

**JUNSEI****Material safety data sheet**

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Catalog Numbers: 95533

Catalog Name: 0.1mol/l Potassium hydroxide ethanolic solution

Company Identification:

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CREATION DATE: August 8, 2012

SECTION 2 HAZARDS IDENTIFICATION

Physical and chemical hazard

Flammable liquids : Category 2

Pyrophoric liquids : Out of category

Substances and mixtures which, in contact with water, emit flammable gases

: Out of category

Human health hazard

Acute toxicity oral : Out of category

Skin corrosion/Irritation : Out of category

Serious eye damage/Eye irritation : Category 2B

Germ cell mutagenicity : Out of category

Reproductive toxicity : Category 1A

Specific target organ systemic toxicity(single exposure)

: Category 3(respiratory tract irritation, narcotic)

Specific target organ systemic toxicity(repeated exposure)

: Category 1(liver),Category 2 (nervous system)

Environmental hazard

Hazardous to the aquatic environment-acute hazard

: Out of category

Hazardous to the aquatic environment-chronic hazard

: Out of category

Pictograms or symbol



Signal word : Danger

Hazard statement : Highly flammable liquid and vapour.
Causes serious eye irritation.
May damage fertility or the unborn child.
May cause respiratory irritation or may cause drowsiness and dizziness.
Causes damage to organs (liver) through prolonged or repeated exposure.
May cause damage to organs (nervous system) through prolonged or repeated exposure.

Cautions

Safety measurements :

- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Keep away from heat./sparks/open flames/hot surfaces.-No smoking.
- Keep container tightly closed.
- Keep cool.
- Ground/bond container and receiving equipment.
- Use explosion-proof electrical/ventilating/lighting equipment.
- Use only non-sparking tools.
- Take precautionary measures against static discharge.
- Do not breathe gas/mist/vapours/spray.
- Avoid contact during pregnancy/while nursing.
- Wash hands thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Use only outdoors or in a well-ventilated area.
- Wear protective gloves/protective clothing/eye protection/face protection.
- Use personal protective equipment as required.

First-aid measures :

- In case of fire; Use appropriate method of extinguishing.
- If ON SKIN(or hair) : Remove/Take off immediately all contaminated clothing.
Rinse skin with water/shower.
- 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 exposed or if you feel unwell: . Call a POISON CENTER or doctor/physician.
- If inhaled : Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Storage

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

Disposal

- Dispose of contents and containers appropriately in accordance with related regulations.

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

Substance/Mixture : Mixture

Ingredient 1

Component : Potassium hydroxide

Chemical formula : KOH

Cas number : 1310-58-3

US TSCA inventory : Registered

EC number (EINECS): 215-181-3

JAPAN number (ENCS): 1-369

Content: circa 0.6 %

Ingredient 2

Component : Ethanol

Chemical formula : C₂H₆O

Cas number : 64-17-5

US TSCA inventory : Registered

EC number (EINECS): 200-578-6

JAPAN number (ENCS): 2-202

Content: circa 80 %

Ingredient 3

Component : Water

Chemical formula : H₂O

Cas number : 7732-18-5

US TSCA inventory : Registered

EC number (EINECS): 231-791-2

Content: circa 19.4 %

SECTION 4 FIRST AID MEASURES

- If inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately Call a POISON CENTER or doctor/physician.
- If on skin : Rinse skin with plenty of /shower for at least 15 minutes while removing contaminated clothing and shoes.
- If in eyes : Rinse cautiously with plenty of water for at least 30 minutes , immediately call a Poison Center or doctor/physician.
- If swallowed : Rinse mouth. Do not induce vomiting.
Immediately Call a POISON CENTER or doctor/physician.

Potential acute health effects :

Inhalation ; Cough. Headache Fatigue. Drowsiness.

Skin ; Dry skin.

Eyes ; Redness. Pain. Burning sensation.

Ingestion ; Burning sensation. Headache. Confusion. Dizziness. Unconsciousness.

Important signs and symptoms : The substance is irritating to the eyes. Inhalation of high concentrations of the vapour may cause irritation of the eyes and respiratory tract. The substance may cause effects on the central nervous system.

SECTION 5 FIRE FIGHTING MEASURES

Extinguishing media : Water spray, dry chemical powder, alcohol-resistant foam, carbon dioxide.

Prohibited extinguishing media : Straight streams of water.

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

Protection for firefighters : Firefighters should wear protective equipment.

SECTION 6 ACCIDENTAL RELEASE MEASURES

General Information : Use proper personal protective equipment as indicated in Section 8.

Cautions for environment : Avoid release to the rivers, lakes, ocean, groundwater.

Spills/Leak : Absorb spills with absorbent (vermiculite, sand, fuller's earth) and place into a suitable disposal container for later disposal.

SECTION 7 HANDLING AND STORAGE

Handling: : Avoid breathing dust, vapor, mist, or gas. Avoid contact with skin and eyes.
Use only in a chemical fume hood.

Storage: : Store in a tightly closed container.

Store in well-ventilated place.

Keep away from incompatible materials.

Avoid all possible sources of ignition (spark or flame).

SECTION 8 EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls : Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Ingredient 1(Potassium hydroxide)

ACGIH (2010) : 2 mg/m³ (TLV-STEL)

OELs (2011) : 2 mg/m³

Ingredient 2(Ethanol)

ACGIH (2010) : 1,000ppm (TLV-STEL)

OELs (2011) : No data available

Personal protective equipment :

Eye Protection : Goggles

Hand Protection : Protective gloves

Skin and body protection : Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection : Wear respiratory protection.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Physical State : Liquid

Appearance : Clear colorless

Odor : Pleasant odor

pH : No data available.

Vapor Pressure : 59.3mmHg(ethanol/25)

Viscosity : No data available.

Boiling Point : No data available.

Freezing/Melting Point : No data available.

Autoignition Temperature : 363 (ethanol)

Flash Point : 13 (ethanol, Closed Cup)

Explosion Limits, lower : 3.3% (ethanol)

Explosion Limits, upper : 19.0% (ethanol)

Decomposition Temperature : No data available.

Solubility in water : miscible
Specific Gravity/Density : No data available.

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability : Stable in ordinary handling conditions. Vapors may form explosive mixtures with air.

Conditions to Avoid : Heat, sparks or flames.

Incompatibilities with Other Materials : Strong oxidizing agents. Strong acids.

Hazardous Decomposition Products: Carbon monoxide.

Hazardous Polymerization : Will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

Acute toxicity:

Oral : Classified into out of category by applying the additivity formula to GHS classification results (Ingredient 1; category 3, Ingredient 2,3 ; out of category) of ingredient 1,2,3.

Dermal : Not possible to classify because of no data.

Gas : Not applicable (GHS definition).

Vapours : Not possible to classify because of no data.

Skin corrosion/Irritation: Classified into out of category by applying the additivity approach to GHS classification results(Ingredient 1; category 1B, Ingredient 2,3 ; out of category) of ingredient 1,2,3.

Serious eye damage/eye irritation: Classified into category 2B by applying the additivity approach to GHS classification results(Ingredient 1; category 1, Ingredient 2 ; category 2B , Ingredient 3; out of category) of ingredient 1,2,3.

Respiratory sensitization: Not possible to classify because of no data.

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

Mutagenicity: Classified into out of category by applying the cut-off value to GHS classification results (Ingredient 1,2,3 ; out of category) of ingredient 1,2,3.

Carcinogenic effects: Not possible to classify because of insufficient data.

Effects on the reproductive system: Classified into category 1A by applying the cut-off value to GHS classification results (Ingredient 1; not possible to classify, Ingredient 2 ; category 1A , Ingredient 3; out of category) of ingredient 1,2,3.

Specific target organ systemic toxicity single exposure.

: Classified into category 3(respiratory tract irritation, narcotic) by applying the cut-off value to GHS classification results [Ingredient 1; category 1(respiratory), Ingredient 2 ; category 3(respiratory tract irritation, narcotic), Ingredient 3 ; out of category] of ingredient 1,2,3 .

Specific target organ systemic toxicity repeated exposure

: Classified into category 1 (liver) and category 2 (nervous system) by applying the cut-off value to GHS classification results [Ingredient 1; not possible to classify, Ingredient 2 ; category 1 (liver) and category 2 (nervous system), Ingredient 3 ; out of category] of ingredient 1,2,3 .

Aspiration hazard : Not possible to classify because of no data.

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity:

Hazardous to the aquatic environment (acute) : Classified into out of category by applying the cut-off value to GHS classification results (Ingredient 1; not possible to classify, Ingredient 2,3 ; out of category) of ingredient 1,2,3 .

Hazardous to the aquatic environment (chronic) : Classified into out of category by applying the cut-off value to GHS classification results (Ingredient 1; not possible to classify, Ingredient 2,3 ; out of category) of ingredient 1,2,3 .

SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of in a manner consistent with federal, state, and local regulations.

SECTION 14 TRANSPORT INFORMATION

IATA Shipping Name: Flammable liquid, corrosive, n.o.s (Potassium hydroxide)
Hazard Class: 3 (Flammable liquid)
UN Number: 2924
Packing Group:

IMO Shipping Name: FLAMMABLE LIQUID, CORROSIVE, N.O.S.(POTASSIUM HYDROXIDE)
Hazard Class: 3 (Flammable liquid)
UN Number: 2924
Packing Group:

RID/ADR Shipping Name: Flammable liquid, corrosive, n.o.s (Potassium hydroxide)
Hazard Class: 3 (Flammable liquid)
UN Number: 2924
Packing Group:

SECTION 15 REGULATORY INFORMATION

Fire Service Act

: Article 2, Category inflammable liquid

Industrial Safety and Health Act

: Article 18-2, Attached Table 9-61 of Cabinet order

Ordinance for Enforcement of the Civil Aeronautics Act

: Article 194 in Regulation 3 inflammable liquid (flash point ; not more than 60)

Regulations for the carriage and storage of dangerous goods in ship

: Article 2 No.1 (1) inflammable liquids

Substance Registration :

[Ingredient 1(Potassium hydroxide)]

Australia (AICS) : Registration

Canada(DSL) : Registration

Korea number (ECL) : KE-29139

China(IECSC) : Registration

[Ingredient 2(Ethanol)]

Australia (AICS) : Registration

Canada(DSL) : Registration
Korea number (ECL) : KE-13217
China(IECSC) : Registration

SECTION 16 OTHER INFORMATION

REFERENCES:

- The Merck Index 14 edition, Monographs No.7640 (Potassium hydroxide) 3760 (Ethanol)
- Chemical Risk Information Platform (CHRIP)
- Information about the status of the implementation of GHS in Japan [ID= 598 (Potassium hydroxide) , 21B3010 (Ethanol)]
- International Chemical Safety Cards (ICSC) No.0357 (Potassium hydroxide) , 0044 (Ethanol)

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

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