

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006  
(amended by Regulation (EU) 2015/830)

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## Deuterium chloride in D2O

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### **SECTION 1: Identification of the substance/mixture and of the company/undertaking**

#### 1.1. Product identifier

Product name	Deuterium chloride in D2O
CAS-No.	7698-05-7
Product code	None.

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

Use of the Substance/Mixture	Solvent for NMR spectroscopy Chemical reaction medium
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#### 1.3. Details of the supplier of the safety data sheet

Company/Undertaking Identification	Zeochem AG, <a href="http://www.zeochem.ch">www.zeochem.ch</a> Joweid 5, 8630 Rüti, Schweiz Tel.: +41 44 922 93 93 E-Mail: <a href="mailto:info@zeochem.ch">info@zeochem.ch</a>
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1.4. Emergency telephone number	Tox-Zentrum Zürich : 145 / +41 44 251 51 51 [24h/7d]
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### **SECTION 2: Hazards identification**

#### 2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008	Skin corrosion/irritation, Cat. 1B, H314 Specific target organ toxicity (single exposure, inhalation), Cat. 3, H335
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Additional information	For the full text of the phrases mentioned in this Section, see Section 16.
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## 2.2. Label elements



<b>Signal Word</b>	Danger
<b>Hazard Statements</b>	H314: Causes severe skin burns and eye damage. H335: May cause respiratory irritation.
<b>Precautionary statements</b>	P260: Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. P264a: Wash skin thoroughly after handling. P280: Wear protective gloves/ protective clothing/ eye protection/ face protection. P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310: Immediately call a POISON CENTER or doctor/physician. P403+P233: Store in a well-ventilated place. Keep container tightly closed. P501: Dispose of contents/ container to an approved waste disposal plant.
<b>Supplemental information</b>	None.
<b>Product identifier</b>	Deuterium chloride, CAS-No. 7698-05-7, EC-No. 231-715-8 Deuterium oxide, CAS-No. 7789-20-0, EC-No. 232-148-9
<b>2.3. Other hazards</b>	None known.

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## **SECTION 3: Composition/information on ingredients**

### 3.2. Mixtures

Components		CLP Classification	Product identifier
Deuterium chloride	25% - 30%	Skin Corr. 1B H314, STOT SE 3 H335	CAS-No.: 7698-05-7 EC-No.: 231-715-8
Deuterium oxide	75% - 90%		CAS-No.: 7789-20-0 EC-No.: 232-148-9

For the full text of the phrases mentioned in this Section, see Section 16.

**Hazardous impurities** None known.

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## **SECTION 4: First aid measures**

### **4.1. Description of first aid measures**

<b>Inhalation</b>	Move to fresh air. Consult a physician after significant exposure.
<b>Skin contact</b>	Wash off immediately with plenty of water. Consult a physician for severe cases.
<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Protect unharmed eye.
<b>Ingestion</b>	If conscious, drink plenty of water. Prevent vomiting if possible. Consult a physician for severe cases.

**4.2. Most important symptoms and effects, both acute and delayed** None known.

**4.3. Indication of any immediate medical attention and special treatment needed** None known.

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## **SECTION 5: Firefighting measures**

### **5.1. Extinguishing media**

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

**Extinguishing media which must not be used for safety reasons** None.

**5.2. Special hazards arising from the substance or mixture** The product is not flammable.

### **5.3. Advice for firefighters**

**Special protective equipment for firefighters** Standard procedure for chemical fires.

**Specific methods** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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## **SECTION 6: Accidental release measures**

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

**Advice for non-emergency personnel** No special measures required.

**Advice for emergency** Handle in accordance with good industrial hygiene and safety

responders practice.

**6.2. Environmental precautions** Do not flush into surface water or sanitary sewer system.

**6.3. Methods and material for containment and cleaning up** Clean up promptly by sweeping or vacuum. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). After cleaning, flush away traces with water.

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## **SECTION 7: Handling and storage**

**7.1. Precautions for safe handling** Plan first aid action before beginning work with this product. Wear personal protective equipment.

**7.2. Conditions for safe storage, including any incompatibilities** Store at room temperature in the original container.

**7.3. Specific end use(s)** No information available.

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## **SECTION 8: Exposure controls/personal protection**

### **8.1. Control parameters**

**Exposure limit(s)** Recommended occupational exposure limit: 2 ppm.

### **8.2. Exposure controls**

**Appropriate engineering controls** Avoid contact with skin, eyes and clothing.

#### **Personal protection equipment**

*Respiratory protection* In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit.

*Hand protection* Gloves made of Chloroprene.

*Eye protection* Safety glasses with side-shields conforming to EN166.

*Skin and body protection* Wear as appropriate: Impervious clothing.

*Thermal hazards* No special measures required.

**Environmental exposure controls** No special measures required.

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## **SECTION 9: Physical and chemical properties**

### **9.1. Information on basic physical and chemical properties**

**Appearance** Liquid.

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<b>Colour</b>	Colourless.
<b>Odour</b>	Stinging.
<b>Odour Threshold</b>	Not determined.
<b>pH:</b>	1
<b>Melting point/range:</b>	-50°C
<b>Boiling point/range:</b>	108°C
<b>Flash point:</b>	Not determined.
<b>Evaporation Rate:</b>	Not determined.
<b>Flammability:</b>	Not determined.
<b>Explosion limits:</b>	Not determined.
<b>Vapour pressure:</b>	21 mbar (20°C)
<b>Vapor density:</b>	Not determined.
<b>Relative density:</b>	1.2 g/ml
<b>Water solubility:</b>	completely soluble
<b>Partition coefficient (n-octanol/water):</b>	Not determined.
<b>Autoignition temperature:</b>	Not determined.
<b>Decomposition temperature:</b>	Not determined.
<b>Viscosity:</b>	Not determined.
<b>Explosive properties:</b>	not hazardous
<b>Oxidising properties:</b>	None

## 9.2. Other information

**General Product Characteristics** No information available.

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## ***SECTION 10: Stability and reactivity***

<b>10.1. Reactivity</b>	No information available.
<b>10.2. Chemical stability</b>	No decomposition if used as directed.
<b>10.3. Possibility of hazardous reactions</b>	No information available.
<b>10.4. Conditions to avoid</b>	Heating in air. Burning produces obnoxious and toxic fumes.
<b>10.5. Incompatible materials</b>	Corrodes base metals. Incompatible with strong bases and oxidizing agents.
<b>10.6. Hazardous decomposition products</b>	None under normal use.

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## ***SECTION 11: Toxicological information***

### 11.1. Information on toxicological effects

<b>Acute toxicity</b>	<b>Deuterium oxide (CAS 7789-20-0)</b> None.
<b>Skin corrosion/irritation</b>	No data available.

<b>Serious eye damage/eye irritation</b>	No data available.
<b>Respiratory / Skin Sensitisation</b>	Vapor extremely irritating.
<b>Carcinogenicity</b>	Not classifiable as a human carcinogen.
<b>Germ cell mutagenicity</b>	No data available.
<b>Reproductive toxicity</b>	Damage to fetus unlikely if the occupational exposure limit values are not exceeded.
<b>Specific target organ toxicity (single exposure)</b>	No data available.
<b>Specific target organ toxicity (repeated exposure)</b>	No data available.
<b>Aspiration hazard</b>	No data available.
<b>Human experience</b>	No data available.

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## ***SECTION 12: Ecological information***

<b>12.1. Toxicity</b>	LC50/48h/golden orfe = 862 mg/l. May change pH of waters. <b>Deuterium oxide (CAS 7789-20-0)</b> None.
<b>12.2. Persistence and degradability</b>	Neutralization is normally necessary before waste water is discharged into water treatment plants.
<b>12.3. Bioaccumulative potential</b>	Does not bioaccumulate.
<b>12.4. Mobility in soil</b>	No data available.
<b>12.5. Results of PBT and vPvB assessment</b>	No information available.
<b>12.6. Other adverse effects</b>	No information available.

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## ***SECTION 13: Disposal considerations***

### **13.1. Waste treatment methods**

<b>Waste from residues / unused products</b>	Taking into account local regulations the product may be disposed of as waste water after neutralisation.
<b>Contaminated packaging</b>	Offer rinsed packaging material to local recycling facilities.

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## **SECTION 14: Transport information**

<b>ADR/RID</b>	UN 1789. Proper shipping name: HYDROCHLORIC ACID. Class 8. Packing group II. ADR/RID-Labels 8. Classification code C1. Hazard identification no. 80. Limited quantity 1 L. Excepted quantity E2. Tunnel restriction code E
<b>IMDG</b>	UN 1789. Proper shipping name: HYDROCHLORIC ACID. Class 8. Packing group II. IMDG-Labels 8. Limited quantity 1 L. Excepted quantity E2. EmS F-A, S-B. Marine pollutant: No.
<b>IATA</b>	UN 1789. Proper shipping name: Hydrochloric acid. Class 8. Packing group II. IATA label 8. Packing instruction (passenger aircraft): 851 (1 L). Packing instruction (LQ): Y840 (0.5 L). Packing instruction (cargo aircraft): 855 (30 L).
<b>Inland navigation ADN</b>	UN 1789. Proper shipping name: HYDROCHLORIC ACID. Class 8. Packing group II. ADN labels 8. Classification code C1. Limited quantity 1 L. Excepted quantity E2.
<b>Further Information</b>	None.

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## **SECTION 15: Regulatory information**

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

<b>Regulatory Information</b>	The product is classified and labelled according to Regulation (EC) No. 1272/2008.
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<b>15.2. Chemical safety assessment</b>	Not required.
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## **SECTION 16: Other information**

**Key or legend to abbreviations and acronyms**

CLP: Classification according to Regulation (EC) No. 1272/2008 (GHS)

**Full text of phrases referred to under sections 2 and 3**

H314: Causes severe skin burns and eye damage.  
H335: May cause respiratory irritation.

**Further information**

Take notice of the directions of use on the label.

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release. It is not to be considered a warranty or quality specification.