

Revision: 2.0
(Replaces revision 1.1 of 16 April 2021)

Revision date: 16 October 2025
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Section 1. Identification

1.1 Product Identifier 1337

Product Name POTASSIUM CHLORATE
CAS Number 3811-04-9
REACH Registration No 01-2119494917-18-XXXX
Molecular Formula $KClO_3$ $M_r=122.55$

1.2 Relevant identified uses of the substance or mixture & uses advised against

Uses of Material Chemical for industrial and laboratory use. Not suitable for domestic use.

1.3 Supplier Vickers Laboratories Ltd



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1.4 Emergency Telephone (08:00-16:30) 44 113 2362811 (24hr) 112 (Have this document to hand)

Section 2. Hazards Identification

2.1 Classification of the substance or mixture

Classification according to regulation (EC) 1272/2008 as amended by GB-CLP Regulation, UK SI 2019/720 & UK SI 2020/1567

Oxidising solid, category 1 H271: May cause fire or explosion; strong oxidizer.
Acute toxicity, category 3 (oral) H301: Toxic if swallowed.

2.2 Label elements

Labelling according to regulation (EC) 1272/2008 as amended by GB-CLP Regulation, UK SI 2019/720 & UK SI 2020/1567

Signal word Danger

Hazard Pictograms



Hazard Statements May cause fire or explosion; strong oxidizer. Toxic if swallowed.

Precautionary Statements Keep away from heat / sparks/open flames/hot surfaces - No smoking. Keep / Store away from clothing / combustible materials. Take any precaution to avoid mixing with combustibles... Wear protective gloves / protective clothing / eye protection. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

Section 3. Composition

3.1 Substances

Component	CAS No.	EC No.	REACH No.	Conc w/w	CLP Classification (1272/2008/CE)
Potassium chlorate	3811-04-9	231-887-4	01-2119494917-18-XXXX	>99.5%	Ox. Sol. 1, Acute Tox. 3 (O)

Section 4. First Aid

4.1 Description of first aid measures

Eyes	Irrigate thoroughly with plenty of water for at least 10 minutes, holding the eye open. If discomfort persists OBTAIN MEDICAL ATTENTION.
Skin	Wash off skin thoroughly with water.
Inhalation	Remove from exposure. If material has reacted with an acid to form, chlorine, seek immediate medical assistance. OBTAIN MEDICAL ATTENTION.
Ingestion	If conscious give plenty of water to drink. Keep warm and at rest. If there is difficulty in breathing give oxygen if available. If breathing stops or shows signs of failing, apply artificial resuscitation. OBTAIN MEDICAL ATTENTION URGENTLY.
Personal protection for first aiders	Wear protective gloves / eye protection.

4.2 Most important symptoms and effects, both acute & delayed.

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed.

No further relevant information available.

Section 5. Fire Fighting

5.1 Extinguishing media

Extinguishing Media	Water spray.
Unsuitable Media	Nothing specified.

5.2 Special hazards arising from the substance or mixture

Hazards	May evolve toxic fumes if involved in a fire. Mixtures with combustible materials are flammable. Mixtures with finely divided combustible materials can react explosively.
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5.3 Advice for firefighters

Advice for firefighters	Evacuate area immediately. Keep up wind. Avoid exposure to toxic vapours and fumes. Fire-fighters should wear protective clothing and breathing apparatus.
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Section 6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Protection	Evacuate area immediately. If contact with acid is possible, use full protective clothing and breathing apparatus. Only re-enter area with full protective clothing and breathing apparatus.
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6.2 Environmental precautions

Environmental	Keep material out of sewers, storm drains, surface waters and soil. Notify the Environmental Agency and local Environmental Health Officer if major spillage occurs.
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6.3 Methods and material for containment and cleaning up

Major Spillage	Shovel/sweep up into container for removal Wash area down with copious amounts of water.
Minor Spillage	Wash area down with copious amounts of water.

6.4 Reference to other sections

See section 8.2 for information on protective equipment and section 13 for information on disposal.

Section 7. Storage & Handling

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Do not breath dust. Do not allow to contaminate clothing.

Ensure Local Exhaust Ventilation maintains dust concentrations to a minimum.

7.2 Conditions for safe storage, including any incompatibilities

Well ventilated, cool, dry storage . Store in a suitable area for oxidising agents. Keep well separated from combustible materials.

7.3 Specific end use(s)

See section 1.2.

Section 8. Workplace Exposure & Personal Protection

8.1 Control parameters

Component	CAS No	Concentration	Workplace Exposure Limits			
			Long Term (8hr TWA)		Short Term 15min period	
Potassium chlorate	3811-04-9	>99.5%	-	-	-	-

Exposure data source(s) No occupational exposure data currently available.

8.2 Exposure controls

Respiratory Protection	If process creates significant amounts of dust use L.E.V. or wear suitable dust mask.
Hand Protection	Wear gloves.
Eye Protection	Use tightly fitting chemical splash proof glasses or goggles.
Skin Protection	Avoid contact with skin. If skin contact or contamination of clothing is likely, protective clothing must be worn.
Special Hazards	No special precautions required.

Section 9. Physical & Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance	White powder.
Odour	No specific odour.
pH	7 @ 20°C solution.
Boiling Point	400°C
Melting Point	356°C
Flash Point	Not applicable
Upper Flammable Limit	Not applicable
Lower Flammable Limit	Not applicable
Auto Ignition	Not applicable
Explosive Properties	No.
Oxidising Properties	A strong oxidising agent.
Vapour Pressure	Not applicable
Relative Density	2.5000
Water Solubility	7.3%

9.2 Other information

No data available.

Section 10. Stability & Reactivity

10.1	Reactivity	No data available.
10.2	Chemical Stability	Stable under normal conditions
10.3	Possibility of hazardous reactions	No data available.
10.4	Conditions to Avoid	Avoid contact with acids or combustible materials.
10.5	Incompatible materials	Many organic compounds. Combustible materials. Acids.
10.6	Hazardous Decomposition Products	Liberates oxygen on decomposition which will assist in a fire. May produce hazardous fumes if involved in a fire.

Section 11. Toxicological Information

11.1 Information on toxicological effects

Eyes	Contact with the solid or dust may be irritating to the eyes.
Skin	The solid and solutions may be irritating to the skin.
LD50 Skin	Not available
Ingestion	Toxic if swallowed. Readily absorbed through digestive tract and acts as a strong blood poison. Lthal dose 5-30g Symptoms include greyish-blue complexion,vomiting,diarrhoea,shortness of breath leading to collapse.
LD50 Oral	1870mg/kg Rat
Inhalation	May be harmful by inhalation.
LD50 Inhalation	Not available
TCLo	Not available
Carcinogenicity	Not considered to be a carcinogen.
Mutagenicity	Not considered to be a mutagen.
Reproductive Effects	None identified.

Section 12. Ecological

12.1	Toxicity	Low levels are readily bio-degraded in the environment. Higher levels are toxic to marine and plant life.
	LC50 Algal	Not available
	LC50 Crustacea	Not available
	LC50 Fish	Not available
12.2	Persistence and degradability	No data available.
12.3	Bioaccumulative potential	No data available.
12.4	Mobility in soil	No data available.
12.5	Results of PBT & vPvB assessment	Assessment not required.
12.6	Other adverse effects	None known at present.

Section 13. Disposal Considerations

13.1 Waste treatment methods

Disposal Methods	Do not dispose of as domestic waste.
Contaminated Packaging	Wash out containers with water.

Section 14. Transport Information

14.1 UN Number	1485
14.2 Proper Shipping Name	Potassium chlorate
14.3 Transport classes	
UN classification	5.1
Subsidiary hazard(s)	None
Transport category	2
ADR Hazard ID	50
Tunnel Restriction Code	E
14.4 Packing Group	II
14.5 Environment hazards	See section 12.
14.6 Special precautions for user	No special precautions required.
14.7 Transport in bulk	Not transported in bulk.



Section 15. Regulatory Information

15.1 Safety, health and environment regulations specific for substance/mixture.

Classification, Labeling & Packaging of Substances & Mixtures Regulations (1272/2008/CE) as amended by GB-CLP Regulation, UK SI 2019/720 & UK SI 2020/1567

Classification Oxidising solid, category 1; Acute toxicity, category 3 (oral)

Signal word Danger

Hazard Pictograms



Hazard Statements H271, H301
May cause fire or explosion; strong oxidizer. Toxic if swallowed.

Precautionary Statements P210, P220, P221, P280, P301+P310
Keep away from heat / sparks/open flames/hot surfaces - No smoking. Keep / Store away from clothing / combustible materials. Take any precaution to avoid mixing with combustibles... Wear protective gloves / protective clothing / eye protection. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

15.2 Chemical safety assessment

Assessment not required.

Section 16. Other Information

The information contained in this document only covers the hazards presented by this material, it DOES NOT constitute a workplace risk assessment. See sections 11 for toxicological information and section 12 for ecological information.

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