

Safety Data Sheet

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

Product Name : Rapid Fire Extinguishing Liquid
Chemical Substance : Potassium Carbonate
Recommended Use : For extinguishing lithium-ion battery fires
Company Name : Seikagakugiken Co., Ltd.
Address : 1-4-1 Kitajo-machi, Joetsu-shi, Niigata Prefecture, Japan
TEL : 025-520-8297
FAX : 025-520-8298
Emergency Contact : Same as above
Date of Preparation : January 6, 2026

SECTION 2 Hazard Identification

GHS Classification

[Health Hazards]

Acute Toxicity (Oral) : Category 4
Skin Corrosion/Irritation : Category 2
Serious Eye Damage/Eye Irritation : Category 2A

[GHS Label Elements]

Pictograms



Signal Word

Danger

Hazard Statements

Harmful if swallowed
Causes skin irritation
Causes serious eye damage

Precautionary Statements

[Prevention]

Wash hands thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/protective clothing/eye protection/face protection.

[Response]

If Swallowed:

Call a poison center/doctor if you feel unwell.
Rinse mouth.

If on Skin: Wash with plenty of water and soap.
If skin irritation 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.
Immediately call a poison center/doctor.

[Other Hazards]

No information available.

[Storage]

Avoid direct sunlight.
Store in a well-ventilated place.
Keep away from ignition sources and heat sources.
Store locked up to prevent theft.
Store at 0°C or above.

[Disposal]

When disposing, entrust to a licensed industrial waste disposal contractor authorized by the prefectural government.

SECTION 3 Composition/Information on Ingredients

Substance/Mixture : Mixture Substance
Chemical Name : Potassium Carbonate
Molecular Formula (Molecular Weight) : CK₂O₃ (-)
CAS No. : 584-08-7 (Potassium Carbonate)
: 7732-18-5 (Water)
: 90045-43-5 (Grapefruit Seed Extract)
Chemical Substance Control Law/Industrial Safety and Health Law Gazette Number : 1-153
Impurities and Stabilizing Additives Contributing to Classification : No information

SECTION 4 First Aid Measures

[If Inhaled]

: Get medical advice/attention if you feel unwell.

[If on Skin]

: If there is any change in appearance or pain, get medical advice/attention.
: Gently wash with plenty of water and soap.
: Take off contaminated clothing and wash it before reuse.

[If in Eyes]

: Immediately rinse with large amounts of clean running water for at least 15 minutes.
: Wash thoroughly including under the eyelids. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists get medical advice/attention.

[If Swallowed]

: Call a doctor if you feel unwell.

: Rinse mouth.

[Most Important Symptoms and Effects, both Acute and Delayed]

Inhalation : Cough, sore throat

Skin : Redness, pain

Eyes : Redness, pain

Ingestion : Burning sensation in throat or chest (Reference: ICSC)

SECTION 5 Firefighting Measures

[Extinguishing Media]

: Non-flammable, so none in particular

[Specific Extinguishing Methods]

: No information

[Specific Hazards Arising from the Chemical in a Fire]

: In case of fire, harmful substances (carbon monoxide, carbon dioxide, metal oxide fumes) may be released.

[Protection of Firefighters]

: Wear appropriate self-contained breathing apparatus and protective clothing (heat-resistant) for eyes and skin.

SECTION 6 Accidental Release Measures

[Personal Precautions, Protective Equipment, and Emergency Procedures]

: Wear protective equipment.

[Environmental Precautions]

: Dispose in accordance with relevant regulations.

: Low hazard to aquatic environment. If a very large amount enters water, sewage, or soil, contact local authorities.

(Reference: GESTIS)

[Methods and Material for Containment and Cleaning Up]

: Remove all ignition sources (no smoking, sparks, or flames in vicinity).

: Carefully collect residue and transfer to a safe place. Do not release into the environment.

SECTION 7 Handling and Storage

[Handling]

Technical Measures : Wear protective equipment as necessary.

Safe Handling Precautions: : Wash hands thoroughly after handling.

Do not eat, drink or smoke when using this product. Wear protective protective clothing/ gloves/eye protection/face protection. Close container tightly after each use.

[Storage]

Suitable Storage Conditions

: Avoid direct sunlight and store in a cool place as much as possible.

: Keep away from ignition sources and heat sources.

: Store in a tightly closed container.

: Store at 0°C or above.

SECTION 8 Exposure Controls/Personal Protection

[Administrative Levels]	: Not established
[Permissible Exposure Limits]	: Not established
[Engineering Controls]	: Install appropriate general ventilation or local exhaust ventilation.
[Personal Protective Equipment]	
Respiratory Protection	: Wear appropriate respiratory protection.
Eye Protection	: Wear appropriate eye protection.
Skin and Body Protection	: Wear appropriate protective clothing.
[Hygiene Measures]	: Wash hands thoroughly after handling.

SECTION 9 Physical and Chemical Properties

Physical State	: Liquid
Color	: Almost transparent
Odor	: Odorless
pH	: 11–13
Melting Point	: No data
Boiling Point, Initial Boiling Point and Boiling Range	
	: No data
Flash Point	: No data
Explosive Limits	: No data
Vapor Pressure	: No data
Vapor Density (Air=1)	: No data
Solubility	: Insoluble in alcohol, glycerin
Octanol/Water Partition Coefficient	: No data
Auto-Ignition Temperature	: Non-flammable
Decomposition Temperature	: No data

SECTION 10 Stability and Reactivity

[Reactivity]	: Considered stable under prescribed storage and handling conditions.
[Possibility of hazardous reactions]	: Reacts violently with acids and chlorine trifluoride.
[Conditions to Avoid]	: Heating
[Incompatible Materials]	: Acids, chlorine trifluoride, metal powders
[Hazardous Decomposition Products]	: No data

SECTION 11 Toxicological Information Information as Chemical Substance

[Acute Toxicity] (Oral)	: Rat LD50 >1870 mg/kg (HSDB(2001), IUCLID(2000)) > 2000 mg/kg (IUCLID(2000)) (GHS Classification: Category 4)
(Dermal)	: No data
(Inhalation) Gas	: No data
(Inhalation) Vapor	: No data

[Skin Corrosion/Irritation]	: In rabbit Draize test, irritation score 2.5 (max 8), irritating (IUCLID(2000)), classified as Category 2.
[Serious Eye Damage/Eye Irritation]	: In rabbit Draize test, average scores: corneal opacity 2.17, iritis 1.33, conjunctival redness 3.00, conjunctival edema 4.00, irritation score 63.2 (max 110), irritating (IUCLID(2000)), classified as Category 2A.
[Respiratory or Skin Sensitization]	
Respiratory Sensitization	: No data
Skin Sensitization	: No data
[Germ Cell Mutagenicity]	: Cannot be classified due to insufficient data
[Carcinogenicity]	: No data
[Reproductive Toxicity]	: Cannot be classified due to insufficient data
[Specific Target Organ Toxicity]	
Single Exposure	: No data
Repeated Exposure	: No data
[Aspiration Hazard]	: No data

SECTION 12 Ecological Information

[Ecotoxicity]	: Not classified
[Persistence and Degradability]	: No data
[Bioaccumulative Potential]	: No data
[Mobility in Soil]	: No data
[Hazardous to the Aquatic Environment]	
Acute	: Not classified
Chronic	: Not classified
[Hazardous to the Ozone Layer]	: Cannot be classified

SECTION 13 Disposal Considerations

[Residual Waste Disposal Methods]	: Dispose in accordance with relevant regulations.
[Contaminated Containers and Packaging]	: Clean containers for recycling or dispose appropriately in accordance with relevant regulations and local government standards. Completely remove contents before disposing of containers.

SECTION 14 Transport Information

[Domestic Regulations]	
Land Transport	: Not applicable
Marine Transport	: Not applicable
Air Transport	: Not applicable

[International Regulations]

UN Number : —
Proper Shipping Name : —
UN Class : —
Marine Pollutant : Not applicable

SECTION 15 Regulatory Information

[Fire Service Act Hazardous Materials] : Not applicable

[Chemical Substances Control Law (PRTR Law)]
: Not applicable

[Poisonous and Deleterious Substances Control Law]
: Not applicable

SECTION 16 Other Information

[Presence of Residual Pesticides] : None

Manufacturer : Seikagakugiken Co., Ltd.

References

- Chemical Substances Control Law (PRTR) MSDS Target Substances Full Data
- Industrial Safety and Health Law MSDS Target Substances Full Data
- JAISH (Japan Industrial Safety and Health Association) Website
- NITE (National Institute of Technology and Evaluation) Website
- Japan Industrial Safety and Health Association Website
- NITE Chemical Risk Information Platform (NITE-CHRIP)
- International Chemical Safety Cards (ICSC)
- Hazardous Substances Data Bank (HSDB)
- GESTIS Substance Database (GESTIS)

The information provided is based on currently available documents, information, and data. However, no guarantees are made regarding content, physical/chemical properties, hazards, etc. This information may be added to or revised if new information becomes available. The precautions are for normal handling; for special handling, implement safety measures appropriate for the use and application before use.