

SDS Potassium Chlorate

Date of Issue: 10/07/2019

Expiry: 01/08/2024

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Company Name **ECP Limited**
Address: 39 Woodside Ave, Northcote, Auckland, New Zealand

| | | |
|---|--------------------|--------------------|
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|----------------|--------------------|-------------|--------------------|------------------------|------------------|------------------------------|
| Product | Potassium Chlorate | Code | 41601, 41608 | | | |
| CAS# | HSNO# | UN # | DG Class/es | Packing group # | Tracking? | Handlers Certificate? |
| 3811-04-9 | HSR001337 | 1485 | 5.1 | II | No | No |

Recommended use: Laboratory Investigations

2. Hazards identification

2.1 GHS Classification

- Oxidizing liquids or solids (Category A)
- Acute toxicity, Oral (Category D)
- Acute toxicity, Inhalation (Category D)
- Acute toxicity, Dermal (Category E)
- Skin irritation (Category B)
- Eye irritation (Category A)
- Aquatic toxicity (Acute or Chronic) (Category D)

2.2 GHS Label elements, including precautionary statements



Pictogram

Signal word **Danger**

Hazard statement(s)

H271 May cause fire or explosion; strong oxidiser.

H302 Harmful if swallowed.

H313 May be harmful in contact with skin.

H316 Causes mild skin irritation.

H320 Causes eye irritation.

H332 Harmful if inhaled.

H401 Toxic to aquatic life.

Precautionary statement(s)

Prevention

P210 Keep away from heat.

P220 Keep/Store away from clothing/ combustible materials.

P221 Take any precaution to avoid mixing with combustibles.

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P283 Wear fire/ flame resistant/ retardant clothing.

Response

P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P306 + P360 IF ON CLOTHING: rinse immediately contaminated clothing and skin with plenty of water before removing clothes.

P312 Call a POISON CENTER or doctor/ physician if you feel unwell.

P330 Rinse mouth.

P332 + P313 If skin irritation occurs: Get medical advice/ attention.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

P371 + P380 + P375 In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

Disposal

P501 Dispose of contents/ container to an approved waste disposal plant.

3. Composition/information on ingredients

3.1 Substances

Formula: ClKO₃

Molecular weight: 122.55 g/mol

| Component | Concentration |
|--------------------|---------------|
| Potassium chlorate | |
| CAS No. | 3811-04-9 |
| | <= 100% |

4. First aid measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

Anaemia, nausea, vomiting, diarrhoea, haemorrhage, convulsions, liver damage. Absorption into the body leads to the formation of methaemoglobin, which in sufficient concentration causes cyanosis.

Onset may be delayed 2 to 4 hours or longer.

5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Hydrogen chloride gas, Potassium oxides

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

Use water spray to cool unopened containers.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas.

Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal.

7. Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition. No smoking.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

8. Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

We are not aware of any national exposure limit.

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards.

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.

Wash and dry hands.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Body Protection

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type or respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance

Form: crystalline

Colour: white

b) Odour

Odourless

c) pH

5.0 - 6.5 at 61.3 g/l at 25 °C

d) Melting point/freezing point

Melting point/range: 356 °C - lit.

e) Relative density

2.320 g/cm³

f) Water solubility

69.9 g/l at 20 °C

10. Stability and reactivity

10.1 Incompatible materials

Strong reducing agents, powdered metals, strong acids, alcohols, organic materials.

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - rat - 1,870 mg/kg

LC50 Inhalation - rat - male and female - 4 h - > 5.1 mg/l

LD50 Dermal - rat - male and female - > 2,000 mg/kg

Serious eye damage/eye irritation

Eyes - rabbit - No eye irritation

Germ cell mutagenicity

Genotoxicity in vitro - Ames test - *S. typhimurium* - with and without metabolic activation - negative

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Potential health effects

Inhalation

Harmful if inhaled. May cause respiratory tract irritation.

Ingestion

Harmful if swallowed.

Skin

May be harmful if absorbed through skin. May cause skin irritation.

Eyes

May cause eye irritation.

Signs and Symptoms of Exposure

Anaemia, nausea, vomiting, diarrhoea, haemorrhage, liver damage, convulsions. Absorption into the body leads to the formation of methaemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer.

Additional Information

RTECS: FO0350000

12. Ecological information

12.1 Toxicity

Toxicity to algae static test EC50 - Nitzschia closterium - 2.8 mg/l - 72 h

12.2 Other adverse effects

Toxic to aquatic life with long lasting effects.

13. Disposal considerations

13.1 Waste treatment methods

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

14. Transport Information Table

| | | ADR/RID – European packaging certification | IMDG International Maritime Dangerous Goods Code | IATA – DGR International Air Travel Association – Dangerous Goods Regulations |
|------|---------------------------------|--|---|--|
| 14.1 | UN Number | 1485 | 1485 | 1485 |
| 14.2 | UN Proper Shipping name | POTASSIUM CHLORATE | POTASSIUM CHLORATE | Potassium chlorate |
| 14.3 | Transport Hazard Class | 5.1 | 5.1 | 5.1 |
| 14.4 | Packaging group | II | II | II |
| 14.5 | Environmental Hazards | Yes | Yes | No |
| 14.6 | Special precautions for user | None | | |

15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulatory information

HSNO Approval Code: HSR001337

HSNO Group Standard Approval: HSR002596 - Laboratory Chemicals and Reagent Kits Group Standard 2006

Tracking Required: not required

Approved Handler Cert.: not required

16. Disclaimer

The information above is believed to be accurate and represents the best information currently available to us. However, the information is not a guarantee expressed or implied, with respect to such information, and we assume no liability resulting from its use. Anyone using the chemical

described here should ensure that he or she has the appropriate training and has the expertise and any equipment required for safe handling. If clarification or further information is required, please contact ECP Ltd or refer to the official handler of dangerous goods within your own company. The user should also make their own investigations to determine the suitability of the product for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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