 Avoid contact during pregnancy/while nursing.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P281 Use personal protective equipment as required.
P321 Specific treatment (see on this label).

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**



· **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**

24390-14-5 Doxycycline hyclate

· **Identification number(s)**

· **EC number:** 234-198-7

4 First-aid measures

· **Description of first aid measures**

· **General information:**

Immediately remove any clothing soiled by the product.
In case of irregular breathing or respiratory arrest provide artificial respiration.
Position and transport stably on side.

· **After inhalation:**

Take affected persons into fresh air and keep quiet.
In case of unconsciousness place patient stably in side position for transportation.
Seek medical treatment.

· **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:** Seek medical treatment.

· **Information for doctor:**

In case of oral overdose, induction of vomiting or gastric lavage should be attempted to remove the unabsorbed portions of the substance from the stomach. The remaining residues can be bound by the addition of antacids or calcium and magnesium salts to non-resorbable chelate complexes.

· **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.

US

(Contd. on page 3)

Trade name: Doxycycline hyclate

(Contd. of page 2)

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
 - Water
 - Foam
- **Special hazards arising from the substance or mixture**
 - Nitrogen oxides (NO_x)
 - CO, CO₂
 - Non-combustible.
 - Ambient fire may liberate hazardous vapours.
- **Advice for firefighters**
- **Protective equipment:**
 - Wear self-contained respiratory protective device.
 - Wear fully protective suit.
- **Additional information**
 - Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
 - Avoid formation of dust.
 - Do not inhale dust.
 - Avoid substance contact.
 - Ensure adequate ventilation
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
 - Pick up mechanically.
 - Avoid generation of dusts.
 - Dispose contaminated material as waste according to item 13.
 - Ensure adequate ventilation.
 - Clean up affected area.
- **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.
 - Ensure good ventilation/exhaustion at the workplace.
 - Any deposit of dust which cannot be avoided must be regularly removed.
- **Information about protection against explosions and fires:** The product is not flammable.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Provide acid-resistant floor.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
 - Protect from exposure to the light.
 - This product is hygroscopic.
 - Keep receptacle tightly sealed.

(Contd. on page 4)

Trade name: Doxycycline hyclate

(Contd. of page 3)

- Store under lock and key and with access restricted to technical experts or their assistants only.
- **Recommended storage temperature:** 2-8 °C
- **Storage class:** 10 - 13
- **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.
Vacuum clean contaminated clothing. Do not blow or brush off contamination.
Avoid contact with the eyes and skin.
- **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.
Filter P1
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
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.
- **For the permanent contact gloves made of the following materials are suitable:**
Recommended thickness of the material: ≥ 0.11 mm
Rubber gloves
Value for the permeation: Level ≥ 480 min
- **As protection from splashes gloves made of the following materials are suitable:**
Recommended thickness of the material: ≥ 0.11 mm
Rubber gloves
Value for the permeation: Level ≥ 480 min
- **Eye protection:**



Tightly sealed goggles

- **Body protection:**
Protective work clothing

(Contd. on page 5)

Trade name: Doxycycline hyclate

(Contd. of page 4)

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled.

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Solid
Color:	Yellow
Odor:	Recognizable
Odor threshold:	Not determined.

· pH-value: 2-3

· Change in condition

Melting point/Melting range:	201 °C (394 °F)
Boiling point/Boiling range:	Undetermined.

· Flash point: Not applicable.

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

· Ignition temperature:

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: Soluble.

· Partition coefficient (n-octanol/water): Not determined.

· Viscosity:

Dynamic: Not applicable.

Kinematic: Not applicable.

· Other information: No further relevant information available.

10 Stability and reactivity

· **Reactivity** No dangerous reactions known.

· Chemical stability

· Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

· Possibility of hazardous reactions

Reacts with strong oxidizing agents.

Risk of dust explosion.

· **Conditions to avoid** No further relevant information available.

· **Incompatible materials:** No dangerous reactions known.

(Contd. on page 6)

Trade name: Doxycycline hyclate

(Contd. of page 5)

- **Hazardous decomposition products:** In the event of fire: See chapter 5

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**

· Components	Type	Value	Species
Oral	LD50	1700 mg/kg	(rat)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **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:**
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow to enter waters, waste water, or soil.
- **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:**
Chemicals must be disposed of in compliance with the respective national regulations.
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.
Packagings that cannot be cleansed are to be disposed of in the same manner as the product.

US
(Contd. on page 7)

Trade name: Doxycycline hyclate

(Contd. of page 6)

14 Transport information

· UN-Number	
· DOT, ADR, ADN, IMDG, IATA	Void
· UN proper shipping name	
· DOT, ADR, ADN, IMDG, IATA	Void
· Transport hazard class(es)	
· DOT, ADR, ADN, IMDG, IATA	
· Class	Void
· Packing group	
· DOT, ADR, IMDG, IATA	Void
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Not applicable.
· Stowage Category	A
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· UN "Model Regulation":	Void

15 Regulatory information

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



GHS07 GHS08

- Signal word Warning
- Hazard statements
H302+H332 Harmful if swallowed or if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H361-H362 Suspected of damaging fertility or the unborn child. May cause harm to breast-fed children.
H335 May cause respiratory irritation.

(Contd. on page 8)

Trade name: Doxycycline hyclate

(Contd. of page 7)

- **Precautionary statements**
 - P260 Do not breathe dust/fume/gas/mist/vapors/spray.
 - P263 Avoid contact during pregnancy/while nursing.
 - P280 Wear protective gloves/protective clothing/eye protection/face protection.
 - P281 Use personal protective equipment as required.
 - P321 Specific treatment (see on this label).
- **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:** Dept. Compliance
- **Contact:** Mr. Th. Stöckle
- **Date of preparation / last revision** 06/14/2017 / 2
- **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)
 - ICAO: International Civil Aviation Organisation
 - 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
 - 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)
 - 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
 - Acute Tox. 4: Acute toxicity – Category 4
 - Skin Irrit. 2: Skin corrosion/irritation – Category 2
 - Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
 - Repr. 2: Reproductive toxicity – Category 2
 - STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

US