



# SAFETY DATA SHEET

## Potassium hydroxide (Flakes or Pellets)

Preparation Date : 11-Oct-2012

Revision Date: 06-Jan-2015

Revision Number: 1

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

#### Product Identifier

**Product Name** Potassium hydroxide (Flakes or Pellets)

#### Other means of identification

**CAS-No** 1310-58-3

**Formula** KOH

#### Recommended use of the chemical and restrictions on use

**General function** Chemical intermediate.

**Uses advised against** No information available

#### Details of the supplier of the safety data sheet

**Company** Albemarle Corporation  
451 Florida Street  
Baton Rouge, LA 70801

**For Non-Emergency** 800-535-3030

**'Competent Body for SDS'** HSE@Albemarle.com

#### Emergency telephone number

**Emergency Telephone Numbers** +1-225-344-7147

### 2. HAZARDS IDENTIFICATION

#### Classification

Acute Toxicity - Oral	Category 4
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Corrosive to Metals	Category 1

#### Label elements

#### Emergency Overview

##### **Danger**

##### **Hazard Statements**

Harmful if swallowed

Causes severe skin burns and eye damage

May be corrosive to metals

**Appearance** Solid**Color** White.**Odor** Odourless.**Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
 Do not eat, drink or smoke when using this product  
 Do not breathe dust/fume/gas/mist/vapors/spray  
 Wear protective gloves/protective clothing/eye protection/face protection  
 Keep only in original container

**Response**

Immediately call a POISON CENTER or doctor/physician  
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 Immediately call a POISON CENTER or doctor/physician  
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
 Wash contaminated clothing before reuse  
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing Immediately call a POISON CENTER or doctor/physician  
 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell Rinse mouth Do not induce vomiting  
 Absorb spillage to prevent material damage

**Storage**

Store locked up  
 Store in corrosive resistant stainless steel container with a resistant inliner

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

Not applicable

**Other Information**

15% of the mixture consists of ingredient(s) of unknown toxicity

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Pure substance/mixture**

Substance

Component	CAS-No	Weight %
Potassium Hydroxide	1310-58-3	>= 85

Note: The exact concentrations of the above listed chemicals are being withheld as a trade secret.

### 4. FIRST AID MEASURES

**First aid measures****Eye contact**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical advice.

**Skin Contact**

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Seek medical advice.

**Inhalation** IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Seek medical advice.

**Ingestion** Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Seek medical advice.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** No information available.

**Indication of any immediate medical attention and special treatment needed**

**Notes to Physician** Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

**Extinguishing media**

**Suitable extinguishing media** Not combustible. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray or fog to cool exposed equipment and containers.

**Unsuitable Extinguishing Media** Water may be ineffective.

**Specific Hazards Arising from the Chemical**

**Combustion/explosion hazards** Attacks many metals in the presence of water or humidity, releasing highly flammable gas (hydrogen) which generates fire or explosion hazards.

**Hazardous Combustion Products** Emits toxic fumes under fire conditions.

**Explosion Data**

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** None.

**Protective Equipment and Precautions for Firefighters**

Wear self-contained breathing apparatus and protective suit.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Isolate the sources of the spill(s) leak(s) and evacuate all personnel from danger area. Ventilate the area. Wear suitable protective equipment.

**Environmental Precautions**

**Environmental precautions** Contain any spill with dikes or absorbents to prevent migration and entry into sewers or streams.

**Methods and material for containment and cleaning up**

**Methods for Containment** Prevent further leakage or spillage if safe to do so.

**Methods for Cleaning up** Small spills may be neutralized with limewater slurry or soda ash and flushed with large amounts of cold water. Shovel up residues and place in a labelled sealable container for subsequent safe disposal. Put leaking container into a labelled drum or overdrum.

## 7. HANDLING AND STORAGE

**Precautions for safe handling**

**Handling** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin and eyes. Wear personal protective equipment.

**Conditions for safe storage, including any incompatibilities**

**Storage** Keep in a dry, cool and well-ventilated place. Keep only in original container. Local exhaust is needed at source of dust.

**Incompatible Materials** None known based on information supplied.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### Exposure Guidelines

Component	ACGIH TLV (TWA)	OSHA PEL (TWA)	NIOSH IDLH
Potassium Hydroxide 1310-58-3	Ceiling: 2 mg/m <sup>3</sup>	(vacated) Ceiling: 2 mg/m <sup>3</sup>	Ceiling: 2 mg/m <sup>3</sup>

#### Appropriate engineering controls

**Engineering Controls** Showers  
Eyewash stations  
Ventilation systems.

#### Individual protection measures, such as personal protective equipment

**Eye/face Protection** Chemical goggles or face shield with safety glasses.

**Skin Protection** Wear protective gloves/clothing.

**Respiratory protection** Whenever workplace conditions warrant, wear properly fitted, approved respirator with high-efficiency (dust/fume/mist) filter cartridges.

**General Hygiene Considerations** Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Appearance</b>	Solid
<b>Color</b>	White.
<b>Odor</b>	Odourless.
<b>Odor Threshold</b>	No information available
<b>Molecular Weight</b>	No information available
<b>pH</b>	14 (10 g/100 ml H <sub>2</sub> O)
<b>Melting point/freezing point</b>	406 °C / 763 °F
<b>Boiling Point/Range</b>	1327 °C / 2421 °F (1013 hPa)
<b>Flash Point</b>	Not applicable: inorganic
<b>Evaporation Rate</b>	No information available
<b>Flammability (solid, gas)</b>	No information available
<b>Flammability Limit in Air</b>	
Upper flammability limit:	No information available
Lower flammability limit:	No information available
<b>Vapor Pressure</b>	
<b>Vapor Density</b>	Not applicable. No information available
<b>Relative density</b>	2.044
<b>Solubility(ies)</b>	
Water Solubility	Soluble. 121g/100g. (25°C)
Solubility in other solvents	No information available
<b>Partition coefficient</b>	Not applicable: inorganic
<b>Autoignition temperature</b>	No information available
<b>Decomposition temperature</b>	No information available
<b>Viscosity, kinematic</b>	No information available
<b>Dynamic viscosity</b>	No information available
<b>Explosive Properties</b>	None
<b>Oxidizing Properties</b>	Non oxidizing.

## 10. STABILITY AND REACTIVITY

<b>Reactivity Hazard</b>	No data available
<b>Stability</b>	Stable under recommended storage conditions.
<b>Hazardous Reactions</b>	No hazardous reaction expected under normal handling.
<b>Hazardous Polymerization</b>	None under normal processing.
<b>Conditions to Avoid</b>	Keep away from humidity. Exposure to air. Freezing.
<b>Materials to avoid</b>	Avoid contact with acids. Avoid strong acids and oxidizers. Never add water to this product. Avoid contact with Al, Zn, Sn, Cu and Al, Zn, Sn, Cu alloys. Contact with metals causes formation of flammable hydrogen gas. Avoid ether. Avoid water solutions. Avoid organic materials.

**Hazardous decomposition products** None known based on information supplied.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

<b>Inhalation</b>	Not irritating.
<b>Eye contact</b>	Causes severe burns.
<b>Skin Contact</b>	Causes severe burns.
<b>Ingestion</b>	Harmful if swallowed.

### Potential Health Effects

#### Acute Effects

<b>Skin corrosion/irritation</b>	Corrosive to skin. Causes severe burns.
<b>Serious eye damage/eye irritation</b>	Risk of serious damage to eyes. Causes eye burns.
<b>Respiratory irritation :</b>	Not irritating.
<b>Sensitization</b>	Not sensitizing. (guinea pig).

#### Chronic Effects

**Mutagenic Effects** In vitro tests did not show mutagenic effects. In vivo mutagenicity tests: Testing is not scientifically justified.

**Carcinogenicity** There are no known carcinogenic chemicals in this product.

Component	CAS-No	ACGIH Carcinogens	IARC	NTP	OSHA Carcinogens
Potassium Hydroxide	1310-58-3	-	-	-	-

<b>Reproductive Effects</b>	None known.
<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	No information available.
<b>Chronic Effects</b>	Chronic dermal exposure may cause inflammatory and ulcerative changes in the mouth and possibly bronchial and gastrointestinal disorders.
<b>Aspiration hazard</b>	No information available.
<b><u>Numerical measures of toxicity</u></b>	
<b><u>Product Information</u></b>	No information available

**Unknown Acute Toxicity** 15% of the mixture consists of ingredient(s) of unknown toxicity

**The following values are calculated based on chapter 3.1 of the GHS document .**

**ATEmix (oral)** 500 mg/kg  
**LD50 Oral:** Rat Oral LD50: 333 mg/kg

**Component Information** No information available

Component	Rat Oral LD50 :	Rabbit Dermal LD50 :	Rat Inhalation LC50:
Potassium Hydroxide 1310-58-3	333 mg/kg	-	-

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Acute Fish toxicity : 50-165 mg/L

Component	Freshwater Algae EC50/72h :	Freshwater Fish LC50/96h :	Water Flea EC50/48h :
Potassium Hydroxide (CAS #: 1310-58-3)	-	50-165 mg/l	-

**Persistence/Degradability** Inorganic substance. Does not undergo biodegradation.

**Bioaccumulation/ Accumulation** No information available.

**Mobility in Environmental Media** The substance is expected to remain in the water phase due to high water solubility.

Component	log Pow :
Potassium Hydroxide 1310-58-3	0.83

**Other adverse effects** No information available

## 13. DISPOSAL CONSIDERATIONS

### Waste treatment methods

**Waste Disposal Method** Do not discharge into drains or the environment, dispose to an authorised waste collection point. Dispose in a safe manner in accordance with local/national regulations, after neutralization (pH between 5.5 and 8.5 inclusive).

**Contaminated Packaging** Do not reuse container.

## 14. TRANSPORT INFORMATION

**DOT**

**Proper Shipping Name** POTASSIUM HYDROXIDE, SOLID  
**Hazard Class** 8  
**UN No.** 1813  
**Packing Group** II  
**Marine Pollutant:** N.  
**Description** UN 1813, Potassium Hydroxide, Solid, 8, II

**IMDG/IMO**

**IMO Class** 8  
**Packing Group** II  
**UN-No** 1813  
**IMO Labelling and Marking** 8  
**Proper Shipping Name** Potassium Hydroxide, Solid  
**EmS** F-A, S-B  
**Marpol - Annex II** Not applicable  
**Marpol - Annex III** Unregulated  
**Transport Description** UN 1813 Potassium Hydroxide, Solid, 8, II

**IATA/ICAO**

**IATA/ICAO Class** 8  
**Packing Group** II  
**UN-No** 1813  
**IATA/ICAO Labelling/Marking** 8  
**Passenger Aircraft** Maximum net quantity per package: 5 kg  
**Cargo aircraft only** Maximum net quantity per package: 50 kg  
**Proper shipping name** Potassium Hydroxide, Solid  
**Transport Description** UN 1813 Potassium Hydroxide, Solid, 8, II

## 15. REGULATORY INFORMATION

International Inventories	TSCA	DSL	NDSL	AICS	EINECS	ELINCS	ENCS	KECL	PICCS	IECSC	NZIoC
Potassium hydroxide (Flakes or Pellets)	X	X	-	X	X	-	X	X	X	X	X

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazardous Categorization**

**Acute Health Hazard** Yes  
**Chronic Health Hazard** Yes  
**Fire Hazard** No  
**Sudden Release of Pressure Hazard** No  
**Reactive Hazard** No

**Reportable and Threshold Planning Quantities**

The following components have RQs and/or TPQs under SARA and/or CERCLA

Component	CERCLA RQ, lbs	SARA 302 RQ, lbs	SARA 302 TPQ, lbs
Potassium Hydroxide (CAS #: 1310-58-3)	1000	-	-

**State Right-to-Know**

This product contains the following chemicals regulated in the states listed below.

Component	California Prop. 65	New Jersey	Massachusetts	Pennsylvania
Potassium Hydroxide (CAS #: 1310-58-3)	-	Listed.	Listed.	Listed.

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

**WHMIS Hazards**

D1B Toxic materials

E Corrosive material

**16. OTHER INFORMATION**

<b>NFPA</b>	Health 3	Flammability 0	Instability 1	Physical Hazards *
<b>HMIS</b>	Health 3	Flammability 0	Physical Hazards 1	

**Prepared By**Health & Environment Department  
Albemarle Corporation

FOR ADDITIONAL NONEMERGENCY PRODUCT INFORMATION, CONTACT:

HEALTH AND ENVIRONMENT DEPARTMENT  
ALBEMARLE CORPORATION  
451 FLORIDA ST.  
BATON ROUGE, LA. 70801  
(800) 535-3030**Preparation Date :**

11-Oct-2012

**Revision Date:**

06-Jan-2015

**Disclaimer:**

The information contained herein is accurate to the best of our knowledge. The Company makes no warranty of any kind, express or implied, concerning the safe use of this material in your process or in combination with other substances.

**End of Safety Data Sheet**