



CHIN CHA-ROEN INTERCHEM CO.,LTD.

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**NIPPON SODA CO.,LTD.**

*Material Safety Data Sheet*

MSDS No. KOH

Section 1 Chemical Product and Company Identification			
Product Name	Potassium Hydroxide		
Chemical Name	Potassium Hydroxide		
Primary Use	Akali Reagent		
Distributor	Name		
	Address		
	TEL. No.		Fax No.
Manufacturer	Name	Nippon Soda Co., Ltd.	
	Address	2-1, Ohtemachi 2-Chome, Chiyodaku, Tokyo 100-8165, Japan	
	TEL. No.	+81-3-3245-6134	Fax No. +81-3-3245-6217
Emergency	TEL. No	1-800-424-9300 (CHEMTREC)	Fax No.
Date Prepared	Feb 19, 2010	Date Revised	

Section 2 Hazardous Identification			
Route of Entry	Skin : Yes	Inhalation : Yes	Ingestion : Yes
Emergency Overview	White solid flames, odorless. Harmfull if swallowed. Cause burns of eyes and skin. may be fatal if swallowed and enter airway.		
Potential Health Effects			
Eye	Corrosive to eye.		
Skin	Corrosive to skin. Dermal sensitization is negative.		
Inhalation	Not available.		
Ingestion	Harmfull if swallowed. May be fatal if swallowed and enter airway.		
Signs and Symptoms	Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting.		
Chronic	Not available		
Target Organs	Causes damage to respiratory system.		
Other Comments	Not known		

Section 3 Composition/Information on Ingredient				
Component	% (wt.)	Exposure Limits		
		OSHA PEL	ACGIH TLV	Specified Other Limit
Potassium Hydroxide (CAS No. 1310-58-3)	≥ 95.5		2 (mg/m <sup>3</sup> )	

Section 4 First Aid Measures	
Eye	Immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.
Skin	Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse.
Inhalation	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Ingestion	Do not induce vomiting. Wash out mouth with water. Get medical attention.
Note to Physicians	None

Section 5 Fire Fighting Measures	
Flammable Properties	Not flammable
Unusual Fire & Explosion Hazards	Under fire conditions this material will melt and flow. Molten material reacts violently with water and can react with aluminium, tin, zinc and their alloys to generate flammable and explosive hydrogen gas.
Extinguishing Media	Non combustible. Use extinguishing media appropriate to surrounding fire conditions. Do not use water
Fire Fighting Instructions	Wear chemical safety goggles, rubber gloves and rubber overclothings. Flood discharge area with water. Cool exposed containers with water.

Section 6 Accidental Release Measures	
Protective equipment	Refer to section 8 for personal protective equipment.
Personal precaution	Avoid raising dust.
Environment precaution	Prevent from releasing it to the environment as this product is toxic to aquatic organisms.
Cleaning procedure	Avoid water. Keep unnecessary people away. Collect the material using proper tools such as a shovel. Then collect the rest of the material using a broom and place in a closed container. The tools should be washed with water thoroughly. When the spilled product gets wet, wash the polluted area and collect all the aqueous potassium hydroxide solution.

<b>Section 7 Handling and Storage</b>	
Handling	Wear suitable protective equipment. Refer to section 8 for personal protective equipment. Don't breathe dust. Don't eat, drink or smoke when using this product. Don't get in eyes, on skin, on clothing. Use only with adequate ventilation. Wash thoroughly after handling.
Storage	Don't store near acid, aluminium, organic material, chloride, magnesium, acid anhydrous, copper Keep from any possible contact with water or moisture Don't store together with any foods and feeding stuff. Store in a cool dry place. Keep the store room locked.

<b>Section 8 Exposure Control/Personal protection</b>			
Specific Engineering Controls	Use general and/or local exhaust ventilation to control dusts. Provide safety shower and eye washes in work area.		
Personal Protection Equipment			
Respiratory	NIOSH/MSHA-approved respirator for dust if the dust cloud is raised	Gloves	Rubber Gloves
Eye/Face	Safety goggles	Footwear	Rubber boots
Clothing	Rubber overclothing	Others	Rubber apron, safety shower and eye bath

<b>Section 9 Physical and Chemical Properties</b>			
Appearance	White solid flames	Odor	Odorless
Density	2.04 g/cm <sup>3</sup> (at 20 °C)	Bulk Density	
Melting Point	360 °C	Boiling Point	1320 °C
Vapor Density (air=1)	Not applicable	Vapor Pressure	Not applicable
Evaporation Rate (Ethyl acetate=1)	Not applicable		
Solubility in water	52.8 g/100g water (at 20 °C)	Solubility in solvent	Soluble in methanol
Log Po/w	Not applicable		
Flash Point	Not applicable	Autoignition Temp.	Not applicable
Explosive Limit	Not available		

<b>Section 10 Stability and Reactivity</b>			
Chemical Stability	Stable	X	
	Unstable		
Hazardous Polymerization	May occur		
	Will not occur	X	

Reactivity	When reacts with acid violently, heat evolves
Incompatible materials	Aluminium, oranic material, acid chlorides, acid anhydrous, magnesium, copper. Protect from moisture. Absorbs CO2 from air.
Hazardous Decomposition Product	When beated to decomposition, it amits toxic fume of K2O
Others	None

<b>Section 11. Toxicological Information</b>			
Effect of Acute Exposure			
Acute Toxicity			
Oral	LD <sub>50</sub> (rat)	273 mg/kg	
Effect of Chronic Exposure			
Not available			
Irritancy			
Eyes (rabbit) : Corrosive			
Dermal (rabbit) : Corrosive			
Sensitization			
Skin (guinea pig) : Negative			
Mutagenicity	Ames test Not available		Chromosomal aberration test Positive
	UDS test Not available		Micronucleus test Not available
Carcinogenicity	NTP :Not listed	IARC Monograph: Not listed	ACGIH Regulated: Not listed
Others May be fatal if swallowed and enters airway. Causes damage to respratory system.			

<b>Section12 Ecological Information</b>			
Environmental Fate			
Not available			
Ecological Toxicity			
When this product dissolves in water to show basic properties, It may be harmful to aquatic life.			
Acute Toxicity to Fish			
Westem mosqul to fish :	LC <sub>50</sub> (rainbow trout):	80 mg/L(96h)	

<b>Section 13 Disposal Considerations</b>			
1) Obey all federal, local and state regulations for health and safety and environmental protection in treating waste.			
2) For small quantities : Cautiously add this product to a large amount of water by portions while stirring. After the neutralizing it with dilute aqueous solution of hydrochloric acod or sulfuric acid, flush the aqueous solution with plenty of water.			
Do not discharge concentrate solution to river, sea, lake, waterwey or sewer systems directly.			
The neutralization reaction may fenerals heat and fumes which can be controlled by the rats of addition.			

**Section 14 Transport Information**

## International marine transportation(IMDG)

Proper Shipping Name: Potassium Hydroxide

UN No. 1813

Hazard Class 8

Packaging Group II

Marine pollutant Applicable(P)

## DOT Regulations

Proper Shipping Name: Potassium cyanide, solid

Identification No. 1813

Hazard Class 8

Packing Group II

North American Emergency Response Guidebook No. 157

## ICAO/IATA Dangerous Goods Regulations

Proper Shipping Name: Potassium cyanide, solid

UN No. 1813

Hazard Class 8

Packing Group II

**Section 15 Regulatory Information**

TSCA

Listed

OSHA (highly hazardous chemicals)

Not Listed

SARA (extremely hazardous substance)

Not Listed

CERCLA (Hazardous Substance)

Listed

Others

None

**Section 16 Other Information**

## Label Information

NFPA Rating

Health ; 3 Flammability; 0 Instability; 0

## Regulatory Information in other area

ENCS (Japan) : Listed (1- 369)

DSL(Canada) : Listed

EINECS (EU) : Listed (215-181-3)

AICS (Australia) Listed

IECSC (China) : Listed

ECL(South Korea): Listed(KE-29139)

## Revised Information

This MSDS is revised according to ANSI Z400.1-2003.

This information is taken from sources or based upon data believed to be reliable. However, Nippon Soda Co., LTD. makes no warranty as to the absolute correctness or sufficiency of any of the foregoing or that additional or other measures may not be required under particular conditions.

