

## Safety Data Sheet

### 1. Product and company identification

Product name : Potassium hypochlorite solution  
Name of manufacturer : KANTO CHEMICAL CO., INC.  
Address : 2-1, Nihonbashi, Muromachi 2-Chome, Chuo-Ku, Tokyo, 103-0022, Japan  
Name of section : Reagent division, catalog and products information section  
Telephone number : +81-3-6214-1090  
Facsimile number : +81-3-3241-1047  
Mail address : BC32@gms.kanto.co.jp  
SDS No. : 32347

### 2. Summary of danger and Hazard

#### GHS classification

##### Physical and chemical hazard

Flammable liquids : Out of category  
Pyrophoric liquids : Out of category  
Self-heating substances and mixtures : Out of category  
Substances and mixtures which, in contact with water, emit flammable gases : Out of category

##### Human health hazard

Skin corrosion/irritation : Category 1C  
Serious eye damage/eye irritation : Category 1  
Specific target organ systemic toxicity(single exposure) : Category 3 (respiratory tract irritation)  
Specific target organ systemic toxicity(repeated exposure) : Category 2

#### Pictogram or symbol



Signal word : Danger  
Hazard statement : Causes severe skin burns and eye damage  
Causes serious eye damage  
May cause respiratory irritation  
May cause damage to organs (systemic toxicity) through prolonged or repeated exposure

#### Cautions

Safety measurements : Do not breathe dust, mist, and vapor.  
Use only in a well-ventilated area.

- Wear appropriate protective gloves, glasses, clothing, face shield, or mask.  
Wash protective equipment thoroughly after use.
- First-aid measures : If inhaled : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical treatment if you feel unwell.
- If swallowed: Rinse mouth, do not induce vomiting. Immediately get medical treatment.  
If in eyes : Rinse cautiously with water for several minutes. Get medical treatment.  
If on skin : Remove contaminated clothing and the substance. Immediately get medical treatment.  
Get medical treatment, if you feel unwell.
- Storage : Tightly container closed and store in a well-ventilated area.  
Store locked up.
- Disposal : Dispose of contents and containers appropriately in accordance with related regulations.

### 3. Composition/Information on ingredients

- Substance/Mixture : Substance  
Chemical name or commercial name : Potassium hypochlorite
- Ingredients and composition : Aqueous solution of potassium hypochlorite, 5.0-7.0% (as available chlorine)
- Chemical formula : KClO  
CAS No. : 7778-66-7  
TSCA Inventory : Registered  
EINECS No. : 2319092
- Dangerous and hazardous ingredients : Potassium hypochlorite

### 4. First aid measures

- Inhalation : Remove the victim to fresh air, and make him blow his nose and gargle.
- Skin contact : Wash the affected areas under running water.
- Eye contact : Wash the affected areas under running water for at least 15 minutes. Get medical treatment.
- Ingestion : Give the victim one or two glasses of water or milk and induce vomiting. Get medical treatment.
- Protection for first aid person : Savers wear proper protective equipment like rubber gloves, goggles.

### 5. Fire fighting measures

- Extinguishing media : This product is noncombustible.  
Prohibited extinguishing media : None

Particular fire fighting : Move containers from fire area if it can be done without risk, if not possible, apply water from a safe distance to cool and protect surrounding area.

Protection for firefighters

: Firefighters should wear protective equipment.

#### 6. Accidental release measures

Cautions for personnel : Wear proper equipment and avoid contact with skin and inhalation of vapor. Keep personnel removed from and upwind of fire. Keep away personnel except for authorized ones from spillage area by stretching ropes.

Cautions for environment : Attention should be given not to cause damage to the environment by flowing of spillage to rivers. In case of the dilution of copious water, do not cause damage to the environment by untreated wastewater.

Removal measure : Absorb spill with inert material (e.g., diatomaceous earth, sand) and flush residual area with copious amounts of water.

#### 7. Cautions of handling and storage

Handling

Engineering measures : Wear proper protective equipment not to contact with skin or inhale the vapor.

Storage

Adequate storage condition

: Store in a refrigerator and tightly closed. (0-6°C)  
Keep away from acids.

Safety adequate container materials

: Glass, polyethylene

#### 8. Exposure control/Personal protection

Engineering measures : Install a local ventilation system in case of dense vapor or dusty condition.

Control parameters

ACGIH(2015) : Not established

Protective equipment

Hands protective equipment

: Impervious protective gloves

Eyes protective equipment

: Safety goggles

Skin and body protective equipment

: Protective clothing, protective boots

#### 9. Physical and chemical properties

Appearance : Liquid

Color : Yellow

Odor : Chlorine odor

pH : Alkalinity

Boiling point : Decomposition

Melting point : Approx. -10°C

Flash point : Noncombustible  
Specific gravity : 1.1g/cm<sup>3</sup>(20°C)  
Solubility  
Solubility in solvents : Water ; Miscible

10. Stability and reactivity

Stability : Decomposes by sunlight or heat.  
Reactivity : Reacts with acids and emits toxic chlorine gas.  
Incompatible conditions : Light, heat  
Incompatible materials : acid

11. Toxicological information

Acute toxicity : Oral : Not possible to classify because of insufficient data.  
Dermal : Not possible to classify because of insufficient data.  
Inhalation(vapor) : Not possible to classify because of insufficient data.  
Inhalation(dust, mist) : Not possible to classify because of insufficient data.

Skin corrosiveness/irritation

: Causes severe skin burns and eye damage(category 1C)  
Since the solution is alkaline, and it causes severe irritation to skin, it was set into category 1C.

Serious eye damage/eye irritation

: Causes serious eye damage(category 1)  
Since the solution is alkaline, and it causes severe irritation to eyes, it was classified into category 1.

Respiratory sensitization or Skin sensitization

: Respiratory sensitization : Not possible to classify because of insufficient data.  
Skin sensitization : Not possible to classify because of insufficient data.

Mutagenicity : Not possible to classify because of insufficient data.

Carcinogenic effects : Not possible to classify because of insufficient data  
IARC classifies it as group 3(not classifiable as to its carcinogenicity to humans).

Effects on the reproductive system

: Not possible to classify because of insufficient data.  
There is no data for the substance, but in seven-generation reproduction tests of hypochlorite salts or chlorine using rats by oral administration, no effect on fertility of parental animals or fetuses was observed. Furthermore, in reproduction tests using rats and mice by oral administration, also no effect on fertility of parental animals or fetuses was observed.

Specific target organ systemic toxicity single exposure

: May cause respiratory irritation(category 3)

Based on case reports that sodium hypochlorite solution causes people who were exposed with the solution at pools irritation of eyes and upper respiratory tract, furthermore, based on the description that the solution causes respiratory tract irritation in aerosol inhalation exposing test using mice, sodium hypochlorite solution was classified into category 3 (respiratory tract irritation), so potassium hypochlorite solution was set into the same classification.

Specific target organ systemic toxicity repeated exposure

: May cause damage to organs (systemic toxicity) through prolonged or repeated exposure(category 2)

In 3-month or 2-year drinking water administration tests in rats, only systemic effects such as suppressed body weight increase were observed at the exceeded guidance range dose (more than 200 mg/kg/day). But in 2-year drinking water administration tests in mice, low value of body weight was observed at a dose (58 mg/kg/day or equivalent) in the range of the guidance value of category 2, however, there is no abnormality in the pathological examination, and target organs are unknown, so sodium hypochlorite solution was classified into category 2 (systemic toxicity), thus, potassium hypochlorite solution was set into the same classification.

Aspiration hazard : Not possible to classify because of insufficient data.

12. Ecological information

Ecotoxicity

Fish toxicity : Acute aquatic toxicity : Not possible to classify because of insufficient data.  
Chronic aquatic toxicity : Not possible to classify because of insufficient data.

Persistence and degradability

: Not available

Bioaccumulative potential : Not available

13. Disposal consideration

Residual disposal : As decomposition with acids releases chlorine gas and it pollutes atmosphere, decomposes in a closed container equipped with a chlorine gas absorption device.

Containers : In case of disposal of empty bottles, dispose bottles after removing the content thoroughly.

14. Transport information

UN class : Class 8(Corrosive substances) P. G. III

UN number : 1791

Marine regulation information

UN No. : 1791

Proper shipping name : HYPOCHLORITE SOLUTION

Class : 8

Sub risk : -

Packing group : III

Marine pollutant : P

Aviation regulation information

UN No. : 1791

Proper shipping name : Hypochlorite solution

Class : 8  
Sub risk : -  
Packing group : III

15. Regulatory information

Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

16. Other information

References

Handbook of dangerous and hazardous chemicals, Japan Industrial Safety & Health Association. (2000-2001)  
Handbook of Dangerous Substances Springer-Verlag Tokyo(1991)  
Handbook of 15710 Chemical Products, The Chemical Daily Co. (2010)  
Handbook of Poisonous and Deleterious substances, revised and enlarged edition, Yakumu Kohosa(2000)

The information contained herein is based on several references and the present state of our knowledge. However the SDS does not always cover all information about the product, handle the product carefully. The information is intended to ordinary usage, in case of particular handlings, conduct appropriate safety measurements. The information herein is only provision of information, and it does not represent a guarantee the properties of the product. The Safety Data Sheet (SDS) is prepared based on JIS Z7253, and it has the same required elements on the Material Safety Data Sheet (MSDS) which is prepared based on JIS Z7250:2010.