

MATERIAL SAFETY DATA SHEET

Doxorubicin Hydrochloride

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Name: Doxorubicin Hcl Date: 7th June 2017 Version: Discofinechem4
Company: Discovery Fine Chemicals Ltd
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2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]

Acute toxicity, Oral (Category 4), H302

Skin irritation (Category 2), H315

Eye irritation (Category 2), H319

Carcinogenicity (Category 1B), H350

For the full text of the H-Statements mentioned in this Section, see Section 16.

Classification according to EU Directives 67/548/EEC or 1999/45/EC

May cause cancer. Harmful if swallowed.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008 [CLP]

Pictogram



Signal word: Danger

Hazard statement(s)

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H350 May cause cancer.

Precautionary statement(s)

P201 Obtain special instructions before use.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.

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.

Supplemental Hazard Statements: none

Restricted to professional users.

According to European Directive 67/548/EEC as amended.

Hazard symbol(s)



R-phrases(s)

R45 May cause cancer.

R22 Also harmful if swallowed.

S-phrases(s)

S53 Avoid exposure - obtain special instructions before use.

S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Restricted to professional users.

2.3 Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Synonyms: Adriamycin®hydrochloride, Hydroxydaunorubicinhydrochloride, DOX

Formula: C₂₇H₂₉NO₁₁· HCl Molecular Weight: 579.98 g/mol

Component: Doxorubicin hydrochloride

Cas No: 25316-40-9 E.C.No: 246-818-3 Concentration: -

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice - Consult a physician. Show this safety data sheet to the doctor in attendance.

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

In case of skin contact - Wash off with soap and plenty of water. Consult a physician.

In case of eye contact - Flush eyes with water as a precaution.

If swallowed

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

4.2 Most important symptoms and effects, both acute and delayed - To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

4.3 Indication of any immediate medical attention and special treatment needed - no data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media - Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Carbon oxides, nitrogen oxides (NO_x), Hydrogen chloride gas

5.3 Advice for firefighters - Wear self contained breathing apparatus for firefighting if necessary.

5.4 Further information - no data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas.

Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

6.2 Environmental precautions

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

6.3 Methods and materials for containment and cleaning up - Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections - For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Avoid exposure - obtain special instructions before use.

Provide appropriate exhaust ventilation at places where dust is formed.

7.2 Conditions for safe storage, including any incompatibilities - Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Recommended storage temperature: 2 - 8°C.

Moisture sensitive. Light sensitive.

7.3 Specific end uses - no data available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls - Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection - Safety glasses with side-shields conforming to EN166 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. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatrill®

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril®

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de,

test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

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 sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

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

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- a) Appearance - Form: solid, Colour: red
- b) Odour - no data available
- c) Odour - Threshold no data available
- d) pH - no data available
- e) Melting point/freezing point - Melting point/range: 216 °C - dec.
- f) Initial boiling point and boiling range - no data available
- g) Flash point - no data available
- h) Evaporation rate - no data available
- i) Flammability (solid, gas) - no data available
- j) Upper/lower flammability or explosive limits - no data available
- k) Vapour pressure - no data available
- l) Vapour density - no data available
- m) Relative density - no data available
- n) Water solubility - no data available
- o) Partition coefficient: noctanol/water - no data available
- p) Auto-ignition temperature – no data available
- q) Decomposition temperature - no data available
- r) Viscosity - no data available
- s) Explosive properties - no data available
- t) Oxidizing properties - no data available

9.2 Other safety information - no data available

10. STABILITY AND REACTIVITY

10.1 Reactivity - no data available

10.2 Chemical stability - no data available

10.3 Possibility of hazardous reactions - no data available

10.4 Conditions to avoid - Light. Exposure to moisture.

10.5 Incompatible materials - Strong oxidizing agents

10.6 Hazardous decomposition products - Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity - LD50 Oral - mouse - 698 mg/kg

Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste): Eye: Lacrimation.

Behavioral: Muscle weakness. Diarrhoea

Inhalation: Irritating to respiratory system.

Skin corrosion/irritation - no data available

Serious eye damage/eye irritation - no data available

Respiratory or skin sensitization - no data available

Germ cell mutagenicity - no data available

Carcinogenicity - This product is or contains a component 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.

Reproductive toxicity - no data available

Specific target organ toxicity - single exposure - no data available

Specific target organ toxicity - repeated exposure - no data available

Aspiration hazard - no data available

Potential health effects

Inhalation - May be harmful if inhaled. May cause respiratory tract irritation.

Ingestion - Harmful if swallowed.

Skin - May be harmful if absorbed through skin. May cause skin irritation.

Eyes - May cause eye irritation.

Signs and Symptoms of Exposure - To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Additional Information: RTECS: Q19295900

Liver - Irregularities - Based on Human Evidence

12. ECOLOGICAL INFORMATION

12.1 Toxicity - no data available

12.2 Persistence and degradability - no data available

12.3 Bio-accumulative potential - no data available

12.4 Mobility in soil - no data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bio-accumulative and toxic (PBT), or very persistent and very bio-accumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects - no data available

13. DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods**

Product - Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging - Dispose of as unused product.

14. TRANSPORT INFORMATION**14.1 UN number**

ADR/RID: - IMDG: - IATA: -

14.2 UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID: - IMDG: - IATA: -

14.4 Packaging group

ADR/RID: - IMDG: - IATA: -

14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

14.6 Special precautions for user - no data available

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

no data available

15.2 Chemical Safety Assessment - no data available

16. OTHER INFORMATION**Further information****Text of H-code(s) and R-phrase(s) mentioned in Section 2**

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H350 May cause cancer.

R45 May cause cancer.

R22 Also harmful if swallowed.

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product.