

Safety Data Sheet

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

Product identifier:

Product name: Potassium Hydroxide

Product code (SDS NO): 39041jis_E-1

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

Uses advised against: This product conform to JSFA(Japan's Specifications and Standards for Food Additives).

Do not use for other purposes.

Details of the supplier of the safety data sheet

Manufacturer/Supplier: JUNSEI CHEMICAL CO., LTD.

Address: 1-6, Ohmano-cho, Koshigaya-shi, Saitama 343-0844, Japan

Division: Quality Assurance Department

Telephone number: +81-48-986-6161

FAX: +81-48-989-2787

e-mail address: shiyaku-t@junsei.co.jp

2. Hazards identification

GHS classification and label elements of the product

Classification of the substance or mixture

HEALTH HAZARDS

Acute toxicity (Oral): Category 3

Skin corrosion/irritation: Category 1

Serious eye damage/eye irritation: Category 1

Specific target organ toxicity – single exposure: Category 1(respiratory organs)

Specific target organ toxicity – repeated exposure: Category 1(respiratory organs)

Aspiration hazard: Category 1

(Note) GHS classification without description: Not classified/Classification not possible

Label elements



Signal word: Danger

HAZARD STATEMENT

H301-Toxic if swallowed

H314-Causes severe skin burns and eye damage

H318-Causes serious eye damage

H370-Causes damage to organs after single exposure

H372-Causes damage to organs through prolonged or repeated exposure

H304-May be fatal if swallowed and enters airways

PRECAUTIONARY STATEMENT

Prevention

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

Wash contaminated parts thoroughly after handling.

Wear protective gloves, protective clothing or face protection.

Wear eye protection/face protection.

Do not eat, drink or smoke when using this product.

Response

- Get medical advice/attention if you feel unwell.
- Immediately call a POISON CENTER or doctor/physician.
- IF exposed or concerned: Call a POISON CENTER or doctor/physician.
- IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Storage

- Store locked up.

Disposal

- Dispose of contents/container in accordance with local/national regulation.

3. Composition/information on ingredients**Mixture/Substance selection:****Substance**

Ingredient name: Potassium hydroxide

Content (%): 85.0 <

Chemical formula: HKO

Chemicals No, Japan: 1-369

CAS No.: 1310-58-3

MW: 56.11

ECNO: 215-181-3

4. First-aid measures**Descriptions of first-aid measures****General measures**

- Get medical attention/advice if you feel unwell.
- Immediately call a POISON CENTER or doctor/physician.

IF INHALED

- Remove person to fresh air and keep comfortable for breathing.
- Call a POISON CENTER or doctor/physician if you feel unwell.

IF ON SKIN (or hair)

- Take off immediately all contaminated clothing. Rinse skin with water/shower.
- If skin irritation or rash occurs: Get medical advice/attention.

IF IN EYES

- 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.

IF SWALLOWED

- Rinse mouth. Do NOT induce vomiting.
- Immediately call a POISON CENTER or doctor/physician.
- Call a POISON CENTER or doctor/physician if you feel unwell.
- If within a few minutes after ingestion, one small glass of water may be given to drink.

Most important symptoms and effects, both acute and delayed**(Symptoms when inhalation or ingestion)**

- Cough. Sore throat. Burning sensation. Shortness of breath. Abdominal pain. Burns in mouth and throat.
- Nausea. Vomiting. Shock or collapse.

(Symptoms when skin and/or eye contact)

Redness. Pain. Blurred vision. Severe burns. Blisters.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Use appropriate extinguishing media suitable for surrounding facilities.

The product is non-flammable.

Unsuitable extinguishing media data is not available.

Specific hazards arising from the substance or mixture

Containers may explode when heated.

Fire may produce irritating, corrosive and/or toxic gases.

Runoff from fire control or dilution water may cause pollution.

Contact with moisture or water may generate sufficient heat to ignite combustible materials.

Advice for firefighters

Specific fire-fighting measures

Evacuate non-essential personnel to safe area.

Special protective equipment and precautions for fire-fighters

Wear fire/flame resistant/retardant clothing.

Wear protective gloves/protective clothing/eye protection/face protection.

Firefighters should wear self-contained breathing apparatus with full face piece operated positive pressure mode.

6. Accidental release measures

Personnel precautions, protective equipment and emergency procedures

Keep unauthorized personnel away.

In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.

Ventilate area until material pick up is complete.

Wear proper protective equipment.

PUBLIC SAFETY: Ventilate closed spaces before entering.

Environmental precautions

Avoid release to headsprings, rivers, lakes, ocean and groundwater.

Methods and materials for containment and cleaning up

Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.

Sweep spilled substance into covered plastic containers.

Carefully collect remainder.

Preventive measures for secondary accident

Collect spillage.

Stop leak if you can do it without risk.

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

Prevent entry into waterways, sewers, basements or confined areas.

Do not get water inside containers.

7. Handling and storage

Precautions for safe handling

Preventive measures

(Exposure Control for handling personnel)

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

(Protective measures against fire and explosion)

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

(Exhaust/ventilator)

Exhaust/ventilator should be available.

(Safety treatments)

Avoid contact with skin.

Avoid contact with eyes.

Safety Measures

Wear protective gloves, protective clothing or face protection.

Wear eye protection/face protection.

Use personal protective equipment as required.

When using do not eat, drink or smoke.

Any incompatibilities

Acids, Metals, Water, Ammonium salts should not be mixed with the chemicals.

Advice on general occupational hygiene

Wash contaminated parts thoroughly after handling.

Do not eat, drink or smoke when using this product.

Wash contaminated clothing before reuse.

Storage

Conditions for safe storage

Store in a well-ventilated place. Keep container tightly closed.

Keep cool. Protect from sunlight.

Store locked up.

Container and packaging materials for safe handling data is not available.

8. Exposure controls/personal protection

Control parameters

Control value in MHLW is not available.

Adopted value

JSOH(1978) (ceiling) 2mg/m³

ACGIH(1992) STEL: C 2mg/m³ (URT, eye & skin irr)

OSHA-PEL value is not available.

NIOSH-REL value is not available.

Exposure controls

Appropriate engineering controls

Do not use in areas without adequate ventilation.

Eye wash station should be available.

Washing facilities should be available.

Individual protection measures

Respiratory protection

Wear respiratory protection.

Wear positive pressure self-contained breathing apparatus (SCBA).

Hand protection

Wear protective gloves.

Consult with your glove and/or personnel equipment manufacturer for selection of appropriate compatible materials.

Eye protection

Wear chemical safety goggle.

Wear eye/face protection.

Skin and body protection

Wear impervious clothing and boots in case of repeated or prolonged treatment.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state: Solid, pellets, flakes, rods or powder.

Color: White

Odor: None

Odor threshold data is not available.

Melting point/Freezing point: 380°C

Boiling point or initial boiling point: 1324°C

Boiling range data is not available.

Flammability (gases, liquids and solids): Non-flammable

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

Flash point: Non-flammable

Auto-ignition temperature data is not available.

Decomposition temperature data is not available.

Self-Accelerating Decomposition Temperature/SADT data is not available.

pH: ca. 13.5 (5.611g/L, 25°C)

Dynamic viscosity data is not available.

Kinematic viscosity data is not available.

Solubility:

Solubility in water: 110 g/100 ml (25°C)

Solubility in solvent: Freely soluble in ethanol.

n-Octanol/water partition coefficient data is not available.

Vapor pressure data is not available.

Vapor density data is not available.

VOC data is not available.

Evaporation rate data is not available.

Density and/or relative density: 2.04g/cm³(20°C)

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

Relative density of the Vapor/air - mixture at 20°C (Air = 1) data is not available.

Critical temperature data is not available.

No Particle characteristics data is not available.

10. Stability and Reactivity

Reactivity

Runaway polymerization will not occur.

Chemical stability

Stable under normal storage/handling conditions.

Deliquesces.

Possibility of hazardous reactions

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

.Reacts with ammonium salts. This produces ammonia. This generates fire hazard.

Contact with moisture and water may generate heat.

Conditions to avoid

Contact with incompatible materials.

Moisture. Air. Heat.

Incompatible materials

Acids, Metals, Water, Ammonium salts

Hazardous decomposition products

Hydrogen gas, Potassium oxides.

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[GHS Cat. Japan, base data]

rat LD50=273mg/kg (SIDS, 2004)

Labor standard law, Japan; Toxic

Potassium hydroxide

Irritant properties

Skin corrosion/irritation

[GHS Cat. Japan, base data]

rabbit/human : corrosive (SIDS, 2004; ECETOC TR66, 1995; JSOH, 1978; PATTY 6th, 2012)

Serious eye damage/irritation

[GHS Cat. Japan, base data]

rabbit : corrosive (SIDS, 2004; JSOH, 1978; PATTY 6th, 2012)

Allergenic and sensitizing effects data is not available.

Germ cell mutagenicity

[GHS Cat. Japan, base data]

in vivo data is not available.

Reverse-mutation assay in bacteria (Ames test) :Negative (SIDS, 2001)

Chromosome aberration test :Negative (SIDS, 2001)

Carcinogenic effects data is not available.

Reproductive toxicity data is not available.

STOT

STOT-single exposure

[cat.1]

[GHS Cat. Japan, base data]

respiratory system (ACGIH 7th, 2001; SIDS, 2004; PATTY 6th, 2012)

STOT-repeated exposure

[cat.1]

[GHS Cat. Japan, base data]

respiratory system (ACGIH 7th, 2001)

Aspiration hazard

[cat.1]

[GHS Cat. Japan, base data]

cat. 1; ACGIH 7th, 2001; SIDS, 2004

12. Ecological Information

Ecotoxicity

Ecotoxicity data is not available.

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.

13. Disposal considerations

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging

Waste treatment methods

Dispose of contents/container in accordance with local/national regulation.

14. Transport Information

UN No., UN CLASS

UN No.: 1813

Proper Shipping Name : POTASSIUM HYDROXIDE, SOLID

Class or division : 8

Packing group : II

ERG GUIDE No.: 154

IMDG Code (International Maritime Dangerous Goods Regulations)

UN No.: 1813

Proper Shipping Name : POTASSIUM HYDROXIDE, SOLID

Class or division : 8

Packing group : II

IATA Dangerous Goods Regulations

UN No.: 1813

Proper Shipping Name : POTASSIUM HYDROXIDE, SOLID

Class or division : 8

Hazard labels : Corrosive

Packing group : II

Environmental hazards

MARPOL Annex III – Prevention of pollution by harmful substances

Marine pollutants (yes/no) : no

15. Regulatory Information

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

Environmental hazards

MARPOL Annex V – Prevention of pollution by garbage discharge

Specific target organ toxicity – repeated exposure: cat.1

Potassium hydroxide

Transport in bulk according to Annex II of MARPOL73/78 and IBC Code

Noxious Liquid ; Cat. Y

Potassium hydroxide

US Federal Regulations

Chemicals listed in TSCA Inventory

Potassium hydroxide

Other regulatory information

We are not able to check up the regulatory information with regard to the substances in your country or region, therefore, we request this matter would be filled by your responsibility.

Regulatory information with regard to this substance in your country or in your region should be examined by your own responsibility.

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

Regulatory information in this section are limited to intentional ingredient(s), but does not contain information on non-intentional ingredients or impurities which are not informed by supplier(s).

16. Other information**GHS classification and labelling**

- H301–Acute Tox. 3: H301 Toxic if swallowed
- H314–Skin Corr. 1: H314 Causes severe skin burns and eye damage
- H318–Eye Dam. 1: H318 Causes serious eye damage
- H370–STOT SE 1: H370 Causes damage to organs after single exposure
- H372–STOT RE 1: H372 Causes damage to organs through prolonged or repeated exposure
- H304–Asp. Tox. 1: H304 May be fatal if swallowed and enters airways

Reference Book

- Globally Harmonized System of classification and labelling of chemicals, (7th revised edition, 2017), UN Recommendations on the TRANSPORT OF DANGEROUS GOODS 20th edit., 2017 UN IMDG Code, 2018 Edition (Incorporating Amendment 39–18)
- IATA Dangerous Goods Regulations (61th Edition) 2020
- Classification, labelling and packaging of substances and mixtures (Table 3 ECNO6182012)
- 2016 EMERGENCY RESPONSE GUIDEBOOK (US DOT)
- 2020 TLVs and BEIs. (ACGIH)
- <http://monographs.iarc.fr/ENG/Classification/index.php>
- JIS Z 7252 : 2019
- JIS Z 7253 : 2019
- 2019 Recommendation on TLVs (JISOH)
- Supplier's data/information
- Chemicals safety data management system "GHS Assistant" Version 4.09 (<https://www.asahi-ghs.com/>)
- NITE Chemical Risk Information Platform "NITE-CHRIP" (https://www.nite.go.jp/en/chem/chrip/chrip_search/systemTop)
- GHS Classification Guidance for Enterprises 2019 Revised Edition (Ver. 2.0) (Mar. 2020, METI)

General Disclaimer

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 Japan official data (NITE published in 2019).