

Material Safety Data Sheet

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Version 1.2

According to 91/155/EEC

Classified as Hazardous according to the criteria of EU Annex 1 and NOHSC.

1 - Product and Company Information

Product Name ALLOXAN MONOHYDRATE
Product Number A7413

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2 - Composition/Information on Ingredients

Product Name	CAS #	EC no	Annex I Index Number
ALLOXAN MONOHYDRATE	2244-11-3	None	None

Formula C₄H₂N₂O₄ · H₂O
Molecular Weight 160.09 AMU
Synonyms Mesoxalylcarbamide monohydrate * Mesoxalylurea
monohydrate * 2,4,5,6(1H,3H)-Pyrimidinetetrone
hydrate * 2,4,5,6-Tetraoxohexahydropyrimidine
hydrate

3 - Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT
Harmful by inhalation, in contact with skin and if swallowed.

4 - First Aid Measures

AFTER INHALATION

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

AFTER SKIN CONTACT

In case of contact, immediately wash skin with soap and copious amounts of water.

AFTER EYE CONTACT

In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

AFTER INGESTION

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

5 - Fire Fighting Measures

EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

SPECIAL RISKS

Specific Hazard(s): Emits toxic fumes under fire conditions.
Explosion Hazards: Container explosion may occur under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

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

6 - Accidental Release Measures

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

7 - Handling and Storage

HANDLING

Directions for Safe Handling: Avoid contact and inhalation. Do not get in eyes, on skin, on clothing. Open carefully.

STORAGE

Conditions of Storage: Keep tightly closed.
Store at 2-8°C

8 - Exposure Controls / Personal Protection

ENGINEERING CONTROLS

Safety shower and eye bath. Mechanical exhaust required.

GENERAL HYGIENE MEASURES

Wash thoroughly after handling. Wash contaminated clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Government approved respirator.
Hand Protection: Rubber gloves.
Eye Protection: Use safety shield. Chemical safety goggles.

9 - Physical and Chemical Properties

Appearance

Color: Faintly beige
Form: Powder

Property

Value

At Temperature or Pressure

pH

N/A

BP/BP Range

N/A

MP/MP Range

253 - 254 °C

Flash Point

N/A

Flammability

N/A

Autoignition Temp	N/A
Oxidizing Properties	N/A
Explosive Properties	N/A
Explosion Limits	N/A
Vapor Pressure	N/A
SG/Density	N/A
Partition Coefficient	N/A
Viscosity	N/A
Vapor Density	N/A
Saturated Vapor Conc.	N/A
Evaporation Rate	N/A
Bulk Density	N/A
Decomposition Temp.	N/A
Solvent Content	N/A
Water Content	12 %
Surface Tension	N/A
Conductivity	N/A
Miscellaneous Data	N/A
Solubility	Solubility in Water:50 mg/ml H2O Clear

10 - Stability and Reactivity

STABILITY

Stable: Stable.

Conditions of Instability: May discolor on exposure to air.

Materials to Avoid: Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Nitrogen oxides.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

11 - Toxicological Information

RTECS NUMBER: UW0492000

ACUTE TOXICITY

LD50

Intravenous

Hamster

65400 UG/KG

Remarks: Gastrointestinal:Other changes.

SIGNS AND SYMPTOMS OF EXPOSURE

Alloxan has been used to produce diabetes in animals by selective necrosis of the pancreatic islet beta-cells. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.

Eye Contact: May cause eye irritation.

Inhalation: Material may be irritating to mucous membranes and upper respiratory tract.

Multiple Routes: Harmful if swallowed, inhaled, or absorbed through skin.

TARGET ORGAN INFORMATION

Pancreas.

CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Species: Rat
Dose: 60 MG/KG
Route of Application: Intravenous
Exposure Time: (9D PREG)
Result: Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).
Specific Developmental Abnormalities: Central nervous system.

12 - Ecological Information

No data available.

13 - Disposal Considerations

SUBSTANCE DISPOSAL

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

14 - Transport Information

RID/ADR

Non-hazardous for road transport.

IMDG

Non-hazardous for sea transport.

IATA

Non-hazardous for air transport.

15 - Regulatory Information

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

INDICATION OF DANGER: Xn

Harmful.

R-PHRASES: 20/21/22

Harmful by inhalation, in contact with skin and if swallowed.

S-PHRASES: 36

Wear suitable protective clothing.

SWITZERLAND

SWISS POISON CLASS: 3

16 - Other Information

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 with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2004 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

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