

ALUMINUM SAFE

Uni-Kem Chemicals Inc.
802 Wm. Leigh Drive
Tullytown, Pa 19007
1-800-752-1120
Fax: 215-269-9855

ALUMINUM SAFE is a heavy duty built detergent designed specifically for the removal of encrusted soils common to the bakery industry. **ALUMINUM SAFE** is strong yet safe for use on aluminum. **ALUMINUM SAFE** is dispensed directly from the shipping container, thus eliminating messy spills and unsightly washing areas. This unique product is formulated to be dispensed through an automated injector system, assuring the lowest possible use cost.

PHYSICAL PROPERTIES:

Chemical Composition . . . Alkaline base; soil and mineral sequestering agents for water conditioning; metal and glaze protectants.
Appearance Colorless clear liquid
pH 13.6
pH of 1% solution 12.4
Specific gravity 1.265
Solubility Complete and Fast
Stability 1 Year @ Ambient Temperature
Caustic Present
Biodegradable Yes, all surfactants
Foaming Low
ALUMINUM SAFE Safe with soft metals
Water Hardness Tolerance . . 15 Grains Per Gallon at 0.3%
10 Grains Per Gallon at 0.2%
5 Grains Per Gallon at 0.1%

RECOMMENDED RANGE OF USE CONCENTRATIONS:

Titrate with Institutional Alkalinity Test Kit. Use range is 0.1% to 0.3%, or 3 to 9 drops (each drop = .033%) using a 10 ml sample and 3 drops of Phenolphthalein Indicator. Select actual use concentration to handle water hardness and soil load.

NOTE: To properly titrate, adjust for raw water alkalinity by titrating H₂O just as you would a detergent solution. Subtract that number from total drop titration to derive intended detergent concentration.

Example: Raw water titrates 2 drops, total drop titration equals 8 drops. $(8 - 2 = 6 \times .033\% = 0.2\%)$

HANDLING PRECAUTIONS:

CAUTION: WARNING KEEP OUT OF REACH OF CHILDREN.

Highly alkaline liquid. Contact with skin and eyes may cause severe irritation. Harmful if swallowed. Flood with water if splashed in eyes. Flush with water for 15 minutes and consult physician immediately. If ingested, drink large amounts of milk, milk of magnesia or gelatin, or if these are not available, drink large amounts of water. DO NOT induce vomiting. Obtain prompt medical attention.

PACKAGING: 5 gal plastic pail net weight 48lbs.

Seller makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risk of use and/or handling of this material when such use and/or handling is contrary to label instructions.

SAFETY DATA SHEET

Issuing Date 07-Aug-2013

Revision Date 07-Aug-2013

Revision Number 0

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

GHS product identifier

Product Name UNI KEM LIQUID ALUMINUM SAFE

Other means of identification

Product Code(s) LAS

UN-Number UN1760

Synonyms LAS

Recommended use of the chemical and restrictions on use

Recommended Use Institutional detergent

Uses advised against No information available

Supplier's details

Supplier Address

Uni-Kem Chemicals, Inc.
P.O. Box # 1625
802 Wm. Leigh Drive
Tullytown, PA 19007
TEL: 1-800-752-1120

Emergency telephone number

Emergency Telephone Number CHEM-TEL, INC.
24 Hour Emergency Contact 1-800-255-3924

2. HAZARDS IDENTIFICATION

Classification

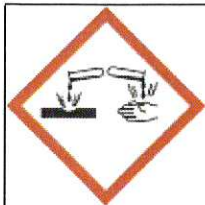
This chemical is considered hazardous according to the OSHA Hazard Communication Standard 2012 (29 CFR 1910.1200)

Skin Corrosion/Irritation	Category 1 Subcategory 1A
Serious Eye Damage/Eye Irritation	Category 1

GHS Label elements, including precautionary statements

Emergency Overview

Signal Word Danger
Hazard Statements
• Causes severe skin burns and eye damage

**Appearance** Brown, Thin liquid**Physical State** Liquid.**Odor** No information available**Precautionary Statements****Prevention**

- Do not breathe dust/fume/gas/mist/vapors/spray
- Wash face, hands and any exposed skin thoroughly after handling
- Wear protective gloves/protective clothing/eye protection/face protection.

General Advice

- Immediately call a POISON CENTER or doctor/physician
- Specific treatment (see supplemental instructions on the administration of antidotes on this label)

Eyes

- 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.

Skin

- IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
- Wash contaminated clothing before reuse.

Inhalation

- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Ingestion

- IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

Storage

- Store locked up.

Disposal

- Dispose of contents/container to an approved waste disposal plant.

Hazard Not Otherwise Classified (HNOC)

Not applicable

Other information

No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS**Synonyms**

LAS

Chemical Name	CAS-No	Weight %	Trade secret
Potassium hydroxide	1310-58-3	15-30	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES**Description of necessary first-aid measures**

Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.
Skin Contact	Wash off immediately with soap and plenty of water. Remove and wash contaminated clothing before re-use. Immediate medical attention is required.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. If symptoms persist, call a physician.
Ingestion	Drink plenty of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Immediate medical attention is required.

Most important symptoms/effects, acute and delayed

Most Important Symptoms/Effects No information available.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media None

Specific Hazards Arising from the Chemical

No information available

Explosion Data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None

Protective Equipment and Precautions for Firefighters

Protect from irritating mists and corrosive solutions with pressure demand, self-contained respirator and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Stop leak if you can do it without risk. If spilled, take caution, as material can cause surfaces to become very slippery.

Environmental Precautions

Environmental Precautions Dispose of contents/container to an approved waste disposal plant. See Section 12 for additional Ecological Information

Methods and materials for containment and cleaning up

Methods for Containment Stop leak if you can do it without risk

Methods for Cleaning Up Contain spill, dilute with water and neutralize as required. Wash away small spills with plenty of water.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Handle in accordance with good industrial hygiene and safety practice. Avoid breathing vapors or mists. Use only in area provided with appropriate exhaust ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Do not eat, drink or smoke when using this product. Do not take internally. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Store at room temperature. Keep from freezing. Keep container closed when not in use. Keep out of the reach of children.

Incompatible Products Acids. Soft metals. Aluminium. Do not mix with anything but water

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**Control parameters****Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Potassium hydroxide 1310-58-3	Ceiling: 2 mg/m ³	(vacated) Ceiling: 2 mg/m ³	Ceiling: 2 mg/m ³

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection Chemical splash goggles.
Skin and Body Protection Rubber gloves. Latex gloves
Respiratory Protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES**Information on basic physical and chemical properties**

Physical State	Liquid	Appearance	Brown, Thin liquid
Odor	No information available	Odor Threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks/ - Method</u>
pH	12.5	None known
Melting Point/Range	No data available	None known
Boiling Point/Boiling Range	> 100 °C / > 212 °F	None known
Flash Point	No data available	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limits in Air		
upper flammability limit	No data available	
lower flammability limit	No data available	
Vapor Pressure	No data available	None known
Vapor Density	No data available	None known
Relative Density	No data available	None known
Specific Gravity	1.17	None known
Water Solubility	100%	None known

Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition Temperature	No data available	None known
Decomposition Temperature	No data available	None known
Viscosity	5 cps	None known

Flammable Properties Not flammable

Explosive Properties No data available

Oxidizing Properties No data available

Other information

VOC Content (%) No data available

10. STABILITY AND REACTIVITY

Reactivity

No data available.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Conditions to avoid

Spills or careless handling. Incompatible products.

Incompatible materials

Acids. Soft metals. Aluminium. Do not mix with anything but water

Hazardous decomposition products

None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	May cause irritation of respiratory tract.
Eye Contact	Causes serious eye damage.
Skin Contact	Causes severe skin burns.
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Potassium hydroxide	= 214 mg/kg (Rat)	-	-

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

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

Sensitization	No information available.
Mutagenic Effects	No information available.
Carcinogenicity	Contains no ingredient listed as a carcinogen.
Reproductive Toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Aspiration Hazard	No information available.

Numerical measures of toxicity - Product

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

LD50 Oral 2504 mg/kg; Acute toxicity estimate

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Potassium hydroxide 1310-58-3		LC50 96 h: = 80 mg/L static (Gambusia affinis)		

Persistence and Degradability No information available.

Bioaccumulation No information available.

Chemical Name	Log Pow
Potassium hydroxide	0.83

Other Adverse Effects

No information available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods Dispose of in accordance with federal, state, and local regulations

Contaminated Packaging Do not re-use empty containers.

Chemical Name	California Hazardous Waste
Potassium hydroxide	Toxic Corrosive

14. TRANSPORT INFORMATION

DOT

UN-Number	UN1760
Proper shipping name	Corrosive liquids, n.o.s.
Hazard Class	8
Packing Group	II
Reportable Quantity (RQ)	Potassium hydroxide: RQ kg= 2532.35
Description	UN1760, Corrosive liquids, n.o.s. (Potassium hydroxide), 8, II, RQ
Emergency Response Guide Number	154

TDG

UN-Number	UN1760
Proper Shipping Name	Corrosive liquid, n.o.s.
Hazard Class	8
Packing Group	II
Description	UN1760, Corrosive liquid, n.o.s. (Potassium hydroxide), 8, II

UN-Number	UN1760
Proper Shipping Name	Corrosive liquid, n.o.s.
Hazard Class	8
Packing Group	II
Description	UN1760, Corrosive liquid, n.o.s. (Potassium hydroxide), 8, II

ICAO

UN-Number	UN1760
Proper shipping name	Corrosive liquid, n.o.s.
Hazard Class	8
Packing Group	II
Description	UN1760, Corrosive liquid, n.o.s., 8, II

IATA

UN-Number	UN1760
Proper Shipping Name	Corrosive liquid, n.o.s.
Hazard Class	8
Packing Group	II
ERG Code	8L
Description	UN1760, Corrosive liquid, n.o.s. (Potassium hydroxide), 8, II

IMDG/IMO

UN-Number	UN1760
Proper Shipping Name	Corrosive liquid, n.o.s.
Hazard Class	8
Packing Group	II
EmS No.	F-A, S-B
Description	UN1760, Corrosive liquid, n.o.s. (Potassium hydroxide), 8, II

UN-Number	UN1760
Proper Shipping Name	Corrosive liquid, n.o.s.
Hazard Class	8
Packing Group	II
Classification Code	C9
Description	UN1760, Corrosive liquid, n.o.s. (Potassium hydroxide), 8, II

ADR

UN-Number	UN1760
Proper Shipping Name	Corrosive liquid, n.o.s.
Hazard Class	8
Packing Group	II
Classification Code	C9
Tunnel Restriction Code	(E)
Description	UN1760, Corrosive liquid, n.o.s. (Potassium hydroxide), 8, II, (E)
ADR/RID-Labels	8
Proper Shipping Name	Corrosive liquid, n.o.s.
Hazard Class	8
Packing Group	II
Classification Code	C9
Special Provisions	274
Description	UN1760, Corrosive liquid, n.o.s. (Potassium hydroxide), 8, II
Limited Quantity	1 L

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL	Complies
EINECS	Complies

IECSC	Complies
PICCS	Complies
AICS	Complies

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

U.S. Federal Regulations

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 Hazard Categories

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

Clean Water Act

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Potassium hydroxide	1000 lb			X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Potassium hydroxide	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ

U.S. State Regulations**California Proposition 65**

This product contains the following Proposition 65 chemicals:

U.S. State Right-to-Know Regulations

"X" designates that the ingredients are listed on the state right to know list.

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Illinois	Rhode Island
Potassium hydroxide	X	X	X		X
Cocamide dea				X	

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION

<u>NFPA</u>	Health Hazard 3	Flammability 0	Instability 0	Physical and Chemical Hazards -
<u>HMIS</u>	Health Hazard 3	Flammability 0	Physical Hazard 0	Personal Protection X

Prepared By	Product Stewardship 23 British American Blvd. Latham, NY 12110 1-800-572-6501
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General Disclaimer

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet

