



# SAFETY DATA SHEET

## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Identifiers: Liquid K Blend, Potassium Carbonate/Potassium Hydroxide Solution  
Product Name: Potassium Carbonate/Potassium Hydroxide Blend in Water  
Identified Uses: Natural Gas Mining (fracking), chemical manufacturing

### Company Information:

ASHTA Chemicals Inc.

P.O. Box 858

Ashtabula Ohio 44005

Phone: (440) 997-5221

Fax: (440) 998-0286

24-hour Emergency Phone: CHEMTREC: (800) 424-9300

## SECTION 2: HAZARDS IDENTIFICATION

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

GHS label elements, including precautionary statements:

Signal Word: Danger

Pictogram(s):



### Hazard Statements

H301	Toxic if swallowed.
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage.
H402	Harmful to aquatic life.

### Precautionary Statements

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/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.



P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P310	Immediately call a POISON CENTER or doctor/ physician.
P321	Specific treatment (see supplemental first aid instructions on this label).
P330	Rinse mouth.
P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material damage.
P405	Store locked up.
P501	Dispose of contents/container to an approved waste disposal plant.

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms:

CHEMICAL NAME: Potassium Carbonate/Hydroxide Solution

TRADE NAME: K Blend

SYNONYMS: Potash Liquor

CONCENTRATIONS:

Chemical	CAS Number	Concentration
Potassium Hydroxide	1310-58-3	10-15%
Potassium Carbonate	584-08-7	20-40%
Water	7732-18-5	Balance

WHMIS: E

CHEMICAL FORMULA:  $K_2CO_3/KOH$  (in aqueous solution)

CHEMICAL FAMILY: Alkali

### SECTION 4: FIRST AID MEASURES

Description of first aid measures:

Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If breathing is difficult, give humidified air. Give oxygen but only by a certified physician. If breathing stops, provide artificial respiration. Get medical attention immediately.

In case of skin contact

Take off immediately all contaminated clothing. Wash off IMMEDIATELY with plenty of water for at least 15-20 minutes. Get medical attention immediately! Wash clothing separately before reuse. Destroy or thoroughly clean contaminated shoes.

In case of eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.

If ingested

Rinse mouth. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Give plenty of water to drink. Consult a physician.



**SECTION 5 FIRE FIGHTING MEASURES**

Flash Point:	Not flammable
Extinguishing Media:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Auto Ignition Temp:	Non-combustible.
Special Fire Fighting Procedures:	Wear self-contained breathing apparatus and full protective clothing. In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Use water spray to cool unopened containers.
Unusual Fire/Explosion Hazards:	Thermal decomposition generates corrosive vapors..

**SECTION 6 ACCIDENTAL RELEASE MEASURES**

**Environmental Precautions:**  
Do not discharge into drains, water courses or onto the ground.

**Small Spill:**  
Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. If necessary: Neutralize the residue with a dilute solution of acetic acid.

**Large Spill:**  
Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Neutralize the residue with a dilute solution of acetic acid. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities. Cleanup personnel must wear proper protective equipment. Completely contain spilled material with dikes, sandbags, etc. Recover as much material as possible into containers for disposal. Remaining material may be neutralized with dilute hydrochloric or acetic acid.

**Waste Control Procedures:**  
All disposals of this material must be done in accordance with federal, state and local regulations. Waste characterization and compliance with disposal regulations are the responsibilities of the waste generator.

**SECTION 7: HANDLING AND STORAGE**

**Precautions to be taken for handling and storage:**  
Storage tanks should be contained in a diked area that has sufficient capacity to hold the contents of the tank. Keep container tightly closed. Store in a cool, dry, well-ventilated place. Store in corrosive resistant container with a resistant inner liner. Store away from incompatible materials. Compatible storage materials may include, but not be limited to, the following: nickel and nickel alloys, steel, plastics, plastic or rubber-lined steel, FRP, or Derakane vinyl ester resin. Do not allow material to freeze.



Precautions for repair:

Equipment: Only personnel trained and qualified in handling this product should prepare equipment for maintenance. Wash thoroughly with water.

Other Precautions: Spillage can be slippery.

**SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION**

Principal Component: Potassium Carbonate/Potassium Hydroxide, water

Occupational Exposure Limits:

ACGIH TLV	=	2mg/m <sup>3</sup> ceiling (KOH)
OSHA PEL	=	None
15 Minute STEL	=	None
NIOSH IDLH	=	None

Exposure Controls:

Eye Protection:	Chemical splash goggles and face shield.
Respiratory Protection:	If misting or heavy vapor formation should occur, a NIOSH approved mist respirator should be worn.
Other Protection:	Rubber boots. Rubbers over leather shoes are not recommended. Rubber apron, rainwear.
Glove Type Recommended:	Rubber, nitrile, neoprene, PVL.
Additional Information:	Safety eyewash/shower stations must be available in the work area.

Appropriate Engineering Controls:

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

Information on basic physical and chemical properties:

Appearance	Colorless liquid.
Odor	No odor
Odor Threshold	No data available
pH	>14
Initial boiling point	No data available
Flash point	Not flammable
Evaporation rate	No data available
Flammability (solid, gas)	Not flammable
Upper/lower flammability or explosive limits	Not flammable
Explosive properties	Not flammable
Water solubility	Very soluble
Physical State	Liquid at room temperature
Molecular Weight	56.1 (KOH), 138.2 (K <sub>2</sub> CO <sub>3</sub> )



Freeze/Solidification	No data available
Specific Gravity (water = 1)	1.35 – 1.50 at 20°C (depends on CO <sub>3</sub> <sup>2-</sup> : OH <sup>-</sup> ratio)
Density Liquid (pounds per gallon)	11.3 – 12.5 at 20°C (depends on CO <sub>3</sub> <sup>2-</sup> : OH <sup>-</sup> ratio)
Vapor Density	No data available
Vapor Pressure	No data available

**SECTION 10: STABILITY AND REACTIVITY**

- Stability: Stable under normal condition.
- Conditions to avoid: Reaction with acids will generate heat and release carbon dioxide.
- Incompatibility: Strong acids, organic chemicals, nitrocarbons, halocarbons, and certain metals or alloys. Oxidizing agents, phosphorus, aluminum, zinc and tin.
- Hazardous decomposition products: Flammable hydrogen gas may be generated when KOH and certain metals react.
- Polymerization: Hazardous polymerization WILL NOT occur.

**SECTION 11: TOXICOLOGICAL INFORMATION**

Information on likely routes of exposure:

**Skin Contact:** Major potential hazard - contact with the skin can cause severe burns with deep ulcerations. Contact with solution or mist can cause multiple burns with temporary loss of hair at burn site. Solutions may not cause immediate pain or irritation upon skin contact. Prolonged or repeated contact with dilute solutions may cause drying and cracking of skin and possible skin damage.

**Skin Absorption:** It can penetrate to deeper layers of skin and corrosion will continue until removed. The severity of injury depends on the concentration and the duration of exposure.

**Eye Contact:** Major potential hazard – Liquid in the eye can cause severe destruction and blindness. These effects can occur rapidly affecting all parts of the eye. Mist or dust can cause irritation with high concentrations causing destructive burns.

**Inhalation:** By analogy with sodium hydroxide, inhalation of solution mist is expected to cause mild irritation at 2 mg/m<sup>3</sup>. More severe burns and tissue damage in the upper respiratory tract can occur at higher concentrations. Pneumonitis can result from severe exposures.

**Ingestion:** Ingestion of potassium hydroxide can cause severe burning and pain in lips, mouth, tongue, throat and stomach. Severe scarring of the throat can occur after swallowing. Death can result from ingestion.

Information on toxicological effects:

**Irritancy:** A study with a 10% KOH solution showed severe tissue damage when applied to skin for 4 hours.

**Sensitization:** Not available



Carcinogenicity:	Not classified
Teratogenicity & Mutagenicity:	Not classified
Reproductive Toxicology :	Not classified
Toxicological Synergism :	Not classified

Product Species Test Results: LD<sub>50</sub>: 2730 mg/kg (rat oral)

**SECTION 12: ECOLOGICAL INFORMATION**

Ecological Information:

Persistence and degradability:	Not established
Bioaccumulative potential:	Not established
Mobility in soil:	Not established
Other adverse effects:	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

Aquatic Toxicity: May cause shifts in water pH outside the range of pH 6-9. This change may be toxic to aquatic organisms.

Biodegradability:  
Not biodegradable, however potassium hydroxide/carbonate will be neutralized by acidity present in natural environment.

**SECTION 13: DISPOSAL CONSIDERATIONS**

Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations. Empty containers or liners may retain some product residues.

**SECTION 14: TRANSPORT INFORMATION**

Shipping:

Usual Shipping Containers:	Tank car, tank truck, ABS drums.
Usual Shelf Life:	Sealed containers, unlimited.
Storage/Transport Temperatures:	Ambient.

Suitable Storage:

Materials/Coatings:	Steel, plastic, polyethylene (when dry).
Unsuitable:	Aluminum or galvanized containers.

D.O.T. Information:  
UN number: 1760  
Class: 8  
Packing group: II  
Proper shipping name: Corrosive Liquid, n.o.s. Potassium Carbonate and Potassium Hydroxide Sol.  
Reportable Quantity (RQ): 1000lbs (100% KOH basis)  
Marine pollutant: No  
Poison Inhalation Hazard: No

**SECTION 15****REGULATORY INFORMATION**

SARA 302 Components  
SARA 302: Not listed.

SARA 313 Components  
SARA 313: Not regulated.

SARA 311/312 Hazards  
Acute Health Hazard

Massachusetts Right To Know Components  
Potassium Hydroxide CAS#: 1310-58-3

Pennsylvania Right To Know Components  
Potassium Hydroxide CAS#: 1310-58-3  
Potassium Carbonate CAS#: 584-08-7

New Jersey Right To Know Components  
Potassium Hydroxide CAS#: 1310-58-3  
Potassium Carbonate CAS#: 584-08-7

California Prop. 65 Components  
This product does not contain any chemicals known to state of California to cause cancer, birth defects, or any other reproductive harm.

OSHA PSM TPQ: Not listed

Toxic Substances Control Act (TSCA):  
CAS# 1310-58-3 is listed on the TSCA inventory.  
CAS#: 584-08-7 is listed on the TSCA inventory.

Comprehensive Environmental Response Compensation Liability Act: (CERCLA)  
CAS# 1310-58-3 is listed on the CERCLA list.

**SECTION 16****OTHER INFORMATION**

HMIS Rating:  
Health Hazard: 3  
Chronic Health Hazard:  
Flammability: 0  
Physical Hazard: 0

NFPA Rating:  
Health Hazard: 3  
Fire Hazard: 0  
Reactivity Hazard: 0

This information is drawn from recognized sources believed to be reliable. ASHTA Chemicals, Inc. Makes no guarantees or assumes any liability in connection with this information. The user should



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