## 1. PRODUCT AND COMPANY IDENTIFICATION

### 1.1 Product identifiers

| | | |
|---|---|---|
| Product name | : | DisCharge H2O, DisCharge H2O X2, DisCharge H20 X4 |
| Product Number | : | DCH, DCH2X, DCH4X |
| Brand | : | DisChem, Inc. |
| CAS-No. | : | Mixture |

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

| | | |
|---|---|---|
| Identified uses | : | Electron beam lithography anti-charging agent |

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

| | | |
|---|---|---|
| Company | : | DisChem, Inc.<br>17295 Boot Jack Rd, Suite A<br>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 % wt/vol | | |
|---|---|---|---|---|
| | | DisCharge H20 | DisCharge H20 X2 | DisCharge H20 X4 |
| **Water**<br>CAS-No: 7732-18-5 | None | 98-99 | 96-98 | 92-94 |
| | | | | |
| | | DisCharge H20 | DisCharge H20 X2 | DisCharge H20 X4 |
| **Quaternary ammonium compounds, coco alkylbis (hydroxyethyl)methyl, nitrates**<br>CAS-No: 71487-00-8 | Acute Tox. 4; H302<br>Skin Corr. 1B; H314<br>Eye Dam. 1; H318<br>Aquatic Acute 1;H400<br>Aquatic Chronic 1; H410<br>M-Factor (Acute): 1 | 1-2 | 2-4 | 6-8 |

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 is 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<br>Colour: colourless |
| b) | Odour | Pleasant |
| c) | Odour Threshold | No data available |
| d) | pH | 6.0 – 7.0 |
| 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 (H2O=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/cm3 |
| 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.*