

Material Safety Data Sheet.

1. IDENTIFICATION

Product Identifier: Doxycycline Hyclate
Other Means of Identification:
Synonymes: Biocamycin; Doxigalumicina; Doxycycline HCl; Doryx; Vibradox; Vibramycin hyclate, Doxycycline hydrochloride hemimethanolate hemihydrate
Chemical Formula: C₂₂H₂₄N₂O₈ · HCl · 0.5H₂O · 0.5C₂H₆O
Chemical Family: Antibiotic
CAS Number: 24390-14-5
Recommended Use: Active pharmaceutical ingredient
Restrictions on Use: Not known.
Initial Supplier Identifier: Gurvey & Berry Co. Inc.
310 Judson Street, Unit #15
Toronto, ON, Canada, M8Z 5T6
Tel: (416) 259-5700 Fax: (416) 259-5417
E-mail: msds@gurveyberry.com
Emergency Telephone number: Canutec +1 (613)-966-6666

2. HAZARD IDENTIFICATION

GHS Classification in accordance with Hazardous Products Regulations (HPR) OR/2015-17)

Hazard class	Category	Hazard statement
Acute toxicity, Oral	4	H302
Skin corrosion/irritation	2	H315
Serious eye damage/eye irritation	2A	H319
Specific target organ toxicity – single exposure (respiratory tract irritation)	3	H335

Signal word: **Warning!**

Pictograms: GHS 07



Hazard statements:

- H302 Harmful if swallowed.
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H335 May cause respiratory tract irritation.

Precautionary statements – prevention.

- P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
 P270 Do not eat, drink, or smoke when using this product.
 P264 Wash hands thoroughly after handling.
 P271 Use only outdoors or in a well-ventilated area.
 P280 Wear protective gloves/clothing and eye/face protection.

Precautionary statements – response

- P301 + P312 + P330 IF SWALLOWED: Rinse mouth. Call a POISON CENTER/ doctor if you feel unwell.
 P302+P352 IF ON SKIN: Wash with plenty of soap and water.
 P332+P313 If skin irritation occurs: Get medical advice/attention.
 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.
 P337+P313 If eye irritation persists: Get medical advice/attention.
 P362 Take off contaminated clothing and wash before use.

Precautionary statements - storage

- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
 P405 Store locked up.

Precautionary statements - disposal

- P501 Dispose of contents/container to industrial combustion plant.

Hazards not otherwise classified (HNOC) or not covered by GHS.**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS No.	Concentration	Common name / Synonyms	Other identifiers
Doxycycline Hyclate	24390-14-5	ca 100%	See section 1	

Notes:

4. FIRST-AID MEASURES

First aid measures by route of exposure:

General:	Move out of dangerous area. Remove any contaminated clothing. Consult a physician and show this safety data sheet.
After Ingestion:	Do not induce vomiting without medical advice. Rinse mouth with water. Never administer anything by mouth to an unconscious person. Obtain medical aid immediately.
After Inhalation:	Move person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Obtain medical aid.
After Skin Contact:	Remove contaminated clothing and shoes. Brush off loose particles from skin. Flush skin with soap and water at least 15 min. Seek medical attention if irritation develops.
After Eye Contact:	Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Seek medical attention should irritation develop or persist.

Most Important Symptoms and Effects, Acute and Delayed:

Symptoms/effects after ingestion:	Diarrhea, nausea, vomiting.
Symptoms/effects after inhalation of dust:	Irritation of the respiratory tract including dry/sore throat, coughing. Irritation of the nasal mucous membranes. May experience symptoms similar to those that occur after ingestion.
Symptoms/effects after skin contact:	Tingling/irritation of the skin, rash.
Symptoms/effects after eye contact:	Dust (or material) can cause eye irritation. Symptoms include stinging, tearing, redness.
Medical Conditions Aggravated By Exposure:	Can interact with other orally taken medications, can cause sun sensitivity (skin rash). May affect nervous system, liver, and kidney.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Water mist, foam, dry chemical.

Unsuitable Extinguishing Media: Carbon dioxide, do not use water jet.

Special Hazards Arising from the Product:

Decomposition Products – Nitrogen oxides, carbon monoxide, and carbon dioxide, Nitrogen chloride gas.

Special Protective Equipment and Precautions for Fire-Fighters:

As in any fire, wear a self-contained breathing apparatus and full protective gear.

During a fire, irritating and highly toxic gases may be generated by thermal decomposition combustion.

Further information. Prevent fire extinguishing water from contaminating surface water or the ground water system.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures:

No action shall be taken involving any personal risk or without suitable training.

Communicate hazard.

Evacuate unprotected personnel to safe areas.

Wear personal protective equipment. (see section 8).

Remove all sources of ignition.

Ensure adequate ventilation. Avoid breathing dust.

Prevent further leak or spill if safe to do so.

Wash hands thoroughly with soap and water after handling this material.

Methods and materials for containment and cleaning up

Small spill.

Wear Personal protective equipment (see section 8).

Prevent further spillage if safe to do so.

Spilled product should be removed immediately to avoid formation of dust.

Vacuum or gently moisten with water and collect into a sealable container for disposal.

Flush spill area with plenty of water (low pressure) into approved sewer.

Avoid formation of aerosols and dusts.

Ensure sufficient ventilation.

Dispose of containers in accordance with local, regional, and federal authority requirement.

Wash contaminated clothing.

Large spill.

Wear Personal protective equipment (see section 8).

Prevent further spillage if safe to do so.

Avoid generation of dusts. Ensure adequate ventilation. Avoid breathing dust.

Shovel. Use designated, labeled, closed waste containers for disposal.

Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

Dispose of containers in accordance with local, regional, and federal authority requirement.

Environmental precautions

Do not let product enter drains and ground.

Reference to other sections

See section 1 for emergency contact.

See section 8 for information on appropriate personal protective equipment.

See section 13 for disposal.

7. HANDLING AND STORAGE

Precautions for Safe Handling: Always wear personal protective equipment (see section 8)
Avoid contact with eyes, skin, and clothing.
Avoid ingestion and inhalation.
Avoid formation of dust.
Use with adequate ventilation.
For precautionary statements see also section 2.2

Wash hands thoroughly after handling.

Don not eat in the area.

Conditions for Safe Storage: Store is a cool, dry place, away from sources of heat and moisture.
Hygroscopic. Keep container closed when not in use.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chemical Name	ACGIH® TLV®		OSHA PEL	
	TWA	STEL	TWA	STEL
	N/A	N/A	N/A	N/A

Appropriate Engineering Controls: Local (or general) exhaust ventilation is recommended.
Or Mechanical exhaust required.
Eyewash station and safety shower required.
Material should be handled in a laboratory hood whenever possible.

Personal Protection Measures (e.g. personal protective equipment):

Eye/face protection Safety glasses with side-shields for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN (EU).

Skin and body protection Full body protective clothing, boots, gloves. Handle with gloves compatible with this material. Gloves must be inspected prior to use.

Respiratory protection

If operations generate dust, fume, or mist, use local ventilation or other appropriate Engineering controls to keep exposure contaminants below the exposure limit. Be sure to use approved /certified respirator or dust mask, such as standard N95.

Control of environmental exposure

Do not let product enter drains or ground.

9. PHYSICAL AND CHEMICAL PROPERTIES**Appearance**

Form:	Solid (powder)
Color:	Yellow
Molecular Weight:	512.94
Odour:	N/A
Odour Threshold:	N/A
pH:	2.0 – 3.0
Melting Point/freezing point:	N/A
Initial boiling point/boiling range:	N/A
Flash Point:	N/A
Evaporation Rate:	N/A
Flammability (solid; gas):	N/A
Upper flammability or explosive limits	N/A
Lower flammability or explosive limits	N/A
Vapor Pressure (mmHg):	N/A
Vapor Density (air=1):	N/A
Relative Density:	N/A
Solubility in Water:	Soluble
Solubility in Other Agents:	Sparingly soluble in alcohol.
Partition coefficient (n-octanol/water)	N/A
Autoignition	N/A
Decomposition	N/A
Viscosity	N/A
Explosive properties	N/A
Oxidizing properties	N/A
Other information:	N/A

10. STABILITY AND REACTIVITY

Reactivity:	No data available
Chemical stability:	Stable under recommended storage conditions. See section 7.
Possibility of hazardous reactions:	No data available
Conditions to avoid:	Heating. Moisture. May decompose on exposure to light.
Incompatible materials:	Strong oxidizing agents.
Hazardous decomposition products:	Carbon monoxide, carbon dioxide, nitrogen oxides, hydrogen chloride gas, other toxic compounds.
Other decomposition products	No data available
In the event of fire:	See section 5

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Inhalation:	Yes
Skin contact:	Yes
Eye contact:	Yes
Ingestion:	Yes

Acute Toxicity Oral LD₅₀: Oral, rat 1700 mg/kg (Doxycycline Hydrochloride)

Skin corrosion/irritation: May cause skin irritation (see section 2)

Serious Eye Damage/irritation: May cause serious eye irritation (see section 2)

Respiratory and/or Skin

Sensitization:	N/A
Aspiration Toxicity:	N/A
STOT (Specific Target Organ Toxicity) Single Exposure:	May cause respiratory irritation.
STOT (Specific Target Organ Toxicity) Repeated Exposure:	N/A

Carcinogenicity:

IARC	Not listed
ACGIH®	Not listed
OSHA	Not listed
Reproductive Toxicity:	N/A
Germ Cell Mutagenicity:	N/A
Interactive Effects	N/A

12. ECOLOGICAL INFORMATION

Ecotoxicity:

No data available

Persistence and degradability:

No data available

Bioaccumulative potential:

No data available

Mobility in soil:

No data available

Other adverse effects:

13. DISPOSAL CONSIDERATIONS

Wastes of Residues: Package product wastes.
Close and label the waste receptacles and any unclean empty containers.
Dispose of according to local, provincial, and federal regulations.

Contaminated Packaging: Do not reuse containers. Dispose of as unused product.

14. TRANSPORT INFORMATION

Not dangerous goods for transport. Keep separated from foodstuffs.

15. REGULATORY INFORMATION

CANADA DSL/NDSL: CAS # 24390-14-5 is listed on the DSL.

16. OTHER INFORMATION

This information is based upon knowledge currently available.
More detailed information on the physical and chemical properties can be requested from the supplier. To the best of our knowledge, the information contained herein is accurate and complete. However, this should not be construed to imply any warranty or guarantee. Gurvey & Berry Co. Inc. shall not be held liable for any damage resulting from handling or from contact with the above chemical.

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This document will only be updated as needed.
N/A = not available.
N/D = not determined.