

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifiers**

Product Name : 1.0 M Cadmium chloride hydrate  
Product Number : HR2-715  
REACH No. : A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.  
CAS Number : 654054-66-7

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

Identified uses : Laboratory chemicals, Manufacture of substances.

**1.3 Details of the supplier of the Safety Data Sheet**

Company : Hampton Research  
34 Journey  
Aliso Viejo, CA 92656-3317  
United States  
Telephone : 949 425 1321  
Telephone technical support is available 8:00 a.m. to 4:30 p.m. USA Pacific Standard Time.  
Fax : 949 425 1611  
Fax Technical Support is available 24 hours a day.  
e-mail : tech@hrmail.com  
e-mail Technical Support is available 24 hours a day.

**1.4 Emergency telephone number**

Emergency phone : 949 425 1321  
For **CHEMTREC** Assistance : 800 424 9300  
For **CHEMTREC** Assistance : 703 527 3887 (International)

**SECTION 2: Hazards Identification****2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]**

Carcinogenicity (Category 1B)  
Germ cell mutagenicity (Category 1B)  
Reproductive toxicity (Category 1B)  
Acute toxicity, Inhalation (Category 2)  
Acute toxicity, Oral (Category 3)  
Specific target organ toxicity - repeated exposure (Category 1)  
Acute aquatic toxicity (Category 1)

## (CONTINUED) - SECTION 2: Hazards Identification

Chronic aquatic toxicity (Category 1)

### Classification according to EU Directives 67/548/EEC or 1999/45/EC

Toxic if swallowed. Toxic: danger of serious damage to health by prolonged exposure through inhalation and if swallowed. May cause cancer. May cause heritable genetic damage. May impair fertility. May cause harm to the unborn child. Very toxic by inhalation. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

## 2.2 Label elements

### Labelling according Regulation (EC) No 1272/2008 [CLP]

Pictogram



Signal Word : Danger

Hazardous statement(s)

H301 : Toxic if swallowed.  
H330 : Fatal if inhaled.  
H340 : May cause genetic defects.  
H350 : May cause cancer.  
H360FD : May damage fertility. May damage the unborn child.  
H372 : Causes damage to organs through prolonged or repeated exposure.  
H410 : Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P201 : Obtain special instructions before use.  
P260 : Do not breathe dust / fume / gas / mist / vapours / spray.  
P273 : Avoid release to the environment.  
P284 : Wear respiratory protection.  
P301 + P310 : IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.  
P310 : Immediately call a POISON CENTER or doctor/ physician.

Supplemental Hazard Statements : none

Restricted to professional users.

### According to European Directive 67/548/EEC as amended.

Hazard symbol(s)



## (CONTINUED) - SECTION 2: Hazards Identification

### R-phrase(s)

R45	: May cause cancer.
R46	: May cause heritable genetic damage.
R60	: May impair fertility.
R61	: May cause harm to the unborn child.
R25	: Also toxic if swallowed.
R26	: Also very toxic by inhalation.
R48/23/25	: Also toxic: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.
R50/53	: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### S-phrase(s)

S53	: Avoid exposure - obtain special instructions before use.
S45	: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S60	: This material and its container must be disposed of as hazardous waste.
S61	: Avoid release to the environment. Refer to special instructions/ Safety data sheets.

Restricted to professional users.

### 2.3 Other hazards - none

## SECTION 3: Composition/Information on Ingredients

### 3.1 Substances

Substance Name	Synonym	Formula	M <sub>r</sub>	CAS #	EC #
Cadmium chloride hydrate	• None	CdCl <sub>2</sub> · xH <sub>2</sub> O	183.32 (anhydrous basis)	654054-66-7	233-296-7

RTECS	Merck	Beilstein	SARA	MDL #	PubChem Substance ID
N/A	14,1617	N/A	No	MFCD00149627	24852504

Component	Concentration
<b>Cadmium chloride hydrate</b>	
CAS-No	654054-66-7
EC-No.	233-296-7
Index-No.	048-008-00-3

No components need to be disclosed according to the applicable regulations.

## SECTION 4: First Aid Measures

### 4.1 Description of first aid measures

#### General Advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

#### If inhaled

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

#### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

#### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes as a precaution and consult a physician.

#### If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### 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

## SECTION 5: Fire Fighting Measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### Unsuitable extinguishing media

None known

### 5.2 Special hazards arising from the substance or mixture

Hydrogen chloride gas, Cadmium/cadmium oxides

### 5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

### 5.4 Further Information

no data available

## SECTION 6: Accidental Release Measures

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

Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

## **(CONTINUED) - SECTION 6: Accidental Release Measures**

### **6.2 Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

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

Pick up and arrange disposal without creating dust.  
Sweep up and shovel. Keep in suitable, closed containers for disposal.

### **6.4 Reference to other sections**

For disposal see section 13.

## **SECTION 7: Handling and Storage**

### **7.1 Personal Precautions**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Avoid exposure - obtain special instructions before use.

Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2.2. 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.

### **7.3 Specific end uses**

no data available

## **SECTION 8: Exposure Controls/Personal Protection**

### **8.1 Control parameters**

**Components with workplace control parameters**

### **8.2 Exposure controls**

**Appropriate engineering controls**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**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.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

## (CONTINUED) - SECTION 8: Exposure Controls/Personal Protection

### Body Protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. 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 is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

## SECTION 9: Physical and Chemical Properties

### 9.1 Information on basic physical and chemical properties

a) Appearance	Form: fine crystals with lumps	Color: white
b) Odor	no data available	
c) Odor Threshold	no data available	
d) pH	no data available	
e) Melting point/freezing point	no data available	
f) Initial boiling point and boiling range	no data available	
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) Vapor pressure	10 mmHg at 656°C	
l) Vapor density	no data available	
m) Relative density	3.327 g/mL at 25°C (literature)	
n) Water solubility	no data available	
o) Partition coefficient: octanol/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

## SECTION 10: Stability and Reactivity

### 10.1 Reactivity

no data available

## (CONTINUED) - SECTION 10: Stability and Reactivity

### 10.2 Chemical stability

no data available

### 10.3 Possibility of hazardous reactions

no data available

### 10.4 Conditions to avoid

Avoid moisture. Air

### 10.5 Incompatible materials

Oxidizing agents

### 10.6 Hazardous decomposition products

Other decomposition products - no data available

## SECTION 11: Toxicological Information

### 11.1 Information on toxicological effects

#### Acute toxicity

no data available

Inhalation: no data available

#### Skin / irritation and corrosion

no data available

#### Serious eye damage / eye irritation

no data available

#### Respiratory or skin sensitization

no data available

#### Germ cell mutagenicity

May alter genetic material.

In vivo tests showed mutagenic effects

#### Chronic exposure

This is or contains a component that has been reported to be carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification. Chronic exposure to cadmium may cause lung and prostate cancer.

Possible human carcinogen

IARC: 1 - Group 1: Carcinogenic to humans (Cadmium chloride hydrate)

1 - Group 1: Carcinogenic to humans (Cadmium chloride hydrate)

#### Reproductive toxicity

May cause congenital malformation in the fetus.

Presumed human reproductive toxicant

May cause reproductive disorders.

## (CONTINUED) - SECTION 11: Toxicological Information

### **Specific target organ toxicity - single exposure**

no data available

### **Specific target organ toxicity - repeated exposure**

Causes damage to organs through prolonged or repeated exposure.

### **Aspiration hazard**

no data available

### **Potential health effects**

**Inhalation** May be fatal if inhaled. May cause respiratory tract irritation.

**Ingestion** Toxic if swallowed.

**Skin** Toxic 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: N/A

## SECTION 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**

Very toxic to aquatic life.

## SECTION 13: Disposal Considerations

### **13.1 Waste treatment methods**

#### **Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.



## (CONTINUED) - SECTION 13: Disposal Considerations

### Contaminated packaging

Dispose of as unused product.

## SECTION 14: Transportation Information

### 14.1 UN number

ADR/RID: 2570

IMDG: 2570

IATA: 2570

### 14.2 UN proper shipping name

ADR/RID: CADMIUM COMPOUND (Cadmium chloride hydrate)

IMDG: CADMIUM COMPOUND (Cadmium chloride hydrate)

IATA: Cadmium compound (Cadmium chloride hydrate)

### 14.3 Transport hazard class(es)

ADR/RID: 6.1

IMDG: 6.1

IATA: 6.1

### 14.4 Packaging group

ADR/RID: III

IMDG: III

IATA: III

### 14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: No

### 14.6 Special precautions for user

No data available

## SECTION 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

### 15.2 Chemical Safety Assessment

no data available

## SECTION 16: Other Information

### DISCLAIMER

For research use only. Not for drug, household, or other use.

## **(CONTINUED) - SECTION 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 this product. Hampton Research Corp., 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.

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