

### 1. PRODUCT AND COMPANY IDENTIFICATION

#### 1.1 Product identifiers

Product name : DisCharge H<sub>2</sub>Ox2

Product Number : DCH  
Brand : DisChem, Inc.

CAS-No. : Mixture

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

Identified uses : SEM / E-Beam lithography anti-charging agent

#### 1.3 Details of the supplier of the safety data sheet

Company : DisChem, Inc.  
17295 Boot Jack Rd, Suite A  
Ridgway, PA 15853 USA

Telephone : +1 814-772-6603  
Fax : +1 814-772-0946

#### 1.4 Emergency telephone number

Emergency Phone # : +1-703-527-3887 (CHEMTREC) CCN 6727

### 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

##### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Eye irritation (Category 2B), H320

For the full text of the H-Statements mentioned in this Section, see Section 16.

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

Pictogram



Signal word : Warning

Hazard statement(s)  
H320 : Causes eye irritation.

Precautionary statement(s)

P261 : Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
P264 : Wash skin thoroughly after handling.  
P280 : Wear protective gloves/ eye protection/ face protection.  
P303 + P361 + P353 : IF ON SKIN (or hair): Take off immediately all contaminated clothing.  
Rinse skin with water/shower.  
P304 + P340 + P312 : IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.  
P305 + P351 + P338 : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337 + P313 : If eye irritation persists: Get medical advice / attention.  
P403 + P233 : Store in a well-ventilated place. Keep container tightly closed.

## 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Substances: Mixture

##### Hazardous components

Component	Classification	Concentration
<b>Water</b> CAS-No: 7732-18-5		
		96-98 %
<b>Quaternary ammonium compounds, coco alkylbis (hydroxyethyl)methyl, nitrates</b> CAS-No: 71487-00-8		
	Acute Tox. 4; H302 Skin Corr. 1B; H314 Eye Dam. 1; H318 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M- Factor (Acute): 1	2-4 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

### 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. Remove contaminated clothing. Consult a physician if irritation persists.

##### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes. Consult a physician if irritation persists.

##### If swallowed

Clean mouth with water and afterward drink plenty of water. Never give anything by mouth to an unconscious person. Rinse mouth with water. Seek medical attention if swallowed.

#### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

#### 4.3 Indication of any immediate medical attention and special treatment needed

No data available

---

## 5. FIREFIGHTING 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 firefighting if necessary.

### 5.4 Further information

No data available.

---

## 6. ACCIDENTAL RELEASE MEASURES

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

Use personal protective equipment. Avoid breathing vapours, mist or gas.

For personal protection see section 8.

### 6.2 Environmental precautions

No special environmental protections are needed/

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

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

### 6.4 Reference to other sections

For disposal see section 13.

---

## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Use explosion-proof equipment. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

For precautions see section 2.2.

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

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.

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

---

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
None				

#### Biological occupational exposure limits

Component	CAS-No.	Parameters	Value	Biological specimen	Basis
None					

## 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

Face shield and safety glasses 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, Flame retardant antistatic protective 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

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

---

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

a) Appearance	Form: liquid Colour: colourless
b) Odour	Pleasant
c) Odour Threshold	No data available
d) pH	7.1
e) Melting point/freezing point	0°C
f) Initial boiling point and boiling range	100°C
g) Flash point	None
h) Evaporation rate	1.0 (H <sub>2</sub> O=1)
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	Non Flammable Lower
k) Vapour pressure	1 (Air = 1)
l) Vapour density	No data available
m) Relative density	0.99 g/cm <sup>3</sup>
n) Water solubility	completely soluble
o) Partition coefficient: n-octanol/water	No data available
p) Auto-ignition 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

VOC (g/L) < 9

---

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

None known

### 10.4 Conditions to avoid

Exposure to sunlight.

### 10.5 Incompatible materials

None known

### 10.6 Hazardous decomposition products

Other decomposition products - No data available

Hazardous decomposition products formed under fire conditions. - Carbon oxides

In the event of fire: see section 5

---

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat – 300-2000 mg/kg

#### Skin corrosion/irritation

Skin - Rabbit

Result: Mild skin irritation

#### Serious eye damage/eye irritation

Eyes - Rabbit

Result: Risk of serious eye irritation - 24 h

#### Respiratory or skin sensitization

No data available

#### Germ cell mutagenicity

No data available

#### Carcinogenicity

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

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.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity**

No data available

No data available

**Specific target organ toxicity - single exposure**

Inhalation, Oral - May cause drowsiness or dizziness.

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

**Additional Information**

RTECS: Not available

---

**12. ECOLOGICAL INFORMATION**

**12.1 Toxicity**

Toxicity to fish LC50 - Pimephales promelas (fathead minnow) – 0.31 mg/L - 96 h

**12.2 Persistence and degradability**

Readily biodegradable 95% - 20 days

**12.3 Bioaccumulative potential**

No bioaccumulation is to be expected (log Pow <= 4).

**12.4 Mobility in soil**

No data available

**12.5 Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**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. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated packaging**

Dispose of as unused product.

---

**14. TRANSPORT INFORMATION****DOT (US)**

UN number: NA

Proper shipping name Chemical, liquid, non-hazardous

Poison Inhalation Hazard: No

**IMDG**

UN number: NA

Proper shipping name Chemical, liquid, non-hazardous

**IATA**

UN number: NA

Proper shipping name Chemical, liquid, non-hazardous

**Export / Import Description**

Quaternary ammonium compounds. Mixture. HS# 2923.90.0000

Reportable Quantity (RQ):

**15. REGULATORY INFORMATION****SARA 302 Components**

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 313.

**California Prop. 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

---

**16. OTHER INFORMATION****Full text of H-Statements referred to under sections 2 and 3.**

H320 Causes eye irritation.

**HMIS Rating**

Health hazard: 1

Flammability: 0

Physical Hazard: 0

**NFPA Rating**

Health hazard: 1

Fire Hazard: 0

Reactivity Hazard: 0



**Further information**

*The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall DisChem, Inc. be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if DisChem, Inc. has been advised of the possibility of such damages.*

