

Safety Data Sheet

SDS Print Date: 07/25/2016
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1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 Product identifiers

Product Name: Doxorubicin hydrochloride
Catalog Number: NB-48-0352
CAS Number: [25316-40-9]
EC Number: [246-818-3]
IUPAC Name: (1S,3S)-3-Glycoloyl-1,2,3,4,6,11-hexahydro-3,5,12-trihydroxy-10-methoxy-6,11-dioxo-1-naphthacenyl-(3-amino-2,3,6-tridesoxy- α -L-lyxo-hexopyranosid) hydrochloride

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified Uses: For laboratory research purposes only. Not for drug or household use.

1.3 Details of the supplier of the safety data sheet

Company: Neo Biotech
74, rue des Suisses
92000 Nanterre - France
E-Mail: info@neo-biotech.com
Internet: www.neo-biotech.com

1.4 Emergency Telephone number

+33 9 77 40 09 09 (office hours)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Acute toxicity, Oral (Category 4), H302
Skin irritation (Category 2), H315
Eye irritation (Category 2A), H319
Carcinogenicity (Category 1B), H350

2.2 Label elements



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.

P202 Do not handle until all safety precautions have been read and understood.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

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

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

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.

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.

2.3 Other hazards none

3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

Product Name: Doxorubicin hydrochloride
Synonyms: (1S,3S)-3-Glycoloyl-1,2,3,4,6,11-hexahydro-3,5,12-trihydroxy-10-methoxy-6,11-dioxo-1-naphthacenyl-(3-amino-2,3,6-tridesoxy- α -L-lyxo-hexopyranosid) hydrochloride, Adriamycin hydrochloride, NSC 123127, Hydroxydaunorubicin hydrochloride, DOX
Formula: $C_{27}H_{29}NO_{11} \cdot HCl$
Molecular Weight: 579.98 g/mol
CAS Number: [25316-40-9]
EC Number: [246-818-3]
(for batch specific information, please see CoA)

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice

Consult a doctor and show this safety data sheet.

If inhaled

Remove to fresh air and monitor breathing. If breathing becomes difficult, give oxygen. If breathing stops, give artificial respiration. Consult a doctor.

In case of skin contact

Immediately wash skin with copious amounts of soap and water for at least 15 minutes. Remove contaminated clothing and shoes and wash before reuse. Consult a doctor.

In case of eye contact

Flush with copious amounts of water for at least 15 minutes. Consult a doctor.

If swallowed

Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Consult a doctor.

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 immediate medical attention and special treatment needed

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

5. FIRE-FIGHTING 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

In combustion, may emit toxic fumes.

5.3 Precautions for fire-fighters

Wear suitable protective clothing to prevent contact with skin and eyes and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Do not take action without suitable protective clothing - see section 8 of SDS. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid breathing vapors, mist, dust or gas.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover spillage with suitable absorbent material. Using non-spark tools, sweep up material and place in an appropriate container. Decontaminate spill site with 10% caustic solution and ventilate area until after disposal is complete. Hold all material for appropriate disposal as described under section 13 of SDS.

6.4 Reference to other sections

For required PPE see section 8. For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Use in a chemical fume hood, with air supplied by an independent system. Avoid inhalation, contact with eyes, skin and clothing. Avoid the formation of dust and aerosols. Use in a well-ventilated area. Keep away from sources of ignition. Avoid prolonged or repeated exposure.

7.2 Conditions for safe storage, including any incompatibilities.

Store in cool, well-ventilated area. Keep away from direct sunlight. Keep container tightly sealed until ready for use. Recommended storage temperature: Store at +4°C.

7.3 Specific end uses

Use in a laboratory fume hood where possible. Refer to employer's COSHH risk assessment.

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

Use in a fume hood where applicable. Ensure all engineering measures described under section 7 of SDS are in place.

Ensure laboratory is equipped with a safety shower and eye wash station.

Personal protective equipment

Eye / face protection

Use appropriate safety glasses.

Skin protection

Use appropriate chemical resistant gloves (minimum requirement use standard BS EN 374:2003). Gloves should be inspected before use. Wash and dry hands thoroughly after handling.

Body protection

Wear appropriate protective clothing.

Respiratory protection

If risk assessment indicates necessary, use a suitable respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Red solid
Vapor pressure	No data available
Odor	No data available
Vapor density	No data available
Odor threshold	No data available
Relative density	No data available
pH	No data available
Solubility(ies)	Soluble in water
Melting / freezing point	216°C
Partition coefficient	No data available
Boiling point / range	No data available
Auto-ignition temperature	No data available
Flash point	No data available
Decomposition temperature	No data available
Evaporation rate	No data available
Viscosity	No data available
Flammability (solid, gas)	No data available
Explosive properties	No data available
Upper / lower flammability	No data available
Oxidising properties or explosive limits	No data available

9.2 Other safety information

No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

Stable under recommended transport or storage conditions.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions will not occur under normal transport or storage conditions. Decomposition may occur on exposure to conditions or materials listed below.

10.4 Conditions to avoid

Heat, moisture.

10.5 Incompatible materials

Strong acids / alkalis, strong oxidizing / reducing agents.

10.6 Hazardous decomposition products

In combustion may emit toxic fumes. No known decomposition information.

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.

Skin corrosion / irritation

Classification criteria are not met based on available data

Serious eye damage / irritation

Classification criteria are not met based on available data

Respiratory or skin sensitization

Classification criteria are not met based on available data

Germ cell mutagenicity

Classification criteria are not met based on available data

Carcinogenicity

Possible human carcinogen.

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.

NTP: Reasonably anticipated to be a human carcinogen.

Reproductive toxicity

Classification criteria are not met based on available data

Specific target organ toxicity

- single exposure

Classification criteria are not met based on available data

Specific target organ toxicity

- repeated exposure

Classification criteria are not met based on available data

Aspiration hazard

Classification criteria are not met based on available data

Symptoms / Routes of exposure

Inhalation:

There may be irritation of the throat with a feeling of tightness in the chest.

Ingestion:

There may be irritation of the throat.

Skin:

There may be mild irritation at the site of contact.

Eyes:

There may be irritation and redness.

Delayed / Immediate Effects:

No known symptoms.

Additional Information

RTECS No: QI9295900

Exposure may cause irritation of eyes, mucous membranes, upper respiratory tract and skin, liver-irregularities - based on human evidence. To

the best of our knowledge, the chemical, physical and toxicological properties have not been fully investigated.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

No data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects

May be harmful to the aquatic environment.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Transfer to a suitable container and arrange for collection by specialized disposal company in accordance with National legislation.

Contaminated packaging

Dispose of in a regulated landfill site or other method for hazardous or toxic wastes in accordance with National legislation.

14. TRANSPORT INFORMATION

Classified according to the criteria of the UN Model Regulations as reflected in the IMDG Code, ADR, RID and IATA.

14.1 UN-Number

Does not meet the criteria for classification as hazardous for transport.

14.2 UN proper shipping name

Does not meet the criteria for classification as hazardous for transport.

14.3 Transport hazard class(es)

Does not meet the criteria for classification as hazardous for transport.

14.4 Packaging group

Does not meet the criteria for classification as hazardous for transport.

14.5 Environmental hazards

This product is not classified as environmentally hazardous according to the UN Model Regulations, nor a marine pollutant according to the IMDG Code.

14.6 Special precautions for users

No data available

14.7. Transport in bulk according to Annex II of MARPOL73/78 and IBC Code

No information required.

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 453/2010.

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

No data available

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been made for this product.

16. OTHER INFORMATION

Further Information

This company shall not be held liable for any damage resulting from handling or from contact with the above product. This material must only be handled by suitably qualified experienced scientists in appropriately equipped and authorized facilities. The above information is believed to be correct but does not purport to be all inclusive and should be used as a guide only for experienced personnel. Always consult your safety advisor and follow appropriate local and national safety legislature. The absence of warning must not, under any circumstance, be taken to mean that no hazard exists.

End of safety data sheet