



SAFETY DATA SHEET

Issue Date 01-May-2014

Version 1

1. IDENTIFICATION

Product Identifier

Product Name AlkaKleen

Other means of identification

SDS # AN_GNC

UN/ID No UN3266

Other Information Package type: 1, 2.5, 55 gallon units.

Recommended use of the chemical and restrictions on use

Recommended Use Cleaning and brightening aluminum finned cooling and heating coils.

Restrictions on Use For Professional use only. Product is a concentrate and should be diluted prior to use.

Details of the supplier of the safety data sheet

Distributed By:

National Refrigeration Products
985 Wheeler Way
Langhorne, PA 19047 USA

Emergency telephone number

Company Phone Number 800-352-6951

Emergency Telephone Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1

Signal word

Danger

Hazard statements

Causes severe skin burns and eye damage

**Appearance** Clear purple liquid**Physical state** Liquid**Odor** None**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

Precautionary Statements - 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: Rinse mouth. DO NOT induce vomiting

Precautionary Statements - Storage

Store locked up
 Keep containers tightly closed in a dry, cool and well-ventilated place

Precautionary Statements - Disposal

Dispose of in accordance with federal, state and local regulations

Hazards not otherwise classified (HNOC)

May be harmful if swallowed
 May be harmful in contact with skin

Other Information

- Harmful to aquatic life
- Harmful to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Sodium hydroxide	1310-73-2	<50%
Potassium hydroxide	1310-58-3	<20%
Sodium metasilicate	6834-92-0	<10%

4. FIRST AID MEASURES

First aid measures

Inhalation	Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately.
Eye contact	Immediately flush with plenty of water for up to 15 minutes. Immediate medical attention is required.
Ingestion	Drink plenty of water. Do NOT induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. seek medical attention immediately.
Skin Contact	Neutralize with very diluted vinegar solution, wash with soap and water, apply skin cream. For large burns - GET IMMEDIATE MEDICAL ATTENTION.

Most important symptoms and effects, both acute and delayed

Symptoms	Inhalation may cause irritation to nasal passages. Severe burns to exposed skin. Nausea. Blindness may occur.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically.
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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

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

Unsuitable Extinguishing Media Not determined.

Specific hazards arising from the chemical

Avoid mixing with acids and soft metals.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Wear impervious to strong alkaline protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions	Use personal protective equipment as required. Wash thoroughly after handling.
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Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so. Neutralize with water and vinegar.
Methods for cleaning up	For small spills: wash to drain after product is neutralized. Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin, eyes or clothing. Wash face, hands and any exposed skin thoroughly after handling. Avoid mixing with acids and soft metals. Use personal protection recommended in Section 8.
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Conditions for safe storage, including any incompatibilities

Storage Conditions Store locked up. Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible materials Acids. Soft metals.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sodium hydroxide 1310-73-2	Ceiling: 2 mg/m ³	TWA: 2 mg/m ³ (vacated) Ceiling: 2 mg/m ³	IDLH: 10 mg/m ³ Ceiling: 2 mg/m ³
Potassium hydroxide 1310-58-3	Ceiling: 2 mg/m ³	(vacated) Ceiling: 2 mg/m ³	Ceiling: 2 mg/m ³
Sodium metasilicate 6834-92-0	2 mg/m ³	2 mg/m ³	-

Appropriate engineering controls

Engineering Controls If vapors are detected, ventilate work area by opening windows and using exhaust fans. Always work with wind from behind.

Individual protection measures, such as personal protective equipment

Eye/face protection Use tight fitting, splash proof safety goggles. Contact lenses should not be worn when handling this material. Face Mask.

Skin and body protection Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact. Wear protective Neoprene™ gloves.

Respiratory protection Ensure adequate ventilation, especially in confined areas.

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

Physical state	Liquid	Odor	None
Appearance	Clear purple liquid	Odor threshold	Not determined
Color	Clear to purplish		
Property	Values	Remarks • Method	
pH	>12.5		
Melting point/freezing point	Not determined		
Boiling point/boiling range	Not determined		
Flash point	Not determined		
Evaporation rate	Not determined		
Flammability (solid, gas)	Not determined		
Flammability Limits in Air			
Upper flammability limits	Not determined		
Lower flammability limit	Not determined		
Vapor pressure	Not determined		
Vapor density	Not determined		
Specific Gravity	1.20		
Water solubility	Not determined		
Solubility in other solvents	Not determined		
Partition coefficient	Not determined		

Autoignition temperature	Not determined
Decomposition temperature	Not determined
Kinematic viscosity	Not determined
Dynamic viscosity	Not determined
Explosive properties	Not determined
Oxidizing properties	Not determined

Other Information**10. STABILITY AND REACTIVITY****Reactivity**

This product will warm slightly with the addition of water

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

Product will react violently with the addition of incompatible materials.

Hazardous polymerization Hazardous polymerization does not occur.

Conditions to avoid

Incompatible materials. Keep out of reach of children.

Incompatible materials

Acids. Soft metals.

Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure****Product Information**

Inhalation	May cause irritation to the mucous membranes and upper respiratory tract.
Eye contact	Causes severe eye damage.
Skin Contact	Causes severe skin burns. May be harmful in contact with skin.
Ingestion	May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sodium hydroxide 1310-73-2	-	1350 mg/kg (Rabbit)	-
Potassium hydroxide 1310-58-3	214 mg/kg (Rat)	-	-
Sodium metasilicate 6834-92-0	600 mg/kg (Rat)	-	-

Information on physical, chemical and toxicological effects

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Numerical measures of toxicity- Product

Not determined

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

ATEmix (oral) 3766 mg/kg

ATEmix (dermal) 3846 mg/kg

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Harmful to aquatic life

Harmful to aquatic life with long lasting effects

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Sodium hydroxide 1310-73-2		45.4: 96 h Oncorhynchus mykiss mg/L LC50 static		
Potassium hydroxide 1310-58-3		80: 96 h Gambusia affinis mg/L LC50 static		
Sodium metasilicate 6834-92-0		210: 96 h Brachydanio rerio mg/L LC50 210: 96 h Brachydanio rerio mg/L LC50 semi-static		216: 96 h Daphnia magna mg/L EC50

Persistence and degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Not determined.

Chemical Name	Partition coefficient
Potassium hydroxide 1310-58-3	0.83

Other adverse effects

Not determined

13. DISPOSAL CONSIDERATIONS**Waste treatment methods****Disposal of wastes**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Chemical Name	California Hazardous Waste Status

Sodium hydroxide 1310-73-2	Toxic Corrosive
Potassium hydroxide 1310-58-3	Toxic Corrosive

14. TRANSPORT INFORMATION

DOT

UN/ID No UN3266
Proper shipping name Corrosive liquid, basic, inorganic, n.o.s. (Sodium hydroxide, Potassium Hydroxide)
Hazard Class Packing 8
Group Reportable II
Quantity (RQ) 1000

IATA

UN/ID No UN3266
Proper shipping name Corrosive liquid, basic, inorganic, n.o.s. (Sodium hydroxide, Potassium Hydroxide)
Hazard Class 8
Packing Group II

IMDG

UN/ID No UN3266
Proper shipping name Corrosive liquid, basic, inorganic, n.o.s. (Sodium hydroxide, Potassium Hydroxide)
Hazard Class 8
Packing Group II

15. REGULATORY INFORMATION

International Inventories

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 Chemical Substances/European List of Notified Chemical Substances*
- ENCS - Japan Existing and New Chemical Substances IECSC*
- China Inventory of Existing Chemical Substances KECL -*
- Korean Existing and Evaluated Chemical Substances*
- PICCS - Philippines Inventory of Chemicals and Chemical Substances*

US Federal Regulations

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

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
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Sodium hydroxide 1310-73-2	1000 lb			X
Potassium hydroxide 1310-58-3	1000 lb			X
Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)	
Sodium hydroxide 1310-73-2	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ	
Potassium hydroxide 1310-58-3	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ	

US State Regulations

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Sodium hydroxide 1310-73-2	X	X	X
Potassium hydroxide 1310-58-3	X	X	X

U.S. EPA Label Information

16. OTHER INFORMATION

<u>NFPA</u>	Health hazards Not determined	Flammability Not determined	Instability Not determined	Special Hazards Not determined
<u>HMIS</u>	Health hazards 3	Flammability 0	Physical hazards 2	Personal protection X

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Disclaimer

The information provided in this Safety Data Sheet 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

End of Safety Data Sheet