

GHS-0024E

SAFETY DATA SHEET

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| PRODUCT NAME Internal solution for reference electrode [3.3mol/L Potassium Chloride Solution] | Data of issue 01/30/2012 | Date of revision 11/28/2015 |
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1 Identification of the substance or mixture and the supplier

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| Product name: | Internal solution for reference electrode [3.3mol/L Potassium Chloride Solution] |
| Name of supplier: | Kyoto Electronics Manufacturing Co., Ltd. |
| Address: | 68 Ninodan-cho, Shinden, Kisshoin, Minami-ku, Kyoto, Japan |
| Division: | Quality Assurance Department |
| Phone: | +81-75-691-4121 |
| Fax: | +81-75-691-4127 |
| Emergency phone No.: | +81-75-691-4125 |
| MSDS No. | GHS-0024E |

2 Hazard identification

GHS hazard class and category

Classification not possible

Label elements

Pictogram -

Signal word -

Hazard statements -

Other hazard statements Avoid contact with skin and eyes.
Wear suitable protective clothing, gloves and eye/face protection.

3 Composition/Information on ingredients

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| Substance/Mixture: | Mixture |
| Chemical identity (or common name): | 3.3mol/L Potassium Chloride Solution |

| Ingredient name | Composition (%) | Chemical formula | CAS No. |
|--------------------|-----------------|------------------|-----------|
| Potassium Chloride | Approx. 21 | KCl | 7447-40-7 |

Impurities and stabilizing additives which are themselves classified and which contribute to the classification of the substance;

None

4 First-aid measures

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| General description of necessary first aid measures: | In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). |
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| Inhalation: | In case of accident by inhalation: remove casualty to fresh air and keep at rest. If breathing is weak, irregular or has stopped, open his airway, loosen his collar and belt and administer artificial respiration. |
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| Skin contact: | Take off immediately all contaminated clothing. After contact with skin, wash immediately with plenty of water. |
| Eye contact: | Gently rinse the affected eyes with clean water for at least 15 minutes. Arrange for transport to the nearest medical facility for examination and treatment by a physician as soon as possible. |
| Ingestion: | If swallowed, seek medical advice immediately and show this container or label. If swallowed rinse mouth with water (only if the person is conscious). Give plenty of water to drink. Do not make an unconscious person vomit. |
| Protections for first-aid persons: | Protect yourself by wearing rubber gloves and air-tight safety goggles. |

5 Fire-fighting measures

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| Extinguishing media: | This product itself is non-combustible. In case of fire, use water mist, foam/water resistance foam, powder, CO2, dry sand. Use extinguishing media appropriate to surrounding fire conditions. |
| Incompatible extinguishing media: | Nothing particular. |
| Specific hazards arising from the chemical (and with regard to fire-fighting measures): | During a fire, irritating and/or highly toxic gases may be generated by thermal decomposition or combustion. Toxic gases will form upon combustion of : chlorine / hydrogen chloride |
| Specific fire-fighting measures: | 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. Dry chemical powder or dry sand should be used for small fires. |
| Special protective equipment and precautions for fire-fighters: | Fire-fighters should wear proper protective equipment. |

6 Accidental release measures

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| Personal precautions, protective equipment and emergency procedures: | Evacuate non-essential personnel. Wear appropriate protective clothing. |
| Environmental precautions: | Attention should be given not to cause damage to the environment by flowing of spillage to rivers. |
| Measures and materials for containment and clean up: | For small spill, absorb spill with absorbent and move to a chemical waste container. For large spill, prevent leakage by surrounded with earth and lead the spill to a safety place to collect. |
| Appropriate containment techniques/clean up procedures: | Shut off the leakage source and stop leak if you can do it without risk. |

7 Handling and storage

Precautions for safe handling:

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| Countermeasure technique(s): | (Exposure control for handling personnel) Wear proper equipment and take measures according to [8. Exposure control/personal protection]. |
| Local exhaust ventilation system/general ventilation: | Ventilation according to [8. Exposure control/personal protection]. |
| Preventive measures: | Use with an enclosed system or a local exhaust ventilation. |
| Incompatible contact(s): | See [10. Stability and reactivity] |
| Safety measures/incompatibility: | Do not shock, overturn, drop, or drag containers. |

Conditions for safe storage, including any incompatibilities:

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| Countermeasure technique(s): | Tightly closed in a well-ventilated place. |
| Incompatibilities: | See [10. Stability and reactivity] |
| Storage: | (Recommendation for storage) Keep tightly closed in dark cool place. (incompatible storage condition) See [10. Stability and reactivity]. |
| Recommendation on container and packaging materials: | Glass, polyethylene, polypropylene, etc. |

 8 Exposure controls/Personal protection

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| Appropriate engineering controls: | Keep source tightly closed or install local exhaust ventilation. Provide shower and vanity unit nearby and make clear the location of these. |
| Control value: | Japan control value (2005) Not established. |
| Adopted value: | [JSOH] Not established. [ACGIH] Not established. |
| Individual protection measures, such as personal protective equipment (PPE): | |
| Eye/face protection: | Wear protective eyeglasses or chemical safety goggles. Wear face protection. |
| Hand protection: | Wear impervious glove made from chloroprene, as appropriate. |
| Skin and body protection: | To prevent any contact, wear impervious clothing such as apron, boots, or whole-body suits made from chloroprene, as appropriate. |
| Respiratory protector: | Wear positive pressure self-contained breathing apparatus (SCBA). Gas mask |

 9 Physical and chemical properties

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| Appearance, color: | Colorless liquid |
| Odor: | Not available |



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| pH: | Neutral |
| Melting point/ freezing point: | ≤0C |
| Boiling point: | Approx. 100C |
| Flash point: | (Non-flammable) |
| Auto-ignition temperature: | (Non-flammable) |
| Upper/lower flammability or explosive limits: | (Non-flammable) |
| Vapour pressure: | Not available |
| Vapour density (Air = 1): | Not available |
| Specific gravity (Density): | Approx. 1.17 |
| Solubility: | Solubility in water; Miscible |
| Octanol/water partition coefficient (log Pow): | Not available |
| Decomposition temperature: | Not available |
| Viscosity: | Not available |

10 Stability and reactivity

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| Chemical stability: | This product is considered a stable material under normal and anticipated storage and handling conditions. |
| Possibility of hazardous reactions: | May react with oxidizing agents. |
| Conditions to avoid: | Sunlight, heat, contact with incompatible materials. |
| Incompatible materials: | Strong oxidants |
| Hazardous decomposition products: | Toxic fumes of chlorine / hydrogen chloride (except for carbon monoxide, carbon dioxide and water) |

11 Toxicological information

(Insufficient data are available on the effect of this substance on human health, therefore utmost care must be taken.)

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| Acute toxicity: | Not available |
| Oral:(as KCl) | rat LD50 2600 mg/kg mouse LD50 1500 mg/kg |
| Irritant properties: | May irritate the eyes and skin. |
| Allergenic and sensitizing effects: | Not available |
| Chronic toxicity: | Not available |
| Carcinogenic effects: | Not available |



Mutagenic effects:
Not available

Teratogenic effects:
Not available

Toxicity for reproduction:
Not available

12 Ecological information

(Insufficient data are available on the effect of this substance on the environment, therefore utmost care must be taken.)

Ecotoxicity:
Not available

Persistence and degradability:
Not available

Bioaccumulative potential:
Not available

Biotransportability:
Not available

13 Disposal considerations

Contact a licensed professional waste disposal service to dispose of this material. Comply with all country, national and local regulations. Do not dump this product into sewers, on the ground or into any body of water.

14 Transport information

Basic classification information for the transporting/shipment:

Sea; Not controlled under IMDG's regulations.

Air; Not controlled under ICAO/IATA's regulations.

Special precautions which a user needs to be aware of or needs to comply with in connection with transport or conveyance either within or outside their premises:

Protection from direct sun light in transportation, and confirm the container does not leak.

Carefully load it onto a transporter without dropping, overturning or damaging so that it will stably stays on the transporter.

15 Regulatory information

Follow all laws and regulations in your country.

Disclaimer

For R&D use only. Not for drug, household or other uses.

Warranty

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.