

Safety Data Sheet

1. Product and company identification

Product name : Hydrogen peroxide
Name of manufacturer : KANTO CHEMICAL CO., INC.
Address : 2-1, Nihonbashi, Muromachi 2-Chome, Chuo-Ku, Tokyo, 103-0022, Japan
Name of section : Electronic materials division technical department
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SDS No. : GE00311

2. Summary of danger and Hazard

GHS classification

Physical and chemical hazard

Explosives : Out of category
Flammable liquids : Out of category
Pyrophoric liquids : Out of category
Self-heating substances and mixtures : Out of category

Oxidizing liquids : Category 2

Human health hazard

Acute toxicity(oral) : Category 4

Acute toxicity(dermal) : Category 4

Acute toxicity(inhalation:vapors) : Category 4

Acute toxicity(inhalation:dust, mists) : Category 4

Skin corrosion • Irritation : Category 1A

Serious eye damage • Eye irritation : Category 1

Carcinogenicity : Category 2


Specific target organ systemic toxicity(single exposure) : Category 1

Specific target organ systemic toxicity(repeated exposure) : Category 1

Environmental hazard

Hazardous to the aquatic environment-acute hazard : Category 1

Hazardous to the aquatic environment-chronic hazard

Pictogram or symbol	: Out of category 
Signal word	: Danger
Hazard statement	: May intensify fire : oxidizer Harmful if swallowed Harmful in contact with skin Harmful if inhaled Harmful if inhaled Causes severe skin burns and eye damage Causes serious eye damage Suspected of causing cancer Causes damage to organs (respiratory organs) Causes damage to organs (respiratory organs) through prolonged or repeated exposure Very toxic to aquatic life
Cautions	
Safety measurements	: Do not handle until all safety precautions have been read and understood. Keep away from heat. Keep away from combustible substances. Do not breathe dust, mist, and vapor. Use only in a well-ventilated area. Avoid release to the environment. Do not eat, drink or smoke when using this product. Wear appropriate protective gloves, glasses, clothing, face shield, or mask. Wash protective equipment thoroughly after use. Wash hands thoroughly after handling.
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. If exposed, get medical treatment. Get medical treatment, if you feel unwell. Collect leakage
Storage	: Keep away from combustible substances. 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

: Hydrogen peroxide

Ingredients and composition

: Water solution contains 31% hydrogen peroxide

Chemical formula : H₂O₂

CAS No. : 7722-84-1

TSCA Inventory : Registered

EINECS No. : 2317650

Dangerous and hazardous ingredients

: Hydrogen peroxide

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 water and 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.

Cautions : Do not contact with metal powder, alkaline substances, or easy oxidized organic compounds.

Storage

Adequate storage condition

: The gas-vent cap is used to evacuate the inside gas. Do not put it sideways to avoid leaking after leaving it too long or under pressurization.

Safety adequate container materials

: Polyethylene, fluorine resin

8. Exposure control/Personal protection

Engineering measures : Use only with adequate ventilation and in closed systems.

Control parameters

ACGIH(2015) : 1ppm(TLV-TWA)

Protective equipment

Respiration protective equipment

: If necessary, wear a chemical cartridge respirator with acidic gases.

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 : Colorless

Odor : Slight characteristic odor

pH : 3.8

Boiling point : 106.2°C

Melting point : -25.7°C

Flash point : Noncombustible

Vapor pressure : 18hPa(20°C)

Specific gravity : 1.11g/cm³ (20°C)

Solubility

Solubility in solvents : Water ; Freely soluble

10. Stability and reactivity

Stability : Decomposes by metal powder, alkaline substances, or organic substances and emits oxygen.

Reactivity : Contact with ammonia may cause explode.

Incompatible conditions : Light, heat

Incompatible materials : Metal powder, and alkaline substances.

11. Toxicological information

Acute toxicity : Harmful if swallowed(category 4)
 Harmful in contact with skin(category 4)
 Harmful if inhaled(vapor) (category 4)
 Harmful if inhaled(dust, mist) (category 4)
 oral LD50=1761mg/kg (as calculated value)
 skin LD50=1941mg/kg(as calculated value)
 Inhalation(dust,mist) LC50=1.438mg/L/4H(calculated value)]

Skin corrosiveness : Causes severe skin burns and eye damage(category 1A)

Irritation to skin, eyes : Causes serious eye damage(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 : Suspected of causing cancer(category 2)

Effects on the reproductive system
 : Not possible to classify because of insufficient data.

Specific target organ systemic toxicity single exposure
 : Cause damage to organs (respiratory organs) (category 1)

Specific target organ systemic toxicity repeated exposure
 : Cause damage to organs (respiratory organs) through prolonged or repeated exposure(category 1)

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

12. Ecological information

Ecotoxicity

Fish toxicity : Very toxic to aquatic life(category 1)
 Chronic aquatic toxicity : Out of category

Rediualbility and degradability

: Rapid biodegradability

Ecorediualbility : Not available

Mobility : Not available

13. Disposal consideration

Residual disposal : Dilute the chemical with a large amount of water and flush in a drain.
 Or consult approved disposal companies.

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

14. Transport information

UN class : Class 5.1(Oxidizing substances) P. G. II

UN number : 2014

Marine regulation information

UN No. : 2014

Proper shipping name : HYDROGEN PEROXIDE, AQUEOUS SOLUTION

Class : 5.1
Sub risk : 8
Packing group : II
Marine pollutant : P
Aviation regulation information
UN No. : 2014
Proper shipping name : Hydrogen peroxide, aqueous solution
Class : 5.1
Sub risk : 8
Packing group : II

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)
Dangerous Properties of Industrial Materials, 6th ed. N. I. Sax Van Nostrand Reinhold Company (1984)
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.