



# DEUTERIUM CHLORIDE "100%" (D, 99.96%) DCL 20% W/W SOLUTION IN D2O

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations  
Issue date: 12/13/2010 Revision date: 11/28/2023 Supersedes: 3/2/2023 Version: 11.2

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
Product name : DEUTERIUM CHLORIDE "100%" (D, 99.96%) DCL 20% W/W SOLUTION IN D2O  
Product code : DLM-54  
Synonyms : DCl; Hydrogen-d chloride

#### 1.2. Recommended use and restrictions on use

No additional information available

#### 1.3. Supplier

Cambridge Isotope Laboratories, Inc.  
50 Frontage Rd  
01810  
ANDOVER, MA, 01810  
USA  
T 1-800-322-1174  
[cilsales@isotope.com](mailto:cilsales@isotope.com) - [www.isotope.com](http://www.isotope.com)

#### 1.4. Emergency telephone number

Emergency number : 1-703-741-5970  
Chemtrec 1-800-424-9300 24 hours

### SECTION 2: Hazard(s) identification

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

##### GHS US classification

Corrosive to metals Category 1	H290	May be corrosive to metals
Acute toxicity (inhalation:dust,mist) Category 4	H332	Harmful if inhaled
Skin corrosion/irritation Category 1A	H314	Causes severe skin burns and eye damage
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335	May cause respiratory irritation

Full text of H statements : see section 16

#### 2.2. GHS Label elements, including precautionary statements

##### GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Danger

Hazard statements (GHS US) :

H290 - May be corrosive to metals  
H314 - Causes severe skin burns and eye damage  
H332 - Harmful if inhaled  
H335 - May cause respiratory irritation

Precautionary statements (GHS US) :

P234 - Keep only in original container.  
P260 - Do not breathe dust, fume, gas, mist, spray, vapors.

# DEUTERIUM CHLORIDE "100%" (D, 99.96%) DCL 20% W/W SOLUTION IN D2O

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

P261 - Avoid breathing dust, fume, gas, mist, spray, vapors.  
P264 - Wash hands, forearms and face thoroughly after handling.  
P271 - Use only outdoors or in a well-ventilated area.  
P280 - Wear protective clothing, protective gloves.  
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 doctor, a POISON CENTER.  
P312 - Call a doctor, a POISON CENTER if you feel unwell.  
P321 - Specific treatment (see Hazardous component(s) for labeling on this label).  
P363 - Wash contaminated clothing before reuse.  
P390 - Absorb spillage to prevent material-damage.  
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.  
P405 - Store locked up.  
P406 - Store in corrosive resistant container with a resistant inner liner.  
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

### 2.3. Other hazards which do not result in classification

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	GHS US classification
DEUTERIUM OXIDE (D, 99.9%)	CAS-No.: 7789-20-0	80	Not classified
DEUTERIUM CHLORIDE (D, 99.6%)	CAS-No.: 7698-05-7	20	Press. Gas (Comp.), H280 Acute Tox. 3 (Inhalation), H331 Skin Corr. 1A, H314 Eye Dam. 1, H318 STOT SE 3, H335

Full text of hazard classes and H-statements : see section 16

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice (show the label where possible). Evacuate danger area.  
First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. Immediately call a poison center or doctor/physician.

# DEUTERIUM CHLORIDE "100%" (D, 99.96%) DCL 20% W/W SOLUTION IN D2O

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

First-aid measures after skin contact	: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a poison center or doctor/physician.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Immediately call a poison center or doctor/physician.

### 4.2. Most important symptoms and effects (acute and delayed)

Potential Adverse human health effects and symptoms	: This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. Inhalation may cause irritation (cough, short breathing, difficulty in breathing). Burning sensation. Pulmonary edema. Wheezing. Spasm, inflammation and edema of the larynx. Spasm, inflammation, and edema of the bronchi. Pneumonitis. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Harmful if inhaled.
Symptoms/effects after inhalation	: Harmful if inhaled. Danger of serious damage to health by prolonged exposure through inhalation. May cause respiratory irritation.
Symptoms/effects after skin contact	: Causes severe skin burns.
Symptoms/effects after eye contact	: Causes severe eye damage.
Symptoms/effects after ingestion	: May be harmful if swallowed.

### 4.3. Immediate medical attention and special treatment, if necessary

No additional information available

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO2).

### 5.2. Specific hazards arising from the chemical

Fire hazard : May be corrosive to metals.  
Hazardous decomposition products in case of fire : hydrogen chloride.

### 5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : DO NOT fight fire when fire reaches explosives. Evacuate area.  
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Wear recommended personal protective equipment.  
Other information : Use water spray to cool exposed surfaces.

## SECTION 6: Accidental release measures

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

#### 6.1.1. For non-emergency personnel

Emergency procedures : Avoid breathing vapors, mist, gas. Avoid dust formation.

#### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Do not allow to enter drains or water courses. Avoid release to the environment.

# DEUTERIUM CHLORIDE "100%" (D, 99.96%) DCL 20% W/W SOLUTION IN D2O

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 6.3. Methods and material for containment and cleaning up

- For containment : Clean up any spills as soon as possible, using an absorbent material to collect it. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal. For large spills, confine the spill in a dike and charge it with wet sand or earth for subsequent safe disposal.
- Methods for cleaning up : This material and its container must be disposed of in a safe way, and as per local legislation.

### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Additional hazards when processed : Avoid all eye and skin contact and do not breathe vapor and mist. Keep away from heat, sparks, open flames, hot surfaces. - No smoking. May be corrosive to metals. Hazardous waste due to potential risk of explosion.
- Precautions for safe handling : Use only outdoors or in a well-ventilated area. Avoid breathing vapors, mist, gas. Do not breathe vapors, mist, gas. Avoid contact during pregnancy/while nursing. Keep away from sources of ignition - No smoking. No open flames. No smoking.
- Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Wash hands, forearms and face thoroughly after handling.

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

- Technical measures : Comply with applicable regulations. Proper grounding procedures to avoid static electricity should be followed.
- Storage conditions : Store at room temperature away from light and moisture.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

DEUTERIUM CHLORIDE "100%" (D, 99.96%) DCL 20% W/W SOLUTION IN D2O	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
Local name	Hydrogen chloride
ACGIH OEL C [ppm]	2 ppm
Remark (ACGIH)	TLV® Basis: URT irr. Notations: A4 (Not classifiable as a Human Carcinogen)
Regulatory reference	ACGIH 2022
<b>USA - OSHA - Occupational Exposure Limits</b>	
Local name	Hydrogen chloride
OSHA PEL C	7 The value in mg/m <sup>3</sup> is approximate. Ceiling limit is to be determined from breathing-zone air samples.
OSHA PEL C [ppm]	5 ppm Ceiling limit is to be determined from breathing-zone air samples.
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
<b>USA - NIOSH - Occupational Exposure Limits</b>	
NIOSH REL C	7 mg/m <sup>3</sup> Often used in an aqueous solution.

# DEUTERIUM CHLORIDE "100%" (D, 99.96%) DCL 20% W/W SOLUTION IN D2O

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

DEUTERIUM CHLORIDE "100%" (D, 99.96%) DCL 20% W/W SOLUTION IN D2O	
NIOSH REL C [ppm]	5 ppm Often used in an aqueous solution.
DEUTERIUM OXIDE (D, 99.9%) (7789-20-0)	
No additional information available	
DEUTERIUM CHLORIDE (D, 99.6%) (7698-05-7)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL C [ppm]	2 ppm Upper Respiratory Tract Irritation. Not classifiable as a human carcinogen.
USA - OSHA - Occupational Exposure Limits	
OSHA PEL C	7 mg/m <sup>3</sup> The value in mg/m <sup>3</sup> is approximate. Ceiling limit is to be determined from breathing-zone air samples.
OSHA PEL C [ppm]	5 ppm Ceiling limit is to be determined from breathing-zone air samples.
Remark (OSHA)	PEL 0.3 ppm / 0.45 mg/m <sup>3</sup> - California permissible exposure limits for chemical contaminants. C 2 ppm - California permissible exposure limits for chemical contaminants.
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL C	7 mg/m <sup>3</sup> Often used in aqueous solution.
NIOSH REL C [ppm]	5 ppm Often used in aqueous solution.
Remark (NIOSH)	Often used in an aqueous solution.

### 8.2. Appropriate engineering controls

Appropriate engineering controls	: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.
Environmental exposure controls	: Avoid release to the environment.

### 8.3. Individual protection measures/Personal protective equipment

#### Personal protective equipment:

Gloves. Protective clothing. Protective goggles. Self-contained breathing apparatus.

<b>Materials for protective clothing:</b>
Wear suitable protective clothing and gloves
<b>Hand protection:</b>
Wear suitable protective clothing and gloves
<b>Eye protection:</b>
Wear eye protection. Chemical goggles or face shield with safety glasses
<b>Skin and body protection:</b>
Wear suitable protective clothing, gloves and eye/face protection
<b>Respiratory protection:</b>
In case of inadequate ventilation wear respiratory protection. Approved supplied air respirator

# DEUTERIUM CHLORIDE "100%" (D, 99.96%) DCL 20% W/W SOLUTION IN D2O

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### Personal protective equipment symbol(s):



## SECTION 9: Physical and chemical properties

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

Physical state	: Liquid
Appearance	: Liquid.
Color	: Light yellow
Odor	: No data available
Odor threshold	: No data available
pH	: 6 – 8 at 25 °C (77 °F)
Melting point	: 0 °C (32 °F); 3.8 °C (38.8 °F) - lit
Freezing point	: 4 °C (39.2 °F)
Boiling point	: 100 °C (212 °F) - lit.; 101.4 °C (214.5 °F) - lit
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Density	: 1.11 g/m <sup>3</sup> at 20 °C (68 °F) (Labeled)
Molecular mass	: 20.03 g/mol (Labeled)
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Thermal decomposition generates : Corrosive vapors.

### 10.2. Chemical stability

Stable if stored under recommended conditions.

### 10.3. Possibility of hazardous reactions

Heating may cause an explosion. Extreme risk of explosion by shock, friction, fire or other sources of ignition.

# DEUTERIUM CHLORIDE "100%" (D, 99.96%) DCL 20% W/W SOLUTION IN D2O

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 10.4. Conditions to avoid

Heat. Sparks. Open flame. Direct sunlight. Overheating.

### 10.5. Incompatible materials

Bases. amines. Alkali metals. metals. permanganates, e.g. potassium permanganate. fluorine. metal acetylides. hexalithium disilicide.

### 10.6. Hazardous decomposition products

Hydrogen chloride gas.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified  
Acute toxicity (dermal) : Not classified  
Acute toxicity (inhalation) : Harmful if inhaled.

#### DEUTERIUM CHLORIDE "100%" (D, 99.96%) DCL 20% W/W SOLUTION IN D2O

LC50 Inhalation - Rat [ppm]	1411 ppm
ATE US (gases)	1562 ppmV/4h
ATE US (dust, mist)	1.5 mg/l/4h

#### DEUTERIUM CHLORIDE (D, 99.6%) (7698-05-7)

LD50 oral	900 mg/kg Rabbit
LC50 Inhalation - Rat [ppm]	1562 ppm/4h
ATE US (gases)	1562 ppmV/4h
ATE US (vapors)	3 mg/l/4h
ATE US (dust, mist)	0.5 mg/l/4h

Skin corrosion/irritation : Causes severe skin burns.  
pH: 6 – 8 at 25 °C (77 °F)

#### DEUTERIUM OXIDE (D, 99.9%) (7789-20-0)

pH	6 – 8 at 25 °C (77 °F)
----	------------------------

Serious eye damage/irritation : Assumed to cause serious eye damage  
pH: 6 – 8 at 25 °C (77 °F)

#### DEUTERIUM OXIDE (D, 99.9%) (7789-20-0)

pH	6 – 8 at 25 °C (77 °F)
----	------------------------

Respiratory or skin sensitization : Not classified  
Germ cell mutagenicity : Not classified  
Carcinogenicity : Not classified

#### DEUTERIUM CHLORIDE "100%" (D, 99.96%) DCL 20% W/W SOLUTION IN D2O

IARC group	3 - Not classifiable
------------	----------------------

Reproductive toxicity : Not classified  
STOT-single exposure : May cause respiratory irritation.

#### DEUTERIUM CHLORIDE (D, 99.6%) (7698-05-7)

STOT-single exposure	May cause respiratory irritation.
----------------------	-----------------------------------

# DEUTERIUM CHLORIDE "100%" (D, 99.96%) DCL 20% W/W SOLUTION IN D2O

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
Potential Adverse human health effects and symptoms	: This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. Inhalation may cause irritation (cough, short breathing, difficulty in breathing). Burning sensation. Pulmonary edema. Wheezing. Spasm, inflammation and edema of the larynx. Spasm, inflammation, and edema of the bronchi. Pneumonitis. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Harmful if inhaled.
Symptoms/effects after inhalation	: Harmful if inhaled. Danger of serious damage to health by prolonged exposure through inhalation. May cause respiratory irritation.
Symptoms/effects after skin contact	: Causes severe skin burns.
Symptoms/effects after eye contact	: Causes severe eye damage.
Symptoms/effects after ingestion	: May be harmful if swallowed.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

DEUTERIUM CHLORIDE "100%" (D, 99.96%) DCL 20% W/W SOLUTION IN D2O	
LC50 - Fish [1]	282 mg/l Gamubsia affinis (Mosquito fish) - 96 h
EC50 - Crustacea [1]	0.492 mg/l

  

DEUTERIUM CHLORIDE (D, 99.6%) (7698-05-7)	
LC50 - Fish [1]	282 mg/l Gamubsia affinis (Mosquito fish) - 96 h

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Other adverse effects : Avoid release to the environment. Disposal must be done according to official regulations.

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Regional legislation (waste)	: Waste materials should be disposed of under conditions which meet Federal, State, and local environmental control regulations.
Product/Packaging disposal recommendations	: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.
Ecology - waste materials	: Dispose of as unused product.



# DEUTERIUM CHLORIDE "100%" (D, 99.96%) DCL 20% W/W SOLUTION IN D2O

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

#### 14.1. UN number

DOT NA No : UN1789  
UN-No. (TDG) : UN1789  
UN-No. (IMDG) : 1789  
UN-No. (IATA) : 1789

#### 14.2. UN proper shipping name

Proper Shipping Name (DOT) : Hydrochloric acid  
Proper Shipping Name (TDG) : HYDROCHLORIC ACID  
Proper Shipping Name (IMDG) : HYDROCHLORIC ACID  
Proper Shipping Name (IATA) : Hydrochloric acid

#### 14.3. Transport hazard class(es)

##### DOT

Transport hazard class(es) (DOT) : 8  
Hazard labels (DOT) : 8



##### TDG

Transport hazard class(es) (TDG) : 8  
Hazard labels (TDG) : 8



##### IMDG

Transport hazard class(es) (IMDG) : 8  
Hazard labels (IMDG) : 8



##### IATA

Transport hazard class(es) (IATA) : 8  
Hazard labels (IATA) : 8



#### 14.4. Packing group

Packing group (DOT) : II

# DEUTERIUM CHLORIDE "100%" (D, 99.96%) DCL 20% W/W SOLUTION IN D2O

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Packing group (TDG) : II  
Packing group (IMDG) : II  
Packing group (IATA) : II

### 14.5. Environmental hazards

Other information : No supplementary information available.

### 14.6. Special precautions for user

#### DOT

UN-No.(DOT) : UN1789  
DOT Special Provisions (49 CFR 172.102) : 386 - Notwithstanding the provisions of §177.834(l) of this subchapter, cargo heaters may be used when weather conditions are such that the freezing of a wetted explosive material is likely. Shipments must be made by private, leased or contract carrier vehicles under exclusive use of the offeror. Cargo heaters must be reverse refrigeration (heat pump) units. Shipments made in accordance with this Special provision are excepted from the requirements of §173.60(b)(4) of this subchapter.  
A3 - For combination packaging, if glass inner packaging (including ampoules) are used, they must be packed with absorbent material in tightly closed metal receptacles before packing in outer packaging.  
B3 - MC 300, MC 301, MC 302, MC 303, MC 305, and MC 306 and DOT 406 cargo tanks and DOT 57 portable tanks are not authorized.  
B15 - Packaging must be protected with non-metallic linings impervious to the lading or have a suitable corrosion allowance.  
B133 - Hydrochloric acid concentration not exceeding 38%, in Packing Group II, is authorized to be packaged in UN31H1 or UN31HH1 intermediate bulk containers when loaded in accordance with the requirements of §173.35(h) of this subchapter.  
IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.  
N41 - Metal construction materials are not authorized for any part of a packaging which is normally in contact with the hazardous material.  
T8 - 4 178.274(d)(2) Normal..... Prohibited  
TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where:  $t_r$  is the maximum mean bulk temperature during transport,  $t_f$  is the temperature in degrees celsius of the liquid during filling, and  $a$  is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling ( $t_f$ ) and the maximum mean bulk temperature during transportation ( $t_r$ ) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where:  $d_{15}$  and  $d_{50}$  are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.  
DOT Packaging Exceptions (49 CFR 173.xxx) : 154  
DOT Packaging Non Bulk (49 CFR 173.xxx) : 202  
DOT Packaging Bulk (49 CFR 173.xxx) : 242  
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 1 L  
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 30 L  
DOT Vessel Stowage Location : C - The material must be stowed "on deck only" on a cargo vessel and on a passenger vessel.  
DOT Vessel Stowage Other : 53 - Stow "separated from" alkaline compounds, 58 - Stow "separated from" cyanides

#### TDG

UN-No. (TDG) : UN1789  
ERAP Index : 3000  
Explosive Limit and Limited Quantity Index : 1 L  
Excepted quantities (TDG) : E2

# DEUTERIUM CHLORIDE "100%" (D, 99.96%) DCL 20% W/W SOLUTION IN D2O

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Passenger Carrying Road Vehicle or Passenger : 1 L  
Carrying Railway Vehicle Index  
Emergency Response Guide (ERG) Number : 157

### IMDG

Limited quantities (IMDG) : 1 L  
Excepted quantities (IMDG) : E2  
Packing instructions (IMDG) : P001  
IBC packing instructions (IMDG) : IBC02  
IBC special provisions (IMDG) : B20  
Tank instructions (IMDG) : T8  
Tank special provisions (IMDG) : TP2  
EmS-No. (Fire) : F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE  
EmS-No. (Spillage) : S-B - SPILLAGE SCHEDULE Bravo - CORROSIVE SUBSTANCES  
Stowage category (IMDG) : C  
Segregation (IMDG) : SGG1A, SG36, SG49  
Flash point (IMDG) : '  
Properties and observations (IMDG) : Colourless liquid. An aqueous solution of the gas hydrogen chloride. Highly corrosive to most metals. Causes burns to skin, eyes and mucous membranes.  
MFAG-No : 157

### IATA

PCA Excepted quantities (IATA) : E2  
PCA Limited quantities (IATA) : Y840  
PCA limited quantity max net quantity (IATA) : 0.5L  
PCA packing instructions (IATA) : 851  
PCA max net quantity (IATA) : 1L  
CAO packing instructions (IATA) : 855  
CAO max net quantity (IATA) : 30L  
Special provision (IATA) : A3, A803  
ERG code (IATA) : 8L

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### DEUTERIUM CHLORIDE "100%" (D, 99.96%) DCL 20% W/W SOLUTION IN D2O

Not subject to reporting requirements of the United States SARA Section 313  
Subject to reporting requirements of United States SARA Section 313  
Listed on EPA Hazardous Air Pollutant (HAPS)

CERCLA RQ	5000 lb
RQ (Reportable quantity, section 304 of EPA's List of Lists)	5000 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	500 lb
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

# DEUTERIUM CHLORIDE "100%" (D, 99.96%) DCL 20% W/W SOLUTION IN D2O

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Name	CAS-No.	Listing	Commercial status	Flags
DEUTERIUM OXIDE (D, 99.9%)	7789-20-0	Present	Active	
DEUTERIUM CHLORIDE (D, 99.6%)	7698-05-7	Not present	-	

### DEUTERIUM OXIDE (D, 99.9%) (7789-20-0)

SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302
--	---

### DEUTERIUM CHLORIDE (D, 99.6%) (7698-05-7)

SARA Section 302 Threshold Planning Quantity (TPQ)	Listed on the United States SARA Section 302
SARA Section 311/312 Hazard Classes	Sudden release of pressure hazard

## 15.2. International regulations

### CANADA

#### DEUTERIUM CHLORIDE "100%" (D, 99.96%) DCL 20% W/W SOLUTION IN D2O

Listed on the Canadian DSL (Domestic Substances List)

#### DEUTERIUM OXIDE (D, 99.9%) (7789-20-0)

Listed on the Canadian DSL (Domestic Substances List)

#### DEUTERIUM CHLORIDE (D, 99.6%) (7698-05-7)

Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)

### EU-Regulations

No additional information available

### National regulations

#### DEUTERIUM CHLORIDE "100%" (D, 99.96%) DCL 20% W/W SOLUTION IN D2O

Listed on INSQ (Mexican National Inventory of Chemical Substances)

## 15.3. US State regulations

#### DEUTERIUM CHLORIDE "100%" (D, 99.96%) DCL 20% W/W SOLUTION IN D2O

State or local regulations	U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List
----------------------------	---

## SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date : 11/28/2023

# DEUTERIUM CHLORIDE "100%" (D, 99.96%) DCL 20% W/W SOLUTION IN D2O

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Other information

: This product is not radioactive. The data given for this product are those of the corresponding unlabeled compound, unless specifically indicated otherwise. Health and safety data for labeled compounds are generally not available, but are assumed to be similar or identical to the corresponding unlabeled compound.

Full text of H-phrases	
H280	Contains gas under pressure; may explode if heated
H290	May be corrosive to metals
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H331	Toxic if inhaled
H332	Harmful if inhaled
H335	May cause respiratory irritation

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.