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SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Product: Potassium Hydroxide (KOH) 90%	**Revision date:** 2026-10-29	**Version:** 1.0	**Brand:** Richest

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product name	Potassium Hydroxide (KOH) 90%
Synonyms	Caustic potash; Potassium hydrate
CAS No.	1310-58-3
EC No.	215-181-3
Molecular formula	KOH
Molecular weight	56.11 g/mol
Relevant identified uses	Chemical raw material for soaps and detergents, potassium salts, alkaline batteries, dyes and fertilizers; pH adjuster and alkalinity control agent in industry and drilling fluids
Uses advised against	None
Company	Richest Group Ltd.
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SECTION 2: Hazards identification

GHS Classification	Met. Corr. 1; Acute Tox. 4 (Oral); Skin Corr. 1A; Eye Dam. 1
Pictogram(s)	GHS05 (Corrosion); GHS07 (Exclamation mark)
Signal word	Danger
Hazard statement(s)	H290 May be corrosive to metals H302 Harmful if swallowed H314 Causes severe skin burns and eye damage

Precautionary statement(s)	P234 Keep only in original packaging P260 Do not breathe dust or mist P264 Wash skin thoroughly after handling P270 Do not eat, drink or smoke when using this product P280 Wear protective gloves/protective clothing/eye protection/face protection P301+P312+P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower P304+P340+P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P405 Store locked up P406 Store in corrosive resistant container with a resistant inner liner P501 Dispose of contents/container in accordance with local regulation
Other hazards	Hygroscopic; absorbs moisture and carbon dioxide from air. Dissolution in water is strongly exothermic.

SECTION 3: Composition/information on ingredients

Component	Potassium hydroxide
CAS No.	1310-58-3
EC No.	215-181-3
Classification	Met. Corr. 1; Acute Tox. 4; Skin Corr. 1A; H290, H302, H314
Concentration (%)	≥90%

SECTION 4: First aid measures

If inhaled	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact	Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.
In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Most important symptoms and effects	Causes severe skin burns and eye damage. Harmful if swallowed. Burning sensation, cough, wheezing, laryngitis and shortness of breath may occur.
Indication of any immediate medical attention	Treat symptomatically. Consult a physician immediately. Show this safety data sheet to the doctor in attendance.

SECTION 5: Firefighting measures

Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media	None known.
Special hazards arising from the chemical	Not combustible. Contact with metals (aluminium, zinc, tin) may release flammable hydrogen gas. Hazardous decomposition products: potassium oxides.
Advice for firefighters	Wear self-contained breathing apparatus and full protective clothing for firefighting if necessary.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures	Use personal protective equipment. Avoid dust formation and breathing dust. Ensure adequate ventilation.
Environmental precautions	Do not let product enter drains.
Methods and materials for containment and cleaning up	Pick up and arrange disposal without creating dust. Sweep up and shovel into suitable, closed containers for disposal.

SECTION 7: Handling and storage

Precautions for safe handling	Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product.
Conditions for safe storage, including any incompatibilities	Keep container tightly closed in a dry and well-ventilated place. Store in corrosive resistant container with a resistant inner liner. Keep away from acids, metals and moisture. Hygroscopic; absorbs CO2 from air. Store locked up.

SECTION 8: Exposure controls/personal protection

Occupational exposure limit values	ACGIH TLV (Ceiling): 2 mg/m3
Biological limit values	None established
Appropriate engineering controls	Ensure adequate ventilation. Provide safety shower and eyewash station.
Eye/face protection	Tightly fitting safety goggles and face shield (EN 166).
Skin protection	Handle with chemical-resistant gloves.
Body protection	Wear protective work clothing.
Respiratory protection	Use suitable respirator when dusts are generated.
Thermal hazards	Not applicable

SECTION 9: Physical and chemical properties

Physical state	Solid (flakes)
Colour	White
Odour	Odourless
Melting point / freezing point	361 °C
Boiling point or initial boiling point and boiling range	1,320 °C
Flammability	Not combustible
Lower and upper explosion limit / flammability limit	Not applicable (non-flammable solid)
Flash point	Not applicable (non-combustible solid)
Auto-ignition temperature	Not applicable (non-combustible solid)
Decomposition temperature	Stable at normal temperatures; decomposes only at very high temperatures, forming potassium oxides
pH	13.5 (1% aqueous solution: ca. 13; strongly alkaline)
Kinematic viscosity	Not applicable (solid)
Solubility	Water: 1,120 g/L at 20 °C (very soluble, strongly exothermic); soluble in ethanol and glycerol
Partition coefficient n-octanol/water	Not applicable (inorganic substance)
Vapour pressure	1 mmHg at 719 °C
Density and/or relative density	2.044 g/cm3 at 20 °C
Relative vapour density	Not applicable (non-volatile solid)
Particle characteristics	No data available

SECTION 10: Stability and reactivity

Reactivity	Reacts violently with acids. Contact with metals (aluminium, zinc, tin) may form flammable hydrogen gas. Hygroscopic; absorbs CO2 from air.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	Violent neutralization reaction with acids; hydrogen evolution with certain metals
Conditions to avoid	Exposure to moisture. Heat.

Incompatible materials	Acids, organic materials, metals (aluminium, zinc, tin), nitro compounds.
Hazardous decomposition products	Potassium oxides

SECTION 11: Toxicological information

Acute toxicity - Oral / Inhalation / Dermal	LD50 Oral - Rat - 333 mg/kg Inhalation/Dermal: not applicable (corrosive)
Skin corrosion/irritation	Skin - Rabbit: severe skin irritation - 24 h
Serious eye damage/irritation	Eyes - Rabbit: corrosive to eyes (OECD 405)
Respiratory or skin sensitization	Not a skin sensitizer
Germ cell mutagenicity	In vitro mammalian cell gene mutation test (mouse lymphoma cells): negative
Carcinogenicity	Not listed by IARC, NTP or OSHA as a carcinogen
Reproductive toxicity	Not classified (based on available data)
STOT - single exposure	Dust or mist causes respiratory tract irritation
STOT - repeated exposure	Not classified (based on available data)
Aspiration hazard	Not classified

SECTION 12: Ecological information

Toxicity to fish / daphnia / algae	LC50 - Gambusia affinis (mosquitofish) - 80 mg/L - 96 h
Persistence and degradability	Not applicable (inorganic substance); dissociates in water into potassium and hydroxide ions
Bioaccumulative potential	No bioaccumulation potential (inorganic ion; log Pow not applicable)
Mobility in soil	Dissociates in soil moisture; high mobility until neutralized; raises soil pH
Other adverse effects	Harmful effect on aquatic organisms due to pH shift; large quantities may alter pH of waters

SECTION 13: Disposal considerations

Product disposal methods	Offer surplus and non-recyclable product to a licensed disposal company. Dispose of in accordance with local regulations.
Contaminated packaging	Dispose of as unused product.

SECTION 14: Transport information

UN Number (ADR/RID, IMDG, IATA)	UN 1813
UN Proper Shipping Name	POTASSIUM HYDROXIDE, SOLID
Transport hazard class(es)	8
Packing group	II
Environmental hazards (Marine pollutant)	No
Special precautions for user	EmS Code: F-A, S-B

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product	EINECS: Listed (215-181-3); TSCA: Listed; IECSC: Listed; REACH Registration No.: 01-2119487136-33-XXXX; GB 12268-2012 List of Dangerous Goods (China): Listed.

SECTION 16: Other information

Full text of H-Statements	H290 May be corrosive to metals H302 Harmful if swallowed H314 Causes severe skin burns and eye damage
Revision date	2026-10-29
Version	1.0

Abbreviations and acronyms: CAS: Chemical Abstracts Service; EC: European Commission; EINECS: European Inventory of Existing Commercial Chemical Substances; ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road; RID: Regulation concerning the International Carriage of Dangerous Goods by Rail; IMDG: International Maritime Dangerous Goods; IATA: International Air Transport Association; TWA: Time Weighted Average; STEL: Short Term Exposure Limit; LD50: Lethal Dose 50%; LC50: Lethal Concentration 50%; EC50: Effective Concentration 50%; PBT: Persistent, Bioaccumulative and Toxic; vPvB: very Persistent and very Bioaccumulative; SDS: Safety Data Sheet.

References: ECHA - European Chemicals Agency, https://echa.europa.eu/; IPCS - International Chemical Safety Cards (ICSC), http://www.ilo.org/; HSDB - Hazardous Substances Data Bank; eChemPortal - OECD Global Portal to Information on Chemical Substances; ERG - Emergency Response Guidebook by U.S. DOT.

Disclaimer: The information in this SDS is only applicable to the specified product and is provided in good faith. It is based on the knowledge available to Richest Group Ltd. at the date of issue and is intended to describe the product for the purposes of health, safety and environmental requirements only. It does not constitute any guarantee of the properties of the product. Richest Group Ltd. shall not be held liable for any damage resulting from handling or from contact with the above product.