Safety Data Sheet

Date of Issue: 02.06.2024 Date of Expiry: 02.06.2032

1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER	

Company Name : **ECP Limited**
Address : PO Box 34125, Birkenhead, Auckland 0746
Telephone : +64 9 480 4386
Facsimile : +64 9 480 4385
Emergency phone number : 0800 243 622 (24 hours)

Product Name	Potassium Hydroxide
Product Code	42801
CAS No.	1310-58-3

Recommended use : Laboratory Investigations

2: Hazard's identification

2.1 GHS Classification
Corrosive to Metals (Category A), Met. Corr., H290
Acute toxicity, Oral (Category D), H302
Skin corrosion (Category A), H314
Serious eye damage (Category A), , H318
Aquatic toxicity (Acute or Chronic) (Category D), H402

2.2 GHS Label elements, including precautionary statements
Pictogram

Signal word : Danger

Hazard statement(s)
H290 May be corrosive to metals.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H402 Harmful to aquatic life.

Precautionary statement(s)
Prevention
P234 Keep only in original container.
P260 Do not breathe dusts or mists.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.

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

Response

P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
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.
P310 Immediately call a POISON CENTER or doctor/ physician.
P321 Specific treatment (see supplemental first aid instructions on this label).
P363 Wash contaminated clothing before reuse.
P390 Absorb spillage to prevent material damage.

Storage

P405 Store locked up.
P406 Store in corrosive resistant container with a resistant inner liner.

Disposal

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

2.3 Other hazards - none

3: Composition/information on ingredients

3.1 Substances

Synonyms	:	Caustic potash
Formula	:	HKO
Molecular weight	:	56.11 g/mol
CAS-No.	:	1310-58-3
EC-No.	:	215-181-3
Index-No.	:	019-002-00-8

4: First aid measures

4.1 Description of first-aid measures

General advice

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Call in physician.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

If swallowed

After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of

perforation). Call a physician immediately. Do not attempt to neutralise.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data available

5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media
For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture
Potassium oxides
Not combustible.
Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters
Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information
Gives off hydrogen by reaction with metals. Prevent fire extinguishing water from contaminating surface water or the ground water system.

6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.
For personal protection see section 8.

6.2 Environmental precautions
Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections
For disposal see section 13.

7: Handling and storage

7.1 Precautions for safe handling
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Storage conditions
No metal containers.

Tightly closed. Dry.
Absorbs carbon dioxide (CO_2) from air.
Air sensitive. strongly hygroscopic

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8: Exposure controls/personal protection

8.1 Control parameters

Derived No Effect Level (DNEL)

Application Area	Routes of Exposure	Health Effect	Value
Workers	Inhalation	Long term local effects	1 mg/m3
Consumers	Inhalation	Long term local effects	1 mg/m3

8.2 Exposure controls

Appropriate engineering controls

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

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.

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	:	pellets
Color	:	colorless
b) Odor	:	odorless
c) Odor Threshold	:	Not applicable
d) pH	:	ca.13.5 at 5.6 g/l at 25 °C
e) Melting point/freezing point	:	Melting point/range: 361 °C - lit.
f) Initial boiling point and boiling range	:	1,327 °C at 1,013 hPa
g) Flash point	:	Not applicable
h) Evaporation rate	:	No data available

i) Flammability (solid, gas)	:	No data available
j) Upper/lower flammability or explosive limits	:	No data available
k) Vapor pressure	:	1 hPa at 719 °C
l) Vapor density	:	No data available
m) Relative density	:	No data available
n) Water solubility	:	1,130 g/l at 20 °C
o) Partition coefficient: n-octanol/water	:	Not applicable for inorganic substances
p) Autoignition temperature	:	No data available
q) Decomposition temperature	:	No data available
r) Viscosity	:	
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
s) Explosive properties	:	No data available
t) Oxidizing properties	:	No data available

9.2 Other safety information
No data available

10: Stability and reactivity

10.1 Reactivity
No data available

10.2 Chemical stability
The product is chemically stable under standard ambient conditions (room temperature) .
Heat of solution is very high, and with limited amounts of water, violent boiling may occur

10.3 Possibility of hazardous reactions
No data available

10.4 Conditions to avoid
Do not heat above melting point.
no information available

10.5 Incompatible materials
animal/vegetable tissues, glass, various plastics, Metals

10.6 Hazardous decomposition products
In the event of fire: see section 5

11: Toxicological information

11.1 Information on toxicological effects
Acute toxicity
LD50 Oral - Rat - male - 333 mg/kg
(OECD Test Guideline 425)
Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.
Symptoms: burns of mucous membranes, Cough, Shortness of breath, Possible damages: damage of respiratory tract
Dermal: No data available

Skin corrosion/irritation
Skin - Rabbit
Result: Causes burns.

Remarks: (IUCLID)

Serious eye damage/eye irritation
Eyes - Rabbit
Result: Causes serious eye damage.
(OECD Test Guideline 405)
Causes serious eye damage.

Respiratory or skin sensitization
Sensitisation test: - Guinea pig
Result: negative
Remarks: (IUCLID)

Germ cell mutagenicity
Test Type: Ames test
Test system: S. typhimurium
Metabolic activation: with and without metabolic activation
Result: negative
Remarks: (ECHA)
Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative

Carcinogenicity
No data available

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

11.2 Additional Information
RTECS: TT2100000
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

After uptake:
Vomiting
shock
Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

12: Ecological information

12.1 Toxicity
Toxicity to fish LC50 - Gambusia affinis (Mosquito fish) - 80 mg/l - 96 h
Remarks: (IUCLID)

12.2 Persistence and degradability
The methods for determining the biological degradability are not applicable to inorganic substances.
12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects
No data available

13: Disposal considerations

13.1 Waste treatment methods
Product
Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

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**	1813	1813	1813
14.2	**UN Proper Shipping name**	POTASSIUM HYDROXIDE, SOLID	POTASSIUM HYDROXIDE, SOLID	Potassium hydroxide, solid
14.3	**Transport Hazard Class**	8	8	8
14.4	**Packaging group**	II	II	II
14.5	**Environmental Hazards**	No	No	No
14.6	**Special precautions for user**	none		
14.7	**Incompatible materials**	animal/vegetable tissues, glass, various plastics, Metals		

Other regulations
Hazchem Code : 2W

15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
National regulatory information
HSNO Approval Code: HSR001546
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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