Date of issue: 2017/07/10
Date of revision: 2026/08/05

Safety Data Sheet

Section 1. Identification of the substance/mixture and of the company/undertaking

Product identifier:
Product name: Fehling's solutionII
SDS No. : E0031E-4
Recommended use of the chemical and restrictions on use
Research and Development
Details of the supplier of the safety data sheet
Manufacturer/Supplier: KISHIDA CHEMICAL CO., LTD.
Address: 3-1, Honmachibashi, Chuo-ku, Osaka, JAPAN
Division: Chemical Safety Management Department
Telephone number: +81-6-6946-8061
FAX: +81-6-6946-1607

Section 2. Hazards identification

Classification of the substance or mixture
HEALTH HAZARDS
Skin corrosion/irritation: Category 1
Serious eye damage/eye irritation: Category 1
Specific target organ toxicity - single exposure: Category 2 (respiratory system)
(Note) GHS classification without description: Not classified/Classification not possible
Label elements
Hazard pictograms:

Signal word: Danger
Hazard statements
H314 Causes severe skin burns and eye damage
H371 May cause damage to organs (respiratory system)
Precautionary statements
Prevention
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P264 Wash hands thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P264 + P265 Wash hands thoroughly after handling. Do not touch eyes.
P270 Do not eat, drink or smoke when using this product.
Response
P308 + P316 IF exposed or concerned: Get emergency medical help immediately.
P316 Get emergency medical help immediately.
P317 Get medical help.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P302 + P361 + P354 IF ON SKIN: Take off immediately all contaminated clothing. Immediately rinse with water for several minutes.
P363 Wash contaminated clothing before reuse.

P305 + P354 + P338 IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Storage

P405 Store locked up.

Disposal

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Specific danger/hazard

Health hazard

See "11. Toxicological Information".

Section 3. Composition/information on ingredients

Substance/mixture:

Mixture

Ingredient name	Content (%)	CAS RN	ENCS	Chemical formula
Potassium sodium tartrate	21	304-59-6	2-1457; 9-530	C4H4NaKO6
Sodium hydroxide	8.1	1310-73-2	1-410	NaOH
Water	71	7732-18-5	-	H2O

Note : The figures shown above are not the specifications of the product.

Section 4. First aid measures

Descriptions of first aid measures

General measures

Get medical help if you feel unwell.
IF exposed or concerned: Get emergency medical help immediately.

IF INHALED

IF INHALED: Remove person to fresh air and keep comfortable for breathing.
If experiencing respiratory symptoms: Get emergency medical help immediately.
Get medical help if you feel unwell.

IF ON SKIN

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water or shower.
If experiencing skin: Get emergency medical help immediately.
If you observe unusual symptom, have irritation/pain and/or feel unwell, seek medical advice.

IF IN EYES

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Rinse in order to better reach all parts of eyes.
Remove all chemicals from contact with the victim's eyes immediately. A delay of only seconds may increase the injury.
If experiencing eye: Get medical help.

IF SWALLOWED

Rinse mouth.

Do NOT induce vomiting.
IF SWALLOWED: Get emergency medical help immediately.

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Use appropriate extinguishing media suitable for surrounding facilities.

Unsuitable extinguishing media

Unsuitable extinguishing media data is not available.

Specific hazards arising from the substance or mixture

Fire may produce irritating, corrosive and/or toxic gases.
Runoff from fire control or dilution water may cause pollution.
See "10.Stability and Reactivity".

Advice for firefighters

Special extinguishing method

Evacuate non-essential personnel to safe area.

Special protective equipment and precautions for fire-fighters

Wear fire resistant or flame retardant clothing.
Wear protective gloves/protective clothing/eye protection/face protection.
Firefighters should wear self-contained breathing apparatus with a full facepiece operated in the positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unauthorized personnel away.
Ventilate area until material pick up is complete.
Wear proper protective equipment.

Environmental precautions

Prevent spills from entering sewers, watercourses, low areas or rivers. To be careful not discharged to the environment without being properly handled waste water contaminated.

Methods and materials for containment and cleaning up

Liquid: Absorb spill with inert material (dry sand, earth, et al), then place in a chemical waste container.
Solid: Sweep up, place in a bag and hold for waste disposal.

Preventive measures for secondary accident

Collect spillage.

Section 7. Handling and storage

Precautions for safe handling

Engineering measures

(Measures to prevent operator exposure)

Do not breathe dust/fume/gas/mist/vapors/spray.

(Measures to prevent fire and explosion)

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

(Local ventilation/general ventilation)

Use adequate general or local exhaust ventilation.

(Precautions)
Avoid contact with skin.
Avoid contact with eyes.
Advice on safe handling
Wear protective gloves/protective clothing/eye protection/face protection.
Wash hands and contaminated parts thoroughly after handling.
When using do not eat, drink or smoke.
Avoidance of contact
See Section 10: Stability and Reactivity.
Advice on general occupational hygiene
Wash hands thoroughly after handling. Do not touch eyes.
Do not eat, drink or smoke when using this product.
Wash contaminated clothing before reuse.
Conditions for safe storage, including any incompatibilities
Conditions for safe storage
Keep container tightly closed.
Store locked up. (P405)
Store in a cool, dry place. Do not store in direct sunlight.
Storage in accordance with local/national regulation.
Safe packaging material
Use closed unbreakable containers.

Section 8. Exposure controls/personal protection

Control parameters
Permissible concentration
Administrative Control Levels and Concentration standard value
Not established
Occupational exposure limit values
The Japan Society for Occupational Health
(Sodium hydroxide)
(Ceiling) 2mg/m3
ACGIH
(Sodium hydroxide)
Ceiling: 2mg/m3 (URT, eye & skin irr)
Appropriate engineering controls
Do not use in areas without adequate ventilation.
Washing facilities should be available.
Individual protection measures, such as personal protective equipment
Recommend to use protective equipment in conformity with the standards.
Use appropriate protective equipment in accordance with local/national regulation.
Respiratory protection
Wear respiratory protection (dust-proof mask/gas mask). Select chemical cartridge corresponding to type of gases when using a gas mask.
Hand protection
Wear impervious protective glove.
Consult with your glove and/or personnel equipment manufacturer for selection of appropriate compatible materials as needed.
Inspect before use and replace worn or damaged gloves.
Contact the glove manufacturer for specific advice on glove selection and breakthrough

times for your use conditions as needed.

Eye/face protection

Wear eye/face protection. Wear safety goggles in cases gas is generated.

Skin and body protection

Wear protective clothing.

Personal protective equipment for the body and skin should be selected based on the task being performed and the risks involved.

Section 9. Physical and Chemical Properties

Physical state: Liquid

Color: Colorless

Odor: None

Melting point/Freezing point data is not available.

Boiling point, initial boiling point, or boiling range data is not available.

Flammability data is not available.

Lower and upper explosion limit/flammability limit data is not available.

Flash point data is not available.

Auto-ignition temperature data is not available.

Decomposition temperature data is not available.

pH data is not available.

Kinematic viscosity data is not available.

Solubility:

Solubility in water: Soluble

Solubility in solvent data is not available.

Partition coefficient n-octanol/water data is not available.

Vapor pressure data is not available.

Density and/or relative density: 1.23

Relative vapor density (Air=1) data is not available.

Particle characteristics data is not available.

Other information

Other information is not available.

Section 10. Stability and Reactivity

Reactivity

Not available.

Chemical stability

Stable under normal storage/handling conditions.

Possibility of hazardous reactions

(Sodium hydroxide)

The solution in water is a strong base. It reacts violently with acid and is corrosive to metals such as aluminium, tin, lead and zinc. This produces a combustible/explosive gas (hydrogen). Reacts with ammonium salts. This produces ammonia. This generates fire hazard. Contact with moisture and water generates heat. (ICSC 0360)

Conditions to avoid

Contact with incompatible materials.

Contact with fire source.

Incompatible materials

Acids, Ammonium salts, Metals

Hazardous decomposition products
Carbon oxides, Hydrogen

Section 11. Toxicological Information

Information on toxicological effects
Acute toxicity data is not available.
Skin corrosion/irritation
[Product]
Category 1, Causes severe skin burns and eye damage
[Data for components of the product]
[NITE-CHRIP]
(Sodium hydroxide)
Category 1 (source: NITE)
Serious eye damage/irritation
[Product]
Category 1, Causes serious eye damage
[Data for components of the product]
[NITE-CHRIP]
(Sodium hydroxide)
Category 1 (source: NITE)
Allergenic and sensitizing effects data is not available.
Mutagenic effects data is not available.
Carcinogenic effects data is not available.
Reproductive toxicity data is not available.
Specific target organ toxicity - single exposure
[Product]
Category 2, May cause damage to organs
[Data for components of the product]
[NITE-CHRIP]
(Sodium hydroxide)
Category 1 (respiratory system) (source: NITE)
Specific target organ toxicity - repeated exposure data is not available.
Aspiration hazard data is not available.

Section 12. Ecological Information

Toxicity
Aquatic toxicity
[Data for components of the product]
Hazardous to the aquatic environment, short-term (acute)
[NITE-CHRIP]
(Sodium hydroxide)
Crustacea (Ceriodaphnia quadrangular) 48-hour LC50: 40 mg/L (source: NITE)
Water solubility
(Sodium hydroxide)
109 g/100 mL (20℃) (source: ICSC, 2010)
Persistence and degradability
Persistence and degradability data is not available.
Bioaccumulative potential

Bioaccumulative potential data is not available.

Mobility in soil

Mobility in soil data is not available.

Other adverse effects

Ozone depleting chemical data is not available.

Section 13. Disposal considerations

Waste treatment methods

Waste from residues, Contaminated packing

Avoid release to the environment.

Dispose of contents/container as industrial waste. Accordance with local/national regulation.

Section 14. Transport Information

UNRTDG

UN number : UN1824

UN Proper Shipping Name : SODIUM HYDROXIDE SOLUTION

Transport hazard class(es) : 8

Packing group : II

IMDG Code (International Maritime Dangerous Goods Regulations)

UN number : UN1824

UN Proper Shipping Name : SODIUM HYDROXIDE SOLUTION

Transport hazard class(es) : 8

Packing group : II

IATA (Dangerous Goods Regulations)

UN number : UN1824

UN Proper Shipping Name : SODIUM HYDROXIDE SOLUTION

Transport hazard class(es) : 8

Hazard labels : Corrosive

Packing group : II

Environmental hazards

Marine pollutants (yes/no) : no

Environmentally hazardous substance/mixture (yes/no) : no

ERG GUIDE No.: 154

Section 15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

U.S. Toxic Substances Control Act (TSCA) Inventory

Chemicals listed in TSCA Inventory

Potassium sodium tartrate; Sodium hydroxide; Water

Other regulatory information

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

Section 16. Other information

References and sources for data

Globally Harmonized System of classification and labelling of chemicals, UN Recommendations on the TRANSPORT OF DANGEROUS GOODS 23rd edit., 2023 UN
IMDG Code, 2024 Edition (Incorporating Amendment 42-24)
IATA Dangerous Goods Regulations (67th Edition) 2026
2024 EMERGENCY RESPONSE GUIDEBOOK (US DOT)
2026 TLVs and BEIs. (ACGIH)
JIS Z 7252 : 2025
JIS Z 7253 : 2025
Recommendation of occupational exposure limits (2024-2025) (JSOH)
Supplier's data/information

General Disclaimer

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Unauthorized translation or modification is prohibited.
Please provide SDS to customers for selling or transferring.
All chemicals have unknown hazard. Handle the product with care.
This data sheet was created based on the information we currently have and may be revised according to new information. In addition, the precautions apply only to normal handling, and in the case of special handling, please make adequate countermeasure to maintain your safety.
The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.
The GHS classification data given here is based on current Data published in Japan (National Institute of Technology and Evaluation (NITE) Chemical Risk Information Platform (NITE-CHRIP), up to FY2024).