



Potassium Hydroxide, 30 - 55%

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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

1.1. Product identifier

Product form : Mixture
Product name : Potassium Hydroxide, 30 - 55%
CAS No : 1310-58-3
Formula : KOH
Other means of identification : Caustic potash, potassium lye, potassium hydrate.

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Chemical intermediate
industrial use: component
pH neutralizer

1.3. Details of the supplier of the safety data sheet

Old World Industries, LLC
4065 Commercial Ave.
Northbrook, IL 60062 - USA
T (847) 559-2000
www.oldworldind.com

1.4. Emergency telephone number

Emergency number : (800) 424-9300; (703) 527 3887 (International)
Chemtrec

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Met. Corr. 1 H290
Acute Tox. 4 (Oral) H302
Skin Corr. 1A H314
Aquatic Acute 3 H402

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



GHS05

GHS07

Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H290 - May be corrosive to metals
H302 - Harmful if swallowed
H314 - Causes severe skin burns and eye damage
H402 - Harmful to aquatic life

Precautionary statements (GHS-US) :

P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P234 - Keep only in original container
P260 - Do not breathe mist, vapors
P264 - Wash affected areas thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P273 - Avoid release to the environment
P280 - Wear personal protective equipment as required
P301+P310 - If swallowed: Immediately call doctor/physician or poison center
P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact

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lenses, if present and easy to do. Continue rinsing
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 a safe manner, to appropriate waste disposal facility, in accordance with local/regional/national/international regulations

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	% by wt	GHS-US classification
potassium hydroxide	(CAS No) 1310-58-3	30 - 55	Acute Tox. 4 (Oral), H302 Skin Corr. 1A, H314

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Call a poison center or a doctor if you feel unwell. If medical advice is needed, have product container or label at hand. Wash contaminated clothing before reuse.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Get medical advice/attention if you feel unwell.
- First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Call a physician immediately. Wash contaminated clothing before reuse.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
- First-aid measures after ingestion : Rinse mouth. Do not induce vomiting. Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries after skin contact : Burns.
- Symptoms/injuries after eye contact : Serious damage to eyes.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Water fog. Foam. Dry powder. Carbon dioxide.
- Unsuitable extinguishing media : Do not use a heavy water stream. May spread fire. Halogenated extinguishing agents.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Not flammable.
- Reactivity : Stable. On heating/burning: release of harmful gases/vapors. Reacts on exposure to temperature rise with (some) metals: release of highly flammable gases/vapors (hydrogen).

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Cool tanks/drums with water spray/remove them into safety.
- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
- Special protective equipment for fire fighters : Protective fire fighting clothing (includes fire-fighting helmet, coat, pants, boots and gloves). Wear positive pressure self-contained breathing apparatus (SCBA).

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid breathing mist, vapors. Do not touch or walk through spilled material. Isolate from fire, if possible, without unnecessary risk.

6.1.1. For non-emergency personnel

Protective equipment : Refer to section 8.2.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Ventilate area. Stop release. Stop leak if safe to do so.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Contain leaking substance. Collect spillage.

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Do not add water to product. Always add the product to the water under constant stirring.

Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Do not breathe mist, vapors. Wear personal protective equipment.

Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in corrosive resistant container with a resistant inner liner. Keep only in original container. Store locked up. Store in a well-ventilated place. Keep cool.

Incompatible materials : Metals.

Storage temperature : < 40.00 °C (104 °F)

Packaging materials : nickel. steel. plastics. steel with plastic inner lining. steel with rubber inner lining.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

potassium hydroxide (1310-58-3)		
USA ACGIH	ACGIH Ceiling (mg/m ³)	2.00 mg/m ³
USA ACGIH	Remark (ACGIH)	URT, eye, & skin irr

8.2. Exposure controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Personal protective equipment : Gloves. Safety glasses. High gas/vapor concentration: gas mask.



Hand protection : Wear suitable gloves resistant to chemical penetration.

Eye protection : Safety glasses.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.

Environmental exposure controls : Avoid release to the environment.

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: Clear;White to light yellow
Odor	: Odorless
Odor threshold	: No data available
pH	: 14 (0.5% Solution)
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: -33 °C (-27.4 °F) [45% Solution]
Freezing point	: No data available
Boiling point	: 133 °C (271.4 °F) [45% Solution]
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapor pressure	: 6.4 mm Hg @ 25 °C (77 °F) [45% Solution]
Relative vapor density at 20 °C	: No data available
Specific Gravity	: No data available
Solubility	: Water: Solubility in water of component(s) of the mixture : • potassium hydroxide: 112 g/100ml
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable. On heating/burning: release of harmful gases/vapors. Reacts on exposure to temperature rise with (some) metals: release of highly flammable gases/vapors (hydrogen).

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Reacts violently with strong acids. Reacts with oxidizing compounds. Do not mix with other chemicals. Corrosive to aluminum, tin, zinc, copper and most alloys in which they are present including brass and bronze. Corrosive to steel at elevated temperatures.

10.5. Incompatible materials

Acids. Oxidizing agent. Phosphorus. aluminium. zinc. tin. Initiates or catalyzes violent polymerization of acetaldehyde, acrolein, or acrylonitrile.

10.6. Hazardous decomposition products

Contact with metals produces hydrogen gas which may form explosive mixtures with air.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed.

potassium hydroxide (1310-58-3)

LD50 oral rat	333 mg/kg (Rat; Experimental value,Rat; Experimental value)
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potassium hydroxide (1310-58-3)	
ATE US (oral)	333 mg/kg bodyweight
Skin corrosion/irritation	: Causes severe skin burns and eye damage. pH: 14 (0.5% Solution)
Serious eye damage/irritation	: Not classified pH: 14 (0.5% Solution)
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Symptoms/injuries after skin contact	: Burns.
Symptoms/injuries after eye contact	: Serious damage to eyes.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Harmful to aquatic life.

potassium hydroxide (1310-58-3)	
LC50 fish 1	> 29 mg/l (96 h; Pisces; Lethal)
LC50 fish 2	80 mg/l (Gambusia affinis)
TLM fish 1	80 ppm (24 h; Gambusia affinis)

12.2. Persistence and degradability

potassium hydroxide (1310-58-3)	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

12.3. Bioaccumulative potential

potassium hydroxide (1310-58-3)	
Bioaccumulative potential	Bioaccumulation: not applicable.

12.4. Mobility in soil

Potassium Hydroxide, 30 - 55% (1310-58-3)	
Ecology - soil	No additional data available.

12.5. Other adverse effects

Effect on ozone layer : No known effect on the ozone layer
Effect on global warming : No known ecological damage caused by this product.
Effect on global warming : No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose of contents/container, in a safe manner, to appropriate waste disposal facility, in accordance with local/regional/national/international regulations. Do not discharge into drains or the environment.

SECTION 14: Transport information

In accordance with DOT
Transport document description : UN1814 Potassium hydroxide, solution, 8, II

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UN-No.(DOT) : 1814
DOT NA no. : UN1814
Proper Shipping Name (DOT) : Potassium hydroxide, solution
Department of Transportation (DOT) Hazard Classes : 8 - Class 8 - Corrosive material 49 CFR 173.136
Hazard labels (DOT) : 8 - Corrosive



Packing group (DOT) : II - Medium Danger
DOT Special Provisions (49 CFR 172.102) : B2 - MC 300, MC 301, MC 302, MC 303, MC 305, and MC 306 and DOT 406 cargo tanks are not authorized.
IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.
T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3)
TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: t_r is the maximum mean bulk temperature during transport, t_f is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (t_f) and the maximum mean bulk temperature during transportation (t_r) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d_{15} and d_{50} are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.
DOT Packaging Exceptions (49 CFR 173.xxx) : 154
DOT Packaging Non Bulk (49 CFR 173.xxx) : 202
DOT Packaging Bulk (49 CFR 173.xxx) : 242
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 1 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 30 L
DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
DOT Vessel Stowage Other : 52 - Stow "separated from" acids
Other information : No supplementary information available.

ADR

No additional information available

Transport by sea

UN-No. (IMDG) : 1814
Proper Shipping Name (IMDG) : POTASSIUM HYDROXIDE SOLUTION
Class (IMDG) : 8 - Corrosive substances
Packing group (IMDG) : II - substances presenting medium danger
EmS-No. (1) : F-A
EmS-No. (2) : S-B

Air transport

UN-No.(IATA) : 1814
Proper Shipping Name (IATA) : Potassium hydroxide solution
Class (IATA) : 8 - Corrosives
Packing group (IATA) : II - Medium Danger
Subsidiary risk (IATA) : ERG Code 8L

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SECTION 15: Regulatory information

15.1. US Federal regulations

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EPA TSCA Regulatory Flag	Toxic Substances Control Act (TSCA): The intentional ingredients of this product are listed
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard

15.2. International regulations

CANADA

Potassium Hydroxide, 30 - 55% (1310-58-3)	
WHMIS Classification	Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects Class E - Corrosive Material

WHMIS Classification



Class D Division 1
Subdivision B -
Toxic material
causing immediate
and serious toxic
effects

Class E - Corrosive
Material

EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Not classified

15.2.2. National regulations

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DSL (Canada): The intentional ingredients of this product are listed
ECL (South Korea): The intentional ingredients of this product are listed.
EINECS (Europe): The intentional ingredients of this product are listed
ENCS (Japan): The intentional ingredients of this product are listed

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm

potassium hydroxide (1310-58-3)

U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - Rhode Island - Hazardous Substance List

SECTION 16: Other information

Full text of H-phrases:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 3	Hazardous to the aquatic environment — Acute Hazard, Category 3
Met. Corr. 1	Corrosive to metals, Category 1
Skin Corr. 1A	Skin corrosion/irritation, Category 1A
H290	May be corrosive to metals
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H402	Harmful to aquatic life

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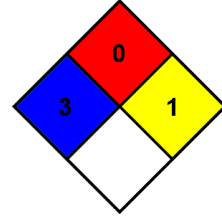
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NFPA health hazard : 3 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.

NFPA fire hazard : 0 - Materials that will not burn.

NFPA reactivity : 1 - Normally stable, but can become unstable at elevated temperatures and pressures or may react with water with some release of energy, but not violently.



HMIS III Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

Flammability : 0 Minimal Hazard

Physical : 1 Slight Hazard

SDS GHS US (GHS HazCom 2012) OWI

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