Material Safety Data Sheet
Potassium Perchlorate

Edition: 19/1/2017

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1) Identification of substance/preparation and of the company undertaking

Material — Potassium Perchlorate (Free flow)
Potassium Perchlorate (High Purity)

CAS No — 7778-74-7

Company — Inoxia Ltd
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2) Hazard Identification

Classification according to Regulation (EC) No 1272/2008

GHS03 flame over circle
Ox. Sol. 1 — H271 May cause fire or explosion; strong oxidiser.

GHS07
Acute Tox. 4 — H302 Harmful if swallowed.

Label elements

· **Labelling according to Regulation (EC) No 1272/2008**

The substance is classified and labelled according to the CLP regulation.

· **Hazard pictograms**

GHS03

GHS07

· **Signal word** Danger

· **Hazard-determining components of labelling:**

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Hazard statements

H271 May cause fire or explosion; strong oxidiser.
H302 Harmful if swallowed.

Precautionary statements

P221 Take any precaution to avoid mixing with combustibles.
P283 Wear fire/flame resistant/retardant clothing.
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P220 Keep/Store away from clothing/combustible materials.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P264 Wash thoroughly after handling.
P270 Do no eat, drink or smoke when using this product.
P306+P360 IF ON CLOTHING: rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
P371+P380+P375 In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.
P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. P330 Rinse mouth.
P501 Dispose of contents/container in accordance with local/regional/national/ international regulations.

3) Composition

Dangerous components:

Name	CAS No. EINECS No.	Content	Hazard
Potassium Perchlorate	7778-74-7 231-912-9	99.8%	Ox. Sol. 1, H271 Acute Tox. 4, H302

4) First Aid Measures

Description of first aid measures

General information — If you feel unwell, seek medical advice (show the label where possible).

After inhalation — Remove victim immediately from source of exposure.
Supply fresh air; consult doctor in case of complaints.

After skin contact — Remove contaminated clothing.
Immediately wash with water and soap and rinse thoroughly.
Rinse with water.
If skin irritation continues, consult a doctor.

After eye contact — Remove contact lenses.
Immediately flush eyes with plenty of water for atleast 15 minutes and get medical attention if irritation persist.

After swallowing — Rinse mouth thoroughly.
Drink water or milk.
Never give an unconscious person anything through the mouth.
DO NOT INDUCE VOMITING.
Obtain medical attention

Information for doctor — Most important symptoms and effects, both acute and delayed
The severity of the symptoms described will vary dependant of the concentration and the length of exposure.

Effects may be delayed. Keep affected person under observation. Cyanosis (blue tissue condition, nails, lips and/or skin). Gastrointestinal symptoms, including upset stomach.
Nausea
Vomiting

5) Fire Fighting

Oxidising materials, although not classified as combustible, can either by yielding oxygen or by similar processes, increase the risk and intensity of fires in other materials which they come into contact with.
Contact with combustible material may cause fire
With this substance contact with combustible material or reducing agents may cause an explosion

Suitable extinguishing media
- Water
- CO_2
- Foam
- Sand
- Earth
- Dry chemical
- Do not use water in a jet

Solutions spilled on clothing and allowed to dry may self ignite giving severe burns
Drums should be sprayed with water to prevent risk of explosion
If involved in a fire harmful fumes may be evolved.
Self contained breathing apparatus should be worn.

6) Accidental Release

Wear suitable protective equipment
Avoid contact with skin and eyes
Do not inhale dust
Shovel or vacuum up
Do not adsorb into sawdust or other combustible material
Avoid raising dust clouds
Deposit in a safe place, in a clearly marked container

7) Handling/Storage

Keep in tightly closed containers in a dry area away from heat
Containers may explode if heated
Store away from heat, sources of ignition, flammable substances, reducing substances or combustible materials
No smoking
Ensure good ventilation, if dust may be generated
Do not inhale dust
Wear suitable protective equipment

8) Exposure Controls

Workplace Exposure Limits (WEL) EH40/2005
No specific exposure limit has be assigned, however, personal exposure should be kept below
- 10mg/m^3 [8 hour TWA] Total inhalable dust
- 4mg/m^3 [8 hour TWA] Respirable dust

The airborne concentration should be kept below the above exposure standards by the use of appropriate ventilation and collection measures. If this is not practicable then personal protection must be worn.

Respiratory protection	Wear an approve mask for fine harmful inorganic dusts, half or full face depending on conditions with type P3 white cartridge
Hand protection	Wear natural rubber, PVC or Nitrile rubber gloves for maximum protection and breakthrough time (BTT). Check with suppliers concerning the performance of gloves. Provide good protection during normal working
Eye protection	Wear approved chemical safety goggles giving complete protection to the eyes
Clothing	Wear overalls, preferably with apron and safety boots. All skin should be covered

9) Physical/Chemical Properties

Appearance	White crystalline solid or white powder
Odour	Odourless
Melting Range	>150ºC decomposes at 400 ºC
SG	2.52
Solubility in Water	Soluble

10) Stability/Reactivity

Reactivity

Chemical stability

Thermal decomposition / conditions to be avoided:

Stable under recommended storage and handling conditions(See section 7).

Possibility of hazardous reactions

No dangerous reactions known.

Conditions to avoid

Avoid heat, flame and other sources of ignition.
Exposure to moisture.
Avoid exposure to air.

Incompatible materials

Strong reducing agents
Flammable/combustible material.
Metal powders.
Strong acids.
alcohol.
Glycols

Hazardous decomposition products

Fire or high temperatures create:
Chlorine
Carbon monoxide (CO) and carbon dioxide (CO2)

11) Toxicological Info

Harmful if swallowed
Ingestion or inhalation may give symptoms of nausea, vomiting and muscular weakness
Excessive amounts may cause systemic damage
May cause burns to the skin and eyes
The solid and solutions are irritating to the skin and eyes and may cause chemical burns
Dust may be irritating to the nose, mucous membranes, respiratory tract and may result in coughing and breathing difficulties
Solutions spilled on clothing and allowed to dry may self-ignite giving severe burns

12) Ecological Information

Toxicity

Aquatic toxicity EC50/48h 670 mg/l (Daphnia)

General notes: Avoid transfer into the environment.

13) Disposal Consideration

Waste material should be shovelled or vacuumed up
Placed in a labelled, dry, closed container in a safe place and disposed of in accordance with The Environmental Protection Act 1990 and Hazardous Waste Regulations 2005

14) Transport Information

UN/UK:

UN No.	1489
UN Haz Class	5.1
Proper shipping name	Potassium Perchlorate
Classification	Oxidising substance
Symbol	Oxidiser
Packing Group	II
Emergency action code	1Y

ADR/RID:

UN No.	1489
UN Haz Class	5.1
Proper shipping name	Potassium Perchlorate
Classification	Oxidising substance
Symbol	Oxidiser
Packing Group	II
Hazard classification	50

IATA/ICAO:

UN No.	1489
UN Haz Class	5.1
Proper shipping name	Potassium Perchlorate
Classification	Oxidising substance
Symbol	Oxidiser
Packing Group	II

IMCO:

UN No.	1489
UN Haz Class	5.1
Proper shipping name	Potassium Perchlorate
Classification	Oxidising substance
Symbol	Oxidiser
Packing Group	II

15) Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture
Labelling according to Regulation (EC) No 1272/2008
Hazard statements Please refer section 2.
National regulations:
Information about limitation of use:
Employment restrictions concerning juveniles must be observed.
Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16) Other Information

· Relevant phrases
H271 May cause fire or explosion; strong oxidiser.
H302 Harmful if swallowed.
R22 Harmful if swallowed.
R9 Explosive when mixed with combustible material.

This information is for health and safety guidance only, is not a material specification, and does not constitute the user's own assessment of suitability, and workplace risk as required by any other Health and Safety legislation. It is accurate to the best of our knowledge and belief, but since the conditions of handling and use are outside our control we make no guarantee of results, and assume no liability for damages incurred by use of this material.