

**Section 1. Product and Company Identification**

Product Name Doxorubicin HCl
Product ID D5794
Chemical Name (Synonyms) Adriacin; Adriblastina; Adriamycin; Caelyx
Supplier LKT Laboratories, Inc
545 Phalen Blvd.
St. Paul, MN 55130 USA
Ph: 651-644-8424 Fax: 651-644-8357
www.lktlabs.com - getinfo@lktlabs.com

Emergency Phone # 1-800-424-9300

Section 2. Hazards Identification

GHS Classification Acute toxicity, Oral (Category 4), H302
Skin irritation (Category 2), H315
Eye irritation (Category 2A), H319
Carcinogenicity (Category 1B), H350

GHS Label elements including precautionary statements

Pictogram



Signal word Danger

Hazard and precautionary statements

Hazard statements

H302 - Harmful if swallowed.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H350 - May cause cancer.

Precautionary statements

P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P264 - Wash skin thoroughly after handling.
P370 - Do not eat, drink or smoke when using this product.
P280 - Wear protective gloves, eye protection and face protection.
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313 - IF exposed or concerned: Get medical advice/ attention.
P321 - Specific treatment (see supplemental first aid instructions on this label).
P330 - Rinse mouth.
P332 + P313 - If skin irritation occurs: Get medical advice/ attention.
P337 + P313 - If eye irritation persists: Get medical advice/ attention.
P362 - Take off contaminated clothing and wash before reuse.
P405 - Store locked up.
P501 - Dispose of contents/ container to an approved waste disposal plant.

HMIS Classification Health hazard: 2
Chronic health hazard: *
Flammability: 0
Physical hazard: 0

NFPA Rating Health hazard: 2
Fire hazard: 0
Reactivity hazard: 0

Potential Health Effects Inhalation - May be harmful if inhaled. May cause respiratory irritation.
Skin - May be harmful if absorbed through skin. Causes skin irritation.
Eyes - Causes serious eye irritation.

Ingestion - Acute toxicity. Harmful if swallowed.
Carcinogenicity - May cause cancer.

Section 3. Composition/Information on Ingredients

Substances

Formula $C_{27}H_{29}NO_{11} \cdot HCl$
CAS No. 25316-40-9

Formula Wt. 579.99
EC No. 246-818-3

Section 4. First Aid Measures

General advice Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Eye Contact Rinse eyes thoroughly with plenty of water for at least 15 minutes and consult a physician.

Skin Contact Wash with soap and plenty of water. Consult a physician.

Inhalation If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Ingestion Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Section 5. Firefighting Measures

Flash Point Not available.

Extinguishing Media Use water spray, alcohol-resistant foam, dry chemical powder, or carbon dioxide.

Firefighting Procedures Wear self-contained breathing apparatus and protective clothing for firefighting if necessary.

Unusual Fire Hazards Carbon oxides, nitrogen oxides (NOx) and hydrogen chloride gas.

Section 6. Accidental Release Measures

Personal Precautions Use personal protective equipment. Avoid dust formation. Avoid breathing dust, vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental Precautions Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleanup Avoid raising dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Section 7. Handling and Storage

Handling Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

Storage Conditions Store in a tightly closed container in a dry and well-ventilated place.
Recommended storage temperature: +4°C

Hazardous Decomposition Products Carbon monoxide, carbon dioxide, nitrogen oxides (NOx), hydrogen chloride gas.

Other Remarks Not available.

Section 8. Exposure Controls/Personal Protection

Personal protective equipment EXPOSURE CONTROLS

Contains no substances with occupational exposure limit values.
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

PERSONAL PROTECTION

Eye/face protection: Safety glasses with side-shields conforming to EN 166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body protection: Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Section 9. Physical and Chemical Properties

Physical State	Solid.	Color	Orange-red crystal powder.
Boiling Point	Not available.	Volatility	Not available.
Melting Point	204°C-205°C(dec.)	Density	Not available.
Solubility	Soluble in water, methanol or aqueous alcohols. Soluble in DMSO to 10 mg/mL. Insoluble in acetone or chloroform.	pH	Not available.
Flash Point	Not available.	Ignition temperature	Not available.
Lower explosion limit	Not available.	Autoignition temperature	Not available.
Upper explosion limit	Not available.	Vapor pressure	Not available.
Water solubility	Soluble in water.	Odor	Not available.
Partition coefficient: n-octanol/water	Not available.	Odor Threshold	Not available.
Relative vapor density	Not available.	Evaporation rate	Not available.

Section 10. Stability and Reactivity

Stability	Stable under recommended storage conditions.
Materials To Avoid	Strong oxidizing agents.
Hazardous Decomposition Products	Carbon monoxide, carbon dioxide, nitrogen oxides (NOx), hydrogen chloride gas.

Possibility of hazardous reactions Not available.

Conditions to avoid Not available.

Section 11. Toxicological Information

Oral LD50 Mouse - 698 mg/kg Remarks: Sense organs and special senses (Nose, eye, ear & taste): Eye: Lacrimation. Behavioral: Muscle weakness. Diarrhea.

Inhalation LC50 Not available.

Dermal LD50 Not available.

Other information on acute toxicity Not available.

Reproductive Toxicity Not available.

Specific organ toxicity single exposure (GHS) Not available.

Specific organ toxicity repeated exposure (GHS) Not available.

Teratogenicity Not available.

Skin corrosion/irritation Not available.

Serious eye damage/irritation Not available.

Respiratory or skin sensitization Not available.

Germ cell mutagenicity Not available.

Aspiration Hazard Not available.

Synergistic effects Not available.

Additional Information RTECS: Q19295900 To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

Signs and symptoms of exposure Liver - Irregularities - Based on human evidence.

Potential Health Effects Inhalation - May be harmful if inhaled. May cause respiratory irritation.
Skin - May be harmful if absorbed through skin. Causes skin irritation.
Eyes - Causes serious eye irritation.
Ingestion - Acute toxicity. Harmful if swallowed.
Carcinogenicity - May cause cancer.

Carcinogenicity This product is or contains a components that has been reported to be probably carcinogenic based on its IARC, OSHA, ACGIH, NTP or EPA classification. POSSIBLE HUMAN CARCINOGEN.
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.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Section 12. Ecological Information

Toxicity Not available.

Mobility in soil Not available.

PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/ not

conducted.

Persistence and degradability Not available.

Other adverse effects Not available.

Bioaccumulative potential Not available.

Section 13. Disposal Considerations

Waste Disposal Dispose of material according to all federal, state, and local regulations.
Offer material to a licensed, professional waste disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Dispose of as unused product.

Section 14. Transport Information

DOT (US) Not dangerous goods.

IATA Not dangerous goods.

IMDG Not dangerous goods.

Further Information

Section 15. Regulatory Information

Reach No.

SARA 302 Components No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Components Acute health hazard, chronic health hazard

Massachusetts Right To Know Components No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components Doxorubicin hydrochloride CAS #: 25316-40-9 Revision Date: 1989-08-11

New Jersey Right To Know Components Doxorubicin hydrochloride CAS #: 25316-40-9 Revision Date: 1989-08-11

California Prop 65 Components WARNING! This product contains a chemical known to the State of California to cause cancer.
Doxorubicin hydrochloride CAS #: 25316-40-9 Revision Date: 2008-06-17
WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.
Doxorubicin hydrochloride CAS #: 25316-40-9 Revision Date: 2008-06-17

Section 16. Other Information

Other information The information in this document is believed to be correct but is not necessarily complete. LKT does not guarantee the accuracy of the information. The burden of verifying the information in this document rests solely upon the user.

Updated 7/11/2019

For emergencies in the USA, call
CHEMTREC 800-424-9300