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

1.1 Identification of the product
Product number: P5158
Name of material: Potassium Hydroxide Pellets
CAS No.: 1310-58-3

1.2 Recommended use and restriction on use
General use : for experimental, research and industrial use
Restriction on use : Never drink, Not used except for experimental, research and industrial applications.

1.3 Manufacturer / Supplier / Distributor information
Importer/distributors identification
Company : ASIA CHEMIE (THAILAND) CO., LTD.
Address : 44/27 Moo.4 T.Huaykapi A.Muangchonburi, Chonburi, Thailand. 20130
Telephone number : +66 3838 7988
Fax number : +66 3838 7989
E-mail : asiachemie@gmail.com, natchakot@asiachemie.com, natchakot@gmail.com

2. Hazards identification

2.1 GHS Classification
Corrosive to metals : Category1
Acute toxicity (oral) : Category3
Skin corrosion/irritation : Category1A
Serious eye damage/irritation : Category1

2.2 GHS label elements
Hazard symbols

Signal words : Danger
Hazard statements
H290 May be corrosive to metals
H301 Toxic if swallowed
H314 Causes severe skin burns and eye damage
H318 Causes serious eye damage
Precautionary statements
P234 Keep only in original container.
P260 Do not breathe dust/fume.
P264 Wash hands 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+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
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.
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 container with a resistant inner liner.
P501 Dispose of contents/container in accordance with local/regional/national/international regulation

2.3 Other hazards which do not result in classification : (NFPA Classification)
NFPA grade (0 ~ 4 level)
- Health : 3, Flammability : 0, Reactivity : 0

3. Composition/information on ingredients

Chemical Name	Synonyms	CAS No.	Concentration (%)
Potassium hydroxide	-	1310-58-3	80~95
Water	-	7732-18-5	20~5

4. First aid measures

4.1 Eye contact
- Do not rub your eyes.
- Immediately flush eyes with plenty of water for at least 15 minutes and call a doctor/physician.
- Get medical attention immediately.
- Remove contact lenses if worn.

4.2 Skin contact
- Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- Wash contaminated clothing thoroughly before re-using.
- Get medical attention immediately.
- Wash thoroughly after handling.

4.3 Inhalation contact
- When exposed to large amounts of steam and mist, move to fresh air.
- Take specific treatment if needed.

4.4 Ingestion contact
- Please be advised by doctor whether induction of vomit is demanded or not.
- Rinse your mouth with water immediately.
- Flush skin with plenty of wter for at least 15 minutes while removing contaminated clothing and shoes.

4.5 Delayed and immediate effects and also chronic effects from short and long term exposure
- Not available

4.6 Notes to physician
- Notify medical personnel of contaminated situations and have them take appropriate protective measures.

5. Fire-fighting measures

5.1 Suitable (Unsuitable) extinguishing media
- Dry chemical, carbon dioxide, regular foam extinguishing agent, spray
- Avoid use of water jet for extinguishing

5.2 Specific hazards arising from the chemical
- Not available

5.3 Special protective actions for firefighters
- Move containers from fire area, if you can do without the risk.
- Keep unauthorized personnel out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- Notify your local firestation and inform the location of the fire and characteristics hazard.
- Keep containers cool with water spray.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
- Ventilate closed spaces before entering.
- Must work against the wind, let the upwind people to evacuate.
- Do not touch spilled material. Stop leak if you can do it without risk.
- Handle the damaged containers or spilled material after wearing appropriate protective equipment
- Avoid skin contact and inhalation.

6.2 Environmental precautions
- Prevent runoff and contact with waterways, drains or sewers.
- If large amounts have been spilled, inform the relevant authorities.

6.3 Methods and materials for containment and cleaning up
- Large spill : Stay upwind and keep out of low areas. Dike for later disposal.
- Notification to central government, local government. When emissions at least of the standard amount
- Dispose of waste in accordance with local regulation.
- Appropriate container for disposal of spilled material collected.
- Small liquid state spills: Appropriate container for disposal of spilled material collected.
- Put the spilled material in an appropriate containers and clean the contaminated area.

Contact : info@qrec.asia, info@asiachemie.com

7. Handling and storage

7.1 Precautions for safe handling

- Avoid direct physical contact.
- Since emptied containers retain product residue (vapor, liquid, solid) follow all MSDS and label warnings even after container is emptied.
- Refer to Engineering controls and personal protective equipment.
- Do not handle until all safety precautions have been read and understood.
- Avoid contact with strong oxidizing agent

7.2 Conditions for safe storage, including any incompatibilities

- Check regularly for leaks.
- Do not apply any physical shock to container.
- Keep sealed when not in use.
- No open fire.
- Prevent static electricity and keep away from combustible materials or heat sources.
- Collected them in sealed containers.
- Do not eat, drink or smoke when using this product.
- Do not store in metal containers.

8. Exposure controls/personal protection

8.1 Exposure limits

ACGIH TLV

- [Potassium hydroxide] : Ceiling 2 mg/m3

OSHA PEL

- Not available

8.2 Engineering controls

Business owner is recommended to maintain below recommended exposure limits for the working place with general exhaust of gas/vapour/mist/fume.

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection

- Under conditions of frequent use or heavy exposure, Respiratory protection may be needed.
- Respiratory protection is ranked in order from minimum to maximum.
- Consider warning properties before use.
- Dust, mist, fume-purifying respiratory protection.
- Air-purifying respirator with high-efficiency particulate filtering
- Any respiratory protection with a electromotion fan(for dust, mist, fume-purifying)
- Self-contained breathing apparatus with a corpuscle filter of high efficiency
- For Unknown Concentration or Immediately Dangerous to Life or Health : Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.

Eye protection

- Wear primary eye protection such as splash resistant safety goggles with a secondary protection face shield.
- Provide an emergency eye wash station and quick drench shower in the immediate work area.

Hand protection

- Wear appropriate chemical resistant glove.

Skin protection

- Wear appropriate chemical resistant protective clothing.

Others

- Not available

9. Physical and chemical properties

A. Appearance	
- Appearance	Solid (Other)
- Color	white
B. Odor	odorless
C. Odor threshold	Not available
D. pH	13.5 (0.1 M solution)

Contact : info@qrec.asia, info@asiachemie.com

E. Melting point/Freezing point	380 ℃
F. Initial Boiling Point/Boiling Ranges	1324 ℃
G. Flash point	Not available
H. Evaporation rate	Not available
I. Flammability (solid, gas)	Not available
J. Upper/Lower Flammability or explosive limits	nonflammable
K. Vapour pressure	1mmHg (719℃)
L. Solubility	112 g/100 ml (20℃)
M. Vapour density	Not available
N. Specific gravity (Relative density)	2.04
O. Partition coefficient of n-octanol/water	Not available
P. Autoignition temperature	Not available
Q. Decomposition temperature	Not available
R. Viscosity	Not available
S. Molecular weight	56.11

10. Stability and reactivity

10.1 Chemical Stability
- Stable under normal conditions of use and storage.

10.2 Possibility of hazardous reactions
- May be corrosive to metals.

10.3 Conditions to avoid
- Avoid contact with incompatible materials and condition.
- Avoid : Accumulation of electrostatic charges, Heating, Flames and hot surfaces.
- Avoid contact with metals.

10.4 Incompatible materials
- Avoid contact with strong oxidizing agent and strong reducing agent.

10.5 Hazardous decomposition products
- May emit flammable vapour if involved in fire.

11. Toxicological information

11.1 Information on the likely routes of exposure

Respiratory tracts
- Not available

Oral
- Toxic if swallowed

Eye · Skin
- Causes serious eye damage
- Causes severe skin burns and eye damage

11.2 Delayed and immediate effects and also chronic effects from short and long term exposure

Acute toxicity

*** Oral**
- Product (ATEmix) : 300mg/kg < ATEmix <= 2000mg/kg
- [Potassium hydroxide] : LD50 273 mg/kg Rat (NLM)
- [Water] : LD50 > 90000 mg/kg Rat (KOSHA)

*** Dermal**
- Not available

*** Inhalation**
- Not available

Skin corrosion/irritation
- Causes severe skin burns and eye damage

Serious eye damage/irritation

- Causes serious eye damage

Respiratory sensitization
- Not available

Skin sensitization
- Not available

Carcinogenicity

*** IARC**
- Not available

*** OSHA**
- Not available

*** ACGIH**
- Not available

*** NTP**
- Not available

*** EU CLP**
- Not available

Germ cell mutagenicity
- Not available

Reproductive toxicity
- Not available

STOT-single exposure
- Not available

STOT-repeated exposure
- Not available

Aspiration hazard
- Not available

12. Ecological information

12.1 Ecotoxicity

Fish
- [Potassium hydroxide] : LC50 165 mg/l 24 hr

Crustaceans
- Not available

Algae
- Not available

12.2 Persistence and degradability

Persistence
- [Water] : log Kow = -1.38

Degradability
- Not available

12.3 Bioaccumulative potential

Bioaccumulative potential
- Not available

Biodegration
- Not available

12.4 Mobility in soil

Not available

12.5 Other adverse effects

Not available

13. Disposal considerations

13.1 Disposal methods

- Since more than two kinds of designated waste is mixed, it is difficult to treat separately, then can be reduction or stabilization by incineration or similar process.
- If water separation is possible, pre-process with Water separation process.
- Dispose by incineration.
- Do disposal as neutralization, hydrolysis and oxidation-reduction.
- High temperature incinerating, high-temperature melt processing will be landfilled
- Solidification processing.

13.2 Special precautions for disposal

- The user of this product must dispose by oneself or entrust it to a waste disposer, a person who recycles other's waste or establishes and operates waste disposal facilities.
- Dispose of waste in accordance with all applicable laws and regulations.

14. Transport information

14.1 UN No. (IMDG CODE/IATA DGR)
- 1813

14.2 Proper shipping name
- POTASSIUM HYDROXIDE, SOLID

14.3 Hazard Class
- 8

14.4 IMDG CODE/IATA DGR Packing group
- II

14.5 Marine pollutant
- Not applicable

14.6 Special precautions for user related to transport or transportation measures
- Local transport follows in accordance with Dangerous goods Safety Management Law.
- Package and transport follow in accordance with Department of Transportation (DOT) and other regulatory agency requirements.
- EmS FIRE SCHEDULE : F-A (General fire schedule)
- EmS SPILLAGE SCHEDULE : S-B (Corrosive substances)

15. Regulatory information

15.1 National and/or international regulatory information

POPs Management Law
- Not applicable

Information of EU Classification

*** Classification**
- [Potassium hydroxide] : H302, H314

U.S. Federal regulations

*** OSHA PROCESS SAFETY (29CFR1910.119)**
- Not applicable

*** CERCLA Section 103 (40CFR302.4)**
- [Potassium hydroxide] : 453.599 kg 1000 lb

*** EPCRA Section 302 (40CFR355.30)**
- Not applicable

*** EPCRA Section 304 (40CFR355.40)**
- Not applicable

*** EPCRA Section 313 (40CFR372.65)**
- Not applicable

Rotterdam Convention listed ingredients
- Not applicable

Stockholm Convention listed ingredients
- Not applicable

Montreal Protocol listed ingredients
- Not applicable

16. Other information

Reason for the revision: General update.
Date: 11/11/2014

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Date: 03/04/2020

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