

Safety Data Sheet

Section 1: Product & Company Identification

Product Name:	Doxorubicin Hydrochloride
Product #:	D-2539
Synonyms:	DOX
Supplier:	AG Scientific Holdings, LLC 9950 Scripps Lake Drive, Suite 104 San Diego, CA 92131 Tele# + 858-452-9925
Emergency Tele#:	ChemTel, Tele# in USA 1-800-255-3924, International 1-813-248-0585

Section 2: Composition / Information on Ingredients

Component	CAS #	EC #	% Composition
Doxorubicin Hydrochloride	25316-40-9	246-818-3	≥98

Section 3: Hazards Identification

Symbols



HMIS Rating

Health Hazard	Chronic Health Hazard	Flammability	Physical Hazard
2	*	0	0

NFPA Rating

Health Hazard	Fire Hazard	Reactivity Hazard
2	0	0

Section 4: First Aid Measures

General Overview:	Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
Inhalation:	In case of unconsciousness place patient stably in side position for transportation.
Skin:	Immediately wash with water and soap and rinse thoroughly.

Eyes:	Rinse opened eyes for several minutes under running water. If symptoms persist, consult a doctor.
Ingestion:	Immediately call a doctor.
	See section 11 for more detailed information on health effects & symptoms.

SECTION 5: Fire Fighting Measures

Flammability of the product:	Product is not flammable.
Extinguishing Media:	Use firefighting measures that suit the environment. A solid water stream may be inefficient.
Hazardous thermal (de)composition products:	No further relevant information available.
Special Fire Fighting Procedures:	No special measures required.
Flash Point:	No data available

Section 6: Accidental Release Measures




Personal Precautions:	Not required.
Environmental Precautions:	Do not allow to enter sewers/ surface or ground water.
Methods for Clean-up:	Dispose contaminated material as waste according to section 13. Ensure adequate ventilation.

SECTION 7: Handling & Storage

Storage:	Recommended storage temperature: -20°C
Handling:	Ensure good ventilation/exhaustion at the workplace.

SECTION 8: Exposure controls / Personal Protection

Respiratory Protection:	
--------------------------------	---

	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.
Skin and Body:	  <p>Protective gloves and lab coat.</p>
Eyes:	 <p>Tightly sealed goggles.</p>
Ventilation/Engineering Measures:	Ensure adequate ventilation.
Hygiene:	Follow standard good industrial hygiene practices.
Other:	Contains no substances with occupational exposure limit values.

SECTION 9: Physical and Chemical Properties

Appearance & Odor:	Solid. Characteristic odor.
Formula	$C_{27}H_{29}NO_{11} \cdot HCl$
Molecular Wt.	580.0
Melting Pt.	No data available
Boiling Pt.	No data available
Density:	No data available
Vapor Pressure:	No data available
Evaporation Rate:	No data available
Vapor Density:	No data available
Solubility:	DMSO: 10 mg/mL DMSO:PBS [pH 7.2] (1:1): 0.5 mg/mL Ethanol: 1 mg/mL PBS (pH 7.2): >100 µg/mL
Flash Point:	No data available
Autoignition Temp:	No data available

SECTION 10: Stability and Reactivity

Stability:	No decomposition if used according to specifications.
Hazardous decomposition products:	Carbon oxides, nitrogen oxides
Materials to Avoid:	Strong oxidizing agents
Conditions to avoid:	No data available

SECTION 11: Toxicological Information

RTECS#:	QI9295900
ACUTE Toxicity:	<p>Oral LD50: 570 mg/kg (mouse) Intraperitoneal LD50: 11,160 µg/kg (mouse) 16,030 µg/kg (rat) Subcutaneous LD50 7,678 µg/kg (mouse) 21,840 µg/kg (rat)</p> <p>Primary irritant effect:</p> <ul style="list-style-type: none"> · on the skin: Irritant to skin and mucous membranes. · on the eye: Irritating effect. · Sensitization: No sensitizing effects known. · Additional toxicological information: · Interactive effects No interactive effects between components are known.
CHRONIC Toxicity:	N/A
Chronic Exposure: Carcinogen: Mutagen: Teratogen: Reproductive:	<p>IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC.</p> <p>AGGIH: No component of this product present at levels greater than or equal to 0.1% is identified as probable, potential human carcinogen by ACGIH.</p> <p>NTP: No component of this product present at levels greater than or equal to 0.1% is identified as known or anticipated human carcinogen by NTP.</p> <p>OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as known or potential human carcinogen by OSHA.</p> <p>EPA: No classification on carcinogenic data is available from EPA</p>

SECTION 12: Ecological Information

Ecotoxicity:	Water hazard class 3 (Self-assessment): extremely hazardous for water.
---------------------	--

	Do not allow product to reach ground water, water course or sewage system, even in small quantities. Danger to drinking water if even extremely small quantities leak into the ground.
Mobility:	No data available
Persistence and degradability:	No data available
Bioaccumulative potential:	No data available
Other adverse effects:	No data available
Corrosivity Characteristic:	No data available
General Notes:	No data available

SECTION 13: Disposal Considerations

Residue Waste or Unused product:	Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Contaminated Packaging:	Disposal must be made according to official regulations.

SECTION 14: Transportation Information

UN ID#:	N/A
ADR / RID (LAND):	Not regulated
DOT regulations:	Not regulated
IMDG/IMO (SEA):	Not regulated
IATA/DGR (AIR):	Not regulated
Special Provisions:	N/A

SECTION 15: Regulatory Information

Health Phrases:	Danger! H302 Harmful if swallowed. H315 Causes skin irritation. H319 Causes serious eye irritation. H340 May cause genetic defects. H350 May cause cancer. H360 May damage fertility or the unborn child.
Risk Phrases:	P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. 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/hearing protection.
Safety Phrases:	P301+P312 If swallowed: Call a poison center/doctor if you feel unwell.

	<p>P330 Rinse mouth.</p> <p>P302+P352 If on skin: Wash with plenty of water.</p> <p>P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P308+P313 IF exposed or concerned: Get medical advice/attention.</p> <p>P321 Specific treatment (see on this label).</p> <p>P362+P364 Take off contaminated clothing and wash it before reuse.</p> <p>P332+P313 If skin irritation occurs: Get medical advice/attention.</p> <p>P337+P313 If eye irritation persists: Get medical advice/attention.</p> <p>P405 Store locked up.</p> <p>P501 Dispose of contents/container in accordance with local/regional/national/international regulations.</p>
EU Regulations:	N/A
US Regulations:	<p>TSCA: Not listed</p> <p>California Proposition 65: No products were found</p>
U.S. Federal Regulations:	<p>SARA 302/304 emergency planning and notification: No products were found.</p> <p>SARA 311/312 MSDS distribution-chemical inventory-hazard identification: No products were found.</p> <p>SARA 313 toxic chemicals notification and release reporting: No products were found.</p> <p>Clean Water Act (CWA) 307: No products were found.</p> <p>Clean Water Act (CWA) 311: No products were found.</p> <p>Clean Air Act (CAA) 112 accidental release prevention: No products were found.</p> <p>Clean Air Act (CAA) 112 regulated flammable substances: No products were found.</p> <p>Clean Air Act (CAA) 112 regulated toxic substances: No products were found.</p> <p>OSHA: Germ cell mutagenicity (Cat. 1A); Carcinogenicity (Cat. 1B); Reproductive toxicity (Cat. 1B); Acute toxicity - oral (Cat. 4); Skin irritation (Cat. 2); Eye irritation (Cat. 2A)</p>
WHMIS (Canada):	N/A

SECTION 16: Other Information

LIABILITY STATEMENT: *The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. AG Scientific shall not be held liable for any damages resulting from handling or from contact with the above product. AG Scientific products are for research purposes only. Not for human use or consumption.*