MSDS No. 1603021 Revised Date: 2020/10/29

SAFETY DATA SHEET

IDENTIFY: HIGH DENSITY CHLORINE MEASUREMENT REAGENT

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: HIGH DENSITY CHLORINE MEASUREMENT REAGENT (High Chlorine Reagent)

MDL: HOCl-K-1

SUPPLIER: SUPPLIER:

Company Name: KASAHARA CHEMICAL INSTRUMENTS CORP.

Address: 2-133-8 Sakurada Kuki-city Saitama 340-0203 Japan

Info Phone Num: +81-480-38-9151 / FAX: +81-480-38-9157

Emergency Phone Num: +81-480-38-9151 / FAX: +81-480-38-9157

SECTION 2. HAZARDS IDENTIFICATION

GHS classification

Classification of the substance or mixture Serious eye damage/eye irritation Reproductive Toxicity Specific target organ toxicity (repeated exposure)

Category 1 skin, systemic toxicity, thyroid gland

Category 2B Category 2 Category 1

Pictograms



Signal word Dange **Hazard statements**

H320 - Causes eye irritation

H361 - Suspected of damaging fertility or the unborn child

H370 - Causes damage to organs through prolonged or repeated exposure

H372 - Causes damage to the following organs through prolonged or repeated exposure: skin, systemic toxicity, thyroid gland

Precautionary statements-(Prevention)

- Obtain special instructions before use
- Do not handle until all safety precautions have been read and understood
- · Use personal protective equipment as required.
- · Wash face, hands and any exposed skin thoroughly after handling
- Do not breathe dust / fume / gas / mist / vapors / spray
- Do not eat, drink or smoke when using this product

Precautionary statements-(Response) •

- IF exposed or concerned : Get medical advice / attention
- IF INEYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- If eye irritation persists: Get medical advice / attention.

Precautionary statements-(Storage)

• Store locked up

Precautionary statements-(Disposal)

• Dispose of contents / container to an approved waste disposal plant

Others

Other hazards Not available

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Single substance or mixture

Mixture

| Chemical Name | Weight-% | Formula | ENCS | ISHL No. | CAS No |
|---------------------------|----------|--|---------|----------|-----------|
| Potassium iodide | 70~75% | KI | (1)-439 | N/A | 7681-11-0 |
| Disodium hydrogen Citrate | 20~25% | NaOCOCH2C(OH)(COOH) CH2COONa-1.5H2O | _ | N/A | 6132-05-4 |
| 1.5-Hydrate | | | | | |
| Other ingredient | 1~6% | _ | _ | _ | _ |

Impurities and Stabilizing additives

Not applicable

SECTION 4. FIRST AID MEASURES

GENERAL ADVICE: Wash off immediately with soap and plenty of water. In the case of respirable dust and/or fumes, use self-contained breathing apparatus and dust impervious protective suit. Use personal protective equipment.

INHALATION: Move victim to fresh air. If breathing is difficult, give oxygen. If irritation persists, consult a physician.

SKIN CONTACT: Remove contaminated clothes and shoes, rinse skin with plenty of water or shower. Use soap to help assure

removal. If irritation persists, consult a physician.

EYE CONTACT: Remove any contact lenses at once. Flush eyes well with a large amount of running water for at least 15 minutes.

Assure adequate flushing by separating the eyelids with sterile fingers. If irritation persists, consult a physician.

INGESTION: Rinse mouth, give plenty of water to dilute the substance. Never give anything by mouth to an unconscious person.

Consult a physician.

SECTION 5. FIRE FIGHTING MEASURES

Suitable extinguishing media Unsuitable extinguishing media

Special extinguishing method
Specific hazards arising from

Specific hazards arising from the chemical product Protection of fire-fighters Water spray (fog), carbon dioxide (CO2), Foam, Extinguishing powder,

No information available No information available

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Use personal protective equipment as required Firefighters should wear self-contained breathing

apparatus and full firefighting turnout gear

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For indoor, provide adequate ventilation process until the end of working. Deny unnecessary entry other than the people involved by, for example, using a rope. While working, wear appropriate protective equipments to avoid adhering it on skin, orinhaling the gas. Work from windward, and retract the people downwind.

Environmental precautions

To be careful not discharged to the environment without being properly handled waste water contaminated See Section 12 for additional ecological information

Methods and materials for contaminent and methods and materials for cleaning up

Do not touch spilled material without suitable protection (See section 8). After material is completely picked up, wash the spill site with soap and water and ventilate the area.

Put all wastes in a plastic bag for disposal and seal it tightly. Remove, clean, or dispose of contaminated clothing.

Recoverly, neutralization

No information available

Secondary disaster prevention measures

Clean contaminated objects and areas thoroughly observing environmental regulations

SECTION 7. HANDLING AND STORAGE

Handling

Technical measures

Avoid contact with strong oxidizing agents. Use with local exhaust ventilation.

Precautions

Do not rough handling containers, such as upsetting, falling, giving a shock, and dragging. Prevent leakage, overflow, and scattering. Not to generate steam and dust in vain.

Seal the container after use. After handling, wash hands and face, and then gargle. In places other than those specified, should not be smoking or eating and drinking.

Should not be brought contaminated protective equipment and gloves to rest stops. Deny unnecessary entry of non-emergency personnel to the handling area.

Safety handling precautions

Use personal protective equipment as required

Storage

Safe storage conditions

Storage conditions Store away from sunlight in well-ventilated dry place at room temperature.

Safe packaging material Polypropylene polyethylene Incompatible substances Strong oxidizing agents

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls

For indoor, provide adequate ventilation process until the end of working. Deny unnecessary entry other than the people involved by, for example, using a rope. While

working, wear appropriate protective equipments to avoid adhering it on skin, or inhaling the gas. Work from windward, and retract the people downwind.

Control parameters Not regulated

Exposure limits This product, as supplied, does not contain any hazardous materials with occupational

exposure limits established by the region specific regulatory bodies

Personal protective equipment

Respiratory protection Dust mask
Hand protection Protection gloves

Eye protection protective eyeglasses or chemical safety goggles

Skin and body protection Long-sleeved work clothes

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: White crystalline powder - powder

ODOR:

pH:

6~8 (1%Liquid)

BOILING POINT:

MeLTING POINT:

No data available

FLASH POINT:

No data available

No data available

FLAMMABILITY (solid, gas): ----

DECOMPOSITION TEMPERATURE : No data available EXPLOSIVE LIMITS : No data available VAPOR PRESSURE : No data available SPECIFIC GRAVITY : No data available

SOLUBILITY IN;

WATER: freely soluble

ETHANOL: practically insoluble, or insoluble.

PARTITION COEFFICIENT Not available DECOMPOSITION TEMPERATURE Not available

SECTION 10. STABILITY AND REACTIVITY

Stability

Stability Stable under recommended storage conditions.

Reactivity No data available

Hazardous reactions

None under normal processing

Conditions to avoid

Extremes of temperature and direct sunlight

Incompatible materials

Strong oxidizing agents

Hazardous decomposition products

Carbon monooxide (CO), carbon dioxide (CO2), Metal oxides

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Skin irritation/corrosion

Serious eye damage/ irritation

Respiratory or skin sensitization

Reproductive cell mutagenicity

No data available

No data available

No data available

CarcinogenicityNo data availableReproductive toxicityNo data availableSTOT-single exposureNo data availableSTOT-repeated exposureNo data availableAspiration hazardNo data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Other data

Persistence and degradability
Bioaccumulative potential
Mobility in soil
Hazard to the ozone layer

No data available
No information available
No information available
No information available

SECTION 13. DISPOSAL CONSIDERATION (INCLUDING CONTAINER)

Waste from residues

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated container and contaminated packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14. TRANSPORT INFORMATION

ADR/RID Not regulated

UN number

Proper shipping name: UN classfication Subsidiary hazard class

Labels
Packing group

IMDG Not regulated

UN number

Proper shipping name: UN classfication Subsidiary hazard class Packing group Marine pollutant (Sea)

IATA Not regulated

UN number

Proper shipping name: UN classfication Subsidiary hazard class Packing group

SECTION 15. REGULATORY INFORMATION

International Inventories

EINECS/ELINCS Listed
TSCA Listed

Japanese regulations

Fire Service Act Not applicable
Poisonous and Deleterious Not applicable

Substances Control Law

Industrial Safety and Health Act Harmful substances whose names are to be indicated on the label (Law art.57,para.1

enforcement order art.18)

Notifiable substances (Law art.57-2,Enforcement oder art.18-2 attached table №9)№606 Not applicable

Regulations for the carriage and storage of dangerous goods

in ship

Not applicable Not applicable

Marine Pollution Prevention Law

Pollutant Release and Transfer

Register Law

Civil Aeronautics Law

Water Pollution Control Act Not applicable

Gunpowder Control Law Dangerous component ETCO Not applicable

Not applicable

SECTION 16. OTHER INFORMATION

No specific notes

The above information is believed to be correct to be the best of our knowledge and information but does not purport to be all inclusive and shall be used only as a guide. This product is intended to be used by expert persons having chemical knowledge and skill, at their own discretion and risk and KRK shall not be held liable for any damage resulting from handling or from contact with the above material.