

Safety Data Sheet


Section 1: Product & Company Identification

Product Name:	Daunorubicin Hydrochloride
Product #:	C-2282
Synonyms:	NDC 0082-4155; Ondena; RP 13057
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
Daunorubicin Hydrochloride	23541-50-6	245-723-4	≥98

Section 3: Hazards Identification

Symbols	
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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:	Immediately remove any clothing soiled by the product. In case of irregular breathing or respiratory arrest provide artificial respiration.
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. Then consult a doctor.
Ingestion:	Do not induce vomiting; immediately call for medical help.
	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.
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.

SECTION 7: Handling & Storage

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

SECTION 8: Exposure controls / Personal Protection

Respiratory Protection:	
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	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>Not required.</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	$C_{27}H_{29}NO_{10} \cdot HCl$
Molecular Wt.	564.0
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:	DMF: 20 mg/mL DMSO: 10 mg/mL Ethanol: 0.5 mg/mL PBS (pH 7.2): 10 mg/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, hydrogen chloride, nitrogen oxides
Materials to Avoid:	Strong oxidizing agents
Conditions to avoid:	No data available

SECTION 11: Toxicological Information

RTECS#:	HB7878000
ACUTE Toxicity:	Oral LD50: 205 mg/kg (mouse) Oral LD50: 290 mg/kg (rat) Intraperitoneal LD50: 3,050 µg/kg (mouse) Intraperitoneal LD50: 14,300 µg/kg (rat) Subcutaneous LD50: 28,800 µg/kg (mouse) Subcutaneous LD50: 33,200 µg/kg (rat)
CHRONIC Toxicity:	No data available
Chronic Exposure: Carcinogen: Mutagen: Teratogen: Reproductive:	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. 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. 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. 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. EPA: No classification on carcinogenic data is available from EPA

SECTION 12: Ecological Information

Ecotoxicity:	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.
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#:	UN2811
ADR / RID (LAND):	N/A
DOT regulations:	Toxic solids , organic, n.o.s. (Daunorubicin (hydrochloride)) Class 6.1 Toxic substances Label 6.1 Packing group III Quantity limitations On passenger aircraft/rail: 100 kg On cargo aircraft only: 200 kg
IMDG/IMO (SEA):	TOXIC SOLID, ORGANIC, N.O.S. (Daunorubicin (hydrochloride)) Class 6.1 Toxic substances Label 6.1 Packing group III Limited quantities (LQ) 5 kg Excepted quantities (EQ) Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
IATA/DGR (AIR):	Toxic solids , organic, n.o.s. (Daunorubicin (hydrochloride)) Class 6.1 Toxic substances Label 6.1 Packing group III 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.
Special Provisions:	Warning: Toxic substances Hazard identification number (Kemler code): 60 EMS Number: F-A,S-A Stowage category: A

SECTION 15: Regulatory Information

Health Phrases:	<p>Danger!</p> <p>H301 Toxic if swallowed.</p> <p>H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.</p> <p>H351 Suspected of causing cancer.</p>
Risk Phrases:	<p>P201 Obtain special instructions before use.</p> <p>P202 Do not handle until all safety precautions have been read and understood.</p> <p>P261 Avoid breathing dust/fume/gas/mist/vapors/spray</p> <p>P264 Wash thoroughly after handling.</p> <p>P270 Do not eat, drink or smoke when using this product.</p> <p>P280 Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>P284 [In case of inadequate ventilation] wear respiratory protection.</p>
Safety Phrases:	<p>P301+P310 If swallowed: Immediately call a poison center/doctor.</p> <p>P321 Specific treatment (see on this label).</p> <p>P330 Rinse mouth.</p> <p>P304+P341 If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.</p> <p>P308+P313 IF exposed or concerned: Get medical advice/attention.</p> <p>P342+P311 If experiencing respiratory symptoms: Call a poison center/doctor.</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>



	OSHA: Acute toxicity - oral (Cat. 3); Sensitization - respiratory (Cat. 1); Carcinogenicity (Cat. 2)
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.*