SAFETY DATA SHEET

PRODUCT NAME	Saturated potassium sulfate solution （Internal solution for Mercury sulfate electrode）	Data of issue Date of revision (Confirmation)	15/11/2011 2/4/2024

1. Identification of the substance or mixture and the supplier

Product name	Saturated potassium sulfate solution（Internal solution for Mercury sulfate electrode）
SDS No.	GHS-0025E
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
Recommended uses and restrictions on use	
Recommended use	For analysis
Restrictions on use	When using for purposes other than those recommended, consult a specialist.

2. Hazard identification

GHS classification	Not a hazardous substance or mixture according to the Globally Harmonized System (GHS).
GHS label elements	Not a hazardous substance or mixture according to the Globally Harmonized System (GHS).
Other hazards which do not result in classification	
Important symptoms and outlines of the emergency assumed	None known.

3. Composition/Information on ingredients

substance / mixture　　mixture

Components

No.	Chemical name	CAS No.	Concentration (% w/w)	ENCS / ISHL number
1	Water	7732-18-5	approx. 89%	–
2	Potassium Sulfate	7448-80-5	approx. 11%	1-454

4. First-aid measures

General advice	Do not leave the victim unattended.
If inhaled	Remove victim to fresh air.
	Call a doctor/physician if you feel unwell.
In case of skin contact	Wash off with soap and plenty of water.
	If symptoms persist, contact a physician.
In case of eye contact	Rinse cautiously with water for several minutes.
	Remove contact lenses, if present and easy to do. Continue rinsing.
	Contact a physician immediately.
If swallowed	Rinse mouth with water.
	Do NOT induce vomiting.
	Never give anything by mouth if unconscious.
	If large quantities of this material are swallowed, call a physician immediately.
Most important symptoms and effects, both acute and delayed	No information
Notes to physician	Treat symptomatically.

5. Fire-fighting measures

Suitable extinguishing media	This product does not burn itself.
	Use fire extinguishing agents appropriate for the surrounding conditions.
Unsuitable extinguishing media	None in particular
Specific hazards during fire fighting	No information available.
Specific extinguishing methods	Standard procedure for chemical fires.
Special protective equipment for fire-fighters	Use personal protective equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Use personal protective equipment.
	Remove all sources of ignition.
Environmental precautions	Prevent further leakage or spillage if safe to do so.
	If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal

containment and cleaning up	binder, sawdust).
	Keep in suitable, closed containers for disposal.

7. Handling and storage

Handling

Advice on safe handling	Wash skin thoroughly after handling.
	Do not eat, drink or smoke when using this product.
Avoidance of contact	No information available.
Hygiene measures	When using do not eat or drink.
	When using do not smoke.
	Wash hands before breaks and at the end of workday.

Storage

Conditions for safe storage	Keep in a well-ventilated place.
	Store at room temperature.
	To maintain product quality, do not store in heat or direct sunlight.
	Keep container tightly closed.
Further information on storage stability	No decomposition if stored and applied as directed.

8. Exposure controls/Personal protection

Threshold limit value and permissible exposure limits for each component in the work environment

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection	Suitable respiratory equipment
Hand protection material	Protective gloves
Eye protection	Safety glasses
Skin and body protection	Protective suit

9. Physical and chemical properties

Physical state	Liquid
Color	Colorless and transparent
Odor	Odorless
Melting point / Freezing point	No data available
Initial boiling point and boiling range	No data available
Flammability (liquids)	No data available

Lower explosion limit and upper explosion limit / flammability limit	
Upper explosion limit / Upper flammability limit	No data available
Lower explosion limit / Lower flammability limit	No data available
Flash point	No data available
Decomposition temperature	No data available
pH	No data available
Autoignition temperature	No data available
Self-Accelerating decomposition temperature (SADT)	No data available
Viscosity	
Viscosity, kinematic	No data available
Solubility(ies)	
Water solubility	this product self-aqueous solution
Partition coefficient: n-octanol/water	No data available
Vapor pressure	No data available
Density and / or relative density Relative density	1.08 at 25℃
Relative vapor density	No data available
Particle characteristics Particle size	No data available

10. Stability and reactivity

Reactivity	No data available
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	No data available
Conditions to avoid	Extreme temperatures and direct sunlight
Incompatible materials	No data available
Hazardous decomposition products	Halogen/Hydrogen halide

11. Toxicological information

Acute toxicity	
Potassium Sulfate	
Acute oral toxicity	LD50 (Rat) 6,600 mg/kg
Skin corrosion/irritation	Not classified based on available information.
Serious eye damage/eye irritation	Not classified based on available information.
Respiratory or skin sensitization	
Skin sensitization	Not classified based on available information.
Respiratory sensitization	Not classified based on available information.

Germ cell mutagenicity	Not classified based on available information.
Carcinogenicity	Not classified based on available information.
Reproductive toxicity	Not classified based on available information.
STOT-single exposure	Not classified based on available information.
STOT-repeated exposure	Not classified based on available information.
Aspiration toxicity	Not classified based on available information.
Remarks	No data available

12. Ecological information

Ecotoxicity

Potassium Sulfate

Toxicity to fish

Toxicity to daphnia and other aquatic invertebrates	EC50 (Lepomis macrochirus) 653 mg/L, Exposure time 48 h EC50 (Daphnia magna) 890 mg/L, Exposure time 96 h
Toxicity to algae/aquatic plants	EC50 (Desmodesmus subspicatus) 2,900 mg/L, Exposure time 72 h
Toxicity to fish (Chronic toxicity)	NOEC (Oreochromis mossambicus) 23.75 mg/L, End point Growth inhibition Exposure time 90 Days
Persistence and degradability	No data available
Bioaccumulative potential	No data available
Mobility in soil	No data available
Hazardous to the ozone layer	No data available
Other adverse effects	No data available

13. Disposal considerations

Waste from residues	Can be incinerated, when in compliance with local regulations. Send to a licensed waste management company.
Contaminated packaging	Empty remaining contents. Empty containers should be taken to an approved waste handling site for recycling or disposal. Dispose of contents/ container to an approved waste disposal plant.

14. Transport information

International Regulations

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation	Please refer to the law and local regulations, etc. in each country
Special precautions for user	Not applicable

15. Regulatory information

16. Other information

Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing,

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