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DOCUMENT #: F/RPI/QC 7.7.3-02-00	PRODUCT NAME: Potassium Hydroxide		RPI ITEM NO: P44000

SECTION 1 - CHEMICAL IDENTIFICATION

PRODUCT NAME: Potassium Hydroxide
RPI CATALOG #: P44000
SUPPLIER'S NAME: Research Products International Corp.
SUPPLIERS ADDRESS: 410 N Business Center Drive Mount Prospect, IL 60056
EMERGENCY CONTACT: 1-800-424-9300
OTHER INFORMATION: 847-635-7330

SECTION 2 - HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

H290	Corrosive to metals	Category 1
H301	Acute toxicity, oral	Category 3
H304	Aspiration hazard	Category 1
H314	Skin corrosion/irritation	Category 1A
H318	serious eye damage	Category 1
H370	Specific target organ toxicity - single exposure	Category 1 (Respiratory System)
H402	Acute aquatic toxicity	Category 3

2.2 GHS Label elements, including Hazard and Precautionary Statement(s)

Pictogram



Signal word: Danger

Hazard statement(s)

H290	May be corrosive to metals.
H301	Toxic if swallowed
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage
H370	Causes damage to organs.
H304	May be fatal if swallowed and enters airways
H402	Harmful to aquatic life

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Prevention, Response, Storage and Disposal Precautionary Statement(s)

P234	Keep only in original container.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
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.
P301 + P310	IF SWALLOWED: Call a POISON CENTER or doctor/physician.
P301+ P330+ P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303+ P61+ P353	IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304	Do NOT induce vomiting.
P304 + P340	IF INHALED: If breathing is difficult, 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.
P308 + P311	IF exposed or concerned: call a POISON CENTER or doctor/ physician
P310	Immediately call a POISON CENTER or doctor/ physician
P321	Specific treatment (see. on this label).
P330	Rinse mouth.
P363	Wash contaminated clothing before reuse
P390	Absorb spillage to prevent material damage.
P405	Store locked up.
P406	Store in corrosive resistant stainless steel container with a resistant inner Liner.
P501	Dispose of contents/ container to an approved waste disposal plant.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	CAS Number	EINECS Number	FORMULA	MW(g/mol)	%age
Potassium Hydroxide	1310-58-3	215-181-3	KOH	56.11	≥ 85.0
Water	7732-18-5	231-791-2	H ₂ O	18.02	≤ 15.0

SECTION 4 - FIRST-AID MEASURES

4.1 Description of first aid measures

General advice: Consult a doctor and show this safety data sheet.

- i. **If inhaled:** Remove to fresh air and monitor breathing. If breathing becomes difficult, give oxygen. If breathing stops, give artificial respiration. Consult a doctor.

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- ii. **In case of skin contact:** Immediately wash skin with copious amounts of soap and water for at least 15 minutes. Remove contaminated clothing and shoes and wash before reuse. Consult a doctor.
- iii. **In case of eye contact:** Flush with copious amounts of water for at least 15 minutes. Consult a doctor.
- iv. **If swallowed:** Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Consult a doctor.

4.2 Most important symptoms and effects, both acute and delayed: To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

4.3 Indication of immediate medical attention and special treatment needed: Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

SECTION 5 - FIRE FIGHTING 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: no data available.

5.3 Precautions for fire-fighters: Wear suitable protective clothing to prevent contact with skin and eyes and self-contained breathing apparatus.

5.4 Further information: no data available

SECTION 6 - ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures: Do not take action without suitable protective clothing - see section 8 of SDS. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid breathing vapors, mist, dust or gas.

6.2 Environmental precautions: Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up: Cover spillage with suitable absorbent material. Using non-spark tools, sweep up material and place in an appropriate container. Decontaminate spill site with 10% caustic solution and ventilate area until after disposal is complete. Hold all material for appropriate disposal as described under section 13 of SDS.

6.4 Reference to other sections: For required PPE see section 8. For disposal see section 13.

SECTION 7 - HANDLING AND STORAGE

7.1 Precautions for safe handling:

Use in a chemical fume hood, with air supplied by an independent system. Avoid inhalation, contact with eyes, skin and clothing. Avoid the formation of dust and aerosols. Use in a well-ventilated area. Keep away from sources of ignition. Avoid prolonged or repeated exposure.

7.2 Conditions for safe storage, including any incompatibilities: Store in cool, well-ventilated area. Keep away from direct sunlight. Keep container tightly sealed until ready for use. Store in corrosive resistant container with a resistant inner liner. Store locked up. Keep only in the original container. Keep out of the reach of children. Store in dry place. Store at room temperature.

7.3 Specific end use(s): Use in a laboratory fume hood where possible. Refer to employer's COSHH risk assessment.

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SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Component	KOH	KOH	KOH	KOH	KOH
CAS-No	1310-58-3		1310-58-3		1310-58-3
Value	C				c
Control parameters	2.000000 mg/m3	Remarks Upper Respiratory Tract irritation Eye irritation Skin irritation	2 mg/m3	Remarks Upper Respiratory Tract irritation Eye irritation Skin irritation	2.000000 mg/m3
Basis	USA. ACGIH Threshold Limit Values (TLV)		USA. ACGIH Threshold Limit Values (TLV)		USA. NIOSH Recommended Exposure Limits

- ❖ **ACGIH:** American Conference of Governmental Industrial Hygienists.
- ❖ **OSHA:** Occupational Safety and Health Administration.
- ❖ **NIOSH IDLH:** The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health.

8.2 Exposure Controls

- i. **Appropriate engineering controls:** Use in a fume hood where applicable. Ensure all engineering measures described under section 7 of SDS are in place. Ensure laboratory is equipped with a safety shower and eye wash station.

8.3 Personal protective equipment

- i. **Eye/face protection:** Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
- ii. **Skin protection:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166
- iii. **Body Protection:** Wear appropriate protective clothing. 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.
- iv. **Respiratory Protection:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
- v. **Control of environmental exposure:** Do not let product enter drains

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

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Appearance	White to Pale Violet Pellets	Vapor density	No Data Available
Odor	Odorless	Vapor Pressure @ 714 °C	0.13332 kPa
Odor Threshold	No Data Available	Density	2,1300 g/cm ³
pH 0.1molar aqueous Solution	13.5	Water Solubility	1070 g/l @ 59°F
Melting / Freezing Point	716 °F (380 °C)	Specific Gravity	2.0442
Initial Boiling Point Range	2420.6 °F (1327 °C)	Auto-Ignition Temperature	No Data Available
Flash Point	No Data Available	Decomposition Temperature	No Data Available
Evaporation Rate	No Data Available	Viscosity	No Data Available
Flammability (Solid, Gas)	No Data Available	Explosive Properties	No Data Available
Upper / Lower Flammability Or Explosive Limits	No Data Available	Oxidizing Properties	No Data Available

SECTION 10 - STABILITY AND REACTIVITY

Stability: Heat of solution is very high, and with limited amounts of water, violent boiling may occur. Stable under recommended storage conditions.

Conditions to Avoid: No Data Available

Incompatible Materials: Nitro compounds, Organic materials, Magnesium, Copper, Water, reacts violently with:, Metals, Light metals, Contact with aluminum, tin and zinc liberates hydrogen gas. Contact with nitro methane and other similar nitro compounds cause formation of shock-sensitive salts. vigorous reaction with:, Alkali metals, Halogens, Azides, Anhydrides

SECTION 11 - TOXICOLOGICAL INFORMATION

Acute Toxicity

LD50 Oral	LD50 Oral	LD50 Oral
1230 mg/kg (Rat)	273 mg/kg (Rat)	1.23 g/kg (Rat)

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity

Toxicity to fish LC50
Western mosquito fish (<i>Gambusia affinis</i>) 80 mg/l, 96 hours

Persistence and degradability/ Bioaccumulative potential: No data available

Mobility in soil: No data available

Results of PBT and vPvB assessment: No data available

Other adverse effects: No data available

Chronic Toxicity: There are no known carcinogenic chemicals in this product

SECTION 13 - DISPOSAL CONSIDERATIONS

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Dispose of container and unused contents in accordance with federal, state and local requirements.

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SECTION 14 - TRANSPORT INFORMATION

	UN#	Proper Shipping Name	Hazard Class	Packaging Group
DOT	1813	Potassium Hydroxide, Solid	8	II
TDG	1813	Potassium Hydroxide, Solid	8	II
IATA	1813	Potassium Hydroxide, Solid	8	II
IMDG/IMO	1813	Potassium Hydroxide, Solid	8	II

SECTION 15 - REGULATORY INFORMATION

INTERNATIONAL INVENTORIES

TSCA	DSL	NDSL	ELINCS	NLP	PICCS	ENCS	AICS	CHINA	KECL
Listed	Listed	-	-	-	Listed	Listed	Listed	Listed	KE-29139 Listed

USA FEDERAL REGULATION

SARA 311/312 HAZARDOUS CATEGORIZATION

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release Of Pressure Hazard	Reactive Hazard
Yes	Yes	No	No	No

TSCA 12(b): Not Applicable

SARA 313: Not Applicable

OSHA: Not Applicable

Clean Air Act: Not Applicable

California Proposition 65: This product does not contain any Proposition 65 chemicals.

Clean Water Act

CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Listed	1000 lb	-	-

CERCLA: This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

Component	Hazardous Substances RQs	CERCLA EHS RQs
Potassium hydroxide	1000 lb	-

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HMIS Rating

Health hazard	Chronic Health Hazard	Flammability	Physical Hazard
3		0	0

NFPA Rating

Health Hazard	Fire Hazard	Reactivity Hazard
3	0	0

STATE RIGHT TO KNOW

Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Listed	Listed	Listed	-	Listed

US DEPARTMENT OF TRANSPORTATION

REPORTABLE QUANTITY (RQ)	DOT MARINE POLLUTANT	DOT SEVER MARINE POLLUTANT
Yes	No	No

U.S. DEPARTMENT OF HOMELAND SECURITY: This product does not contain any DHS chemicals.

Canada: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR.

This SDS complies with the requirements of Regulation (EC).

SECTION 16 - OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Research Products International Corp. shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. This product is sold for laboratory research and development purposes use only.