

## Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)  
Classifications according to Regulation (EC) No 1272/2008.  
Printdate 09 Sep 2021

## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product name:

Deuterium oxide

### 1.1. Catalog No.:

1069

### 1.2. Relevant identified uses of the substance or mixture

Identified: Laboratory chemical  
uses: R&D

### 1.3. Uses advised against:

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## 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture  
Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.  
This substance is not classified as dangerous according to Directive 67/548/EEC.

### 2.2. Label elements

#### 2.2.1. Pictogram

#### 2.2.2.

2.2 Label elements  
The product does not need to be labelled in accordance with EC directives or respective national laws.  
2.3 Other hazards - none

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances  
Synonyms : Water-d2  
Heavy water  
Formula : D2O  
Molecular Weight : 20,03 g/mol

### 3.1.1. Formula

D2O

### 3.1.2. Molecular Weight (g/mol)

20.03

### 3.1.3. CAS-No.

7789-20-0

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

In case of skin contact

Wash off with soap and plenty of water.

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.

### 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. 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

no data available

### 5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

### 5.4 Further information

no data available

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

Avoid breathing vapors, mist or gas.

### 6.2 Environmental precautions

Do not let product enter drains.

### 6.3 Methods and materials for containment and cleaning up

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

Normal measures for preventive fire protection.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Store under inert gas. Hygroscopic.

### 7.3 Specific end uses

no data available

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

Components with workplace control parameters

### 8.2 Exposure controls

Appropriate engineering controls

General industrial hygiene practice.

Personal protective equipment

Eye/face protection

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

impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Respiratory protection not required. For nuisance exposures use type OV/AG (US) or type ABEK (EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

## 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance Form: liquid, clear

Colour: colourless

b) Odour no data available

c) Odour Threshold no data available

d) pH no data available

e) Melting point/freezing point

Melting point/range: 3,8 °C - lit.

f) Initial boiling point and boiling range

101,4 °C - lit.

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 1,107 g/mL at 25 °C

n) Water solubility no data available

o) Partition coefficient: noctanol/water

no data available

p) Autoignition 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

Exposure to moisture.

10.5 Incompatible materials

no data available

10.6 Hazardous decomposition products

no data available

## 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

no data available

Inhalation: no data available

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  
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 May be 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: ZC0230000

## 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  
no data available

## 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods  
Product  
Offer surplus and non-recyclable solutions to a licensed disposal company.  
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

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15.2 Chemical Safety Assessment  
no data available

## 16. OTHER INFORMATION

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. For lab use only!