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1. Identification

Chemical or mixture (trade name):POTASSIUM CARBONATE SOLUTION (K₂CO₃)**Main recommended uses for the substance or mixture:**Special Glass manufacturing; Production of potassium silicate; Food industry.**Company Name:** Katrium Chemical Industries Ltd.
Address: John Paul Road, 530 - Honorio Gurgel
CEP: 21512-002
Rio de Janeiro / RJ - Brazil**Contact Phone:**55 (21) 2472-9060**Emergency telephone number:** SUATRANS COTEC - Or 0800 707 7022 0800 17 2020**Internet:**www.katrium.com.br

2. Hazards identification

the substance or mixture:

Corrosion / skin irritation: Category 2

Serious eye damage / eye irritation: Category 2A

Toxicity for specific target organs - single exposure: Category 3

GHS label elements

**Words of warning:**Attention**Phrase (s) of danger:**H315 - Causes skin irritation. H319 - Causes serious eye irritation. H335 - May cause respiratory irritation.**Phrase (s) of caution:**

- **General:**not suitable
- **Prevention:**P264 - Wash thoroughly after handling. P280 - Wear protective gloves / protective clothing / eye protection / face protection.
- **the emergency response:**P305 + P351 + P338 - IN CASE OF EYE CONTACT: Rinse thoroughly with water for several minutes. In the case of wearing contact lenses, remove them, if it is easy. Continue rinsing. P337 + P313 - If eye irritation persists: consult a doctor. P304 + P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.
- **Storage:**P403 + P233 - Store in a well-ventilated place. Keep the container tightly closed.

Other hazards which do not result in classification:There is a danger of intoxication.**Other information:**Not available.

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3. Composition and information about ingredients

Product type: Substance**Ingredients or impurities contributing to hazard:**

Common chemical name or technical	CAS	Concentration or concentration range (%)
POTASSIUM CARBONATE	584-08-7	50

4. First aid actions

First aid actions

- **Inhalation:**Remove the person from contaminated area. Look ventilated place. If not breathing, resuscitate and administer oxygen. Seek medical attention immediately.
- **Skin contact:**Wash the affected area immediately with plenty of water for at least 20 minutes. Consult a doctor for treatment.
- **Eye contact:**With eye held open, rinse immediately with plenty of water for at least 20 minutes. immediately consult an ophthalmologist if symptoms persist. When dealing with caustic substances, notify the emergency doctor immediately (keywords: burns in the eye).
- **ingestion:**immediately dilute the chemical, drinking large quantities of water or milk. Vomiting may occur spontaneously, but does not lead. Seek medical attention immediately.

Most important symptoms and effects, acute and delayed:It causes skin irritation. Causes serious eye irritation. May result in respiratory irritation

Notes to physician:Provide wash facilities for eyes and skin near the work area.

5. Fire fighting measures

Suitable extinguishing agents:Water spray, foam, CO₂, dry powder.

Unsuitable extinguishing media:Water jet.

Specific hazards of the substance or mixture:The product is not flammable.

Protective measures of the fire fighting team:In case of insufficient ventilation, wear suitable respiratory equipment.

6. control measures to spill or leak

Personal precautions, protective equipment and emergency procedures

- **For staff that is not part of the emergency services:** Do not allow the product contact with skin, eyes and mucous membranes. Do not handle broken packages. Do not touch the spilled material.
- **For emergency service personnel:** Use personal protective equipment described in section 8.

Environmental precautions: Avoid environmental contamination. Do not get in contact with the sewage and rainwater. Do not dump the soil.

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Methods and materials for sealing and containing: Use PPE. Collect contaminated material in resistant containers. Eliminate the contaminated material and its container as hazardous waste in accordance with local regulations.

area isolation: Keep unauthorized persons away.

Methods and materials for cleaning: Isolate the area and collect the product. Remove the product with proper equipment. Pack the residue in suitable container to disposal.

7. Handling and Storage

Precautions for safe handling

- **Worker exposure prevention:** Use personal protective equipment.
- **Fire and explosion prevention:** The substance is not flammable.
- **Precautions and guidelines for safe handling:** The usual precautions for handling chemicals should be observed. Avoid any direct contact with the material.
- **Hygiene measures**
 - **appropriate:** Wash hands before breaks and at the end of the working period. Do not eat food or smoke during the work period. Remove contaminated clothing immediately.
 - **inappropriate:** Do not eat, drink or smoke when handling the product.

Safe storage conditions

- **appropriate conditions:** Conditions for safe storage, including any incompatibilities. Keep container tightly closed in a dry and ventilated place.
- **Conditions that should be avoided, including any incompatibilities:**
- **Packaging materials**
 - **recommended:** Plastic.
 - **inadequate:** Copper, brass, light metals.

Other information: Maintaining the sealed container. Use dikes or natural barriers to contain the leakage of the product. Take up dry. If possible leakage sealed using plugs, sealing strap or reversing the hole / slot / crumpled up. Collect all the material in containers suitable and properly labeled for subsequent treatment and disposal. Waste must be disposed of according to environmental local, state or federal law. To verify an appropriate location overflow and perform the security procedures described above.

8. Exposure control and personal protection

Control parameters

- **Occupational exposure limits:** (NR 15) - there is no exposure limit, product not classified.
- **Biological indicators:** There are biological indicators of exposure established by Brazilian legislation - NR 07.

Engineering control measures: No action is required engineering. It is recommended adequate ventilation and existence device as emergency showers and eye wash.

Personal protective measures

- **eye / face protection:** wide vision safety goggles.

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- **Skin Protection:** PVC boots.
- **Breath protection:**Respirator with chemical filter (the case of brief exposure). In case of longer exposure, use an autonomous breathing mask.
- **Hand protection:** rubber gloves (PVC)
- **Thermal Hazards:** Not available.

9. Physical and chemical properties

- **Aspect:**
physical state:colorless liquid
- **Odor:**Odorless
- **Odor threshold:**Not available
- **pH:**~ 11.5 to 12.5
- **Melting point / freezing point:**N / -21 to 17 ° C
- **Initial boiling point:**Not available
- **Boiling Temperature Range:**Not available
- **Flash Point:**Non flammable
- **Evaporation rate:**Not available
- **Flammability (solid, gas):**Non flammable
- **lower flammability limit or explosive:**Not available
- **flammability limit or greater explosiveness:** Not available
- **Steam pressure:**Not available
- **Vapor Density:**Not available
- **Relative density:**1.53 g / cm³ at 25 ° C
- **Solubility (s):**100%
- **Partition coefficient - n - octanol / water:** Not available
- **Autoignition Temperature:**Not available
- **Decomposition temperature:**Not available
- **Viscosity:**Not available

10. Stability and reactivity

Chemical stability: Stable under recommended conditions of storage and handling refer to handling and storage.

Reactivity:Exothermic reaction with acids.Carbon dioxide evolution.

Possibility of hazardous reactions: Reaction with acids (bases).

Conditions to avoid: None known.

Incompatible materials: Strong acids and oxidizing agents.

Hazardous decomposition products: Carbon dioxide.

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11. toxicological information

Acute toxicity: In contact with skin and / or eyes, irritation.

Corrosion / skin irritation: It causes skin irritation

Serious eye damage / irritation: Causes serious eye irritation

respiratory or skin sensitization: May result in respiratory irritation

Germ cell mutagenicity: Conclusion: not sufficient for classification

carcinogenicity: Conclusion: not sufficient for classification

Reproductive toxicity: Conclusion: not sufficient for classification

Toxicity for specific target organs - single exposure: Conclusion: not sufficient for classification

Toxicity for specific target organs - repeated exposure: Conclusion: not sufficient for classification

Aspiration hazard: May result in respiratory irritation

Other information: Not available

12. ecological information

ecotoxicity: Not classified as toxic. Large spills may cause damage to aquatic life and water quality

Persistence and degradability: Not available

bioaccumulative potential: Not potentially bioaccumulative

Mobility in soil: water soluble - Final destination of the product: Water.

Other adverse effects: Do not allow that he shall come tanks, rivers and rainwater.

13. Considerations disposal

Recommended methods for disposal

- **Product:** Keep any leftover product in their original containers tightly closed. Do not dispose in sewer systems, waterways and sewage treatment plants.
- **Used packaging:** Do not reuse empty containers. The containers should be washed and neutralized. Improper disposal of empty containers and remains of products on the environment cause contamination of soil, water and air, damaging the fauna, flora and human health.

14. Transport Information

National and international regulations:

This product is not classified as hazardous by Resolution No. 5232 of December 14, 2016, The Ministry of Transport.

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15. Regulatory Information

specific safety regulations, health and the environment for the chemical:

BRAZIL - MINISTRY OF LABOR - NR 26 - Decree 229.

BRAZIL - MINISTRY OF TRANSPORT - ANTT - Resolution No. 5232, of December 14, 2016.

BRAZIL - ABNT NBR 14725 - Parts 1, 2, 3 and 4.

BRAZIL - MINISTRY OF LABOR - Decree 2657.

16. Other information

important information, but not specifically described the previous sections:

This MSDS was based on the current knowledge of the product and provides information on the protection, safety, health and the environment.

The caveat is that the handling of any chemical substance requires prior knowledge of its hazards for the user. It is up to the user company's product promotes training of its employees and contractors about the possible risks from the product.

References: [ABNT] ASSOCIATION BRAZILIAN TECHNICAL STANDARDS NBR 14725.

BRAZIL. Ministry of Transport. National Land Transportation Agency.

[ECHA] European Union. ECHA European Chemical Agency

Captions and abbreviations: CAS - Chemical Abstracts Service