



SAFETY DATA SHEET

Issue Date 01-May-2014

Version 1

1. IDENTIFICATION

Product Identifier

Product Name KleenBrite

Other means of identification

SDS # KB_GNC

UN/ID No UN2922

Other Information Package type: 1, 2.5, 55 gal.

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. Contains Hydrofluoric Acid, can be fatal if used incorrectly, use product at own risk. 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

Acute toxicity - Oral	Category 2
Acute toxicity - Dermal	Category 1
Acute toxicity - Inhalation (Dusts/Mists)	Category 2
Skin corrosion/irritation	Category 1 Sub-category A
Serious eye damage/eye irritation	Category 1

Signal word

Danger

Hazard statements

Fatal if swallowed
 Fatal in contact with skin
 Fatal if inhaled
 Causes severe skin burns and eye damage



Appearance Clear pink liquid

Physical state Liquid

Odor Pungent

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Do not get in eyes, on skin, or on clothing
 Wear protective gloves/protective clothing/eye protection/face protection
 Do not breathe dust/fume/gas/mist/vapors/spray
 Use only outdoors or in a well-ventilated area
 Wear respiratory 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
 Immediately call a POISON CENTER or doctor/physician
 Wash contaminated clothing before reuse
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
 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: Immediately call a POISON CENTER or doctor/physician
 Rinse mouth
 Do NOT induce vomiting

Precautionary Statements - Storage

Store locked up
 Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not Applicable

Other Information

Not Applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Hydrofluoric acid	7664-39-3	<25
Sulfuric acid	7664-93-9	<20

4. FIRST AID MEASURES

First aid measures

General advice	Overexposure may produce hypocalcaemia therefore systemic administration of calcium gluconate may be necessary.
Inhalation	Remove to fresh air. If breathing has stopped, give artificial respiration. Call a physician or poison control center immediately.
Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Immediately call a POISON CENTER or doctor/physician.
Ingestion	Rinse mouth thoroughly with water. Do NOT induce vomiting. If swallowed, call a poison control center or physician immediately.
Skin Contact	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical attention immediately.

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	Eyes: Hold eye lids apart and flood eyes with running water for at least 15 minutes. A 1% calcium gluconate solution should be used to wash eyes for 15 minutes and then instilled every 2-3 hours. A physician, or preferably an eye specialist should be called immediately. Skin: painful detection may be delayed, If suspected contact, treat as contact. Wash effected area of the skin with copious amounts of water. A calcium gluconate gel (2.5%) or a 1% zephrine chloride wash should be rubbed in until pain has subdued.
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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

Contact with alkalis and metals may evolve flammable hydrogen gas. Emits toxic fumes under fire conditions.

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. Wear self-contained breathing apparatus (SCBA).
For emergency responders	Overexposure may produce hypocalcaemia therefore systemic administration of calcium gluconate may be necessary.

Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so. Isolate area. Keep unnecessary and unprotected personnel from entering contaminated area. Absorb material with an inert material. Prevent from entering drains sewers or other bodies of water, absorb unrecoverable product. Transfer contaminated material to containers for disposal.
Methods for cleaning up	Sweep up and shovel into suitable containers for disposal. For waste disposal, see section 13 of the SDS.

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. Use personal protection recommended in Section 8. Do not eat, drink or smoke when using this product. Do not get in eyes, on skin, or on clothing. Use only outdoors or in a well-ventilated area. Wear respiratory protection.
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Conditions for safe storage, including any incompatibilities

Storage Conditions	Store locked up. Keep container tightly closed in a dry and well-ventilated place.
Incompatible materials	Alkali. Ammonia. chlorine bleach. OXIDIZERS. Alkaline materials.

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

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Hydrofluoric acid 7664-39-3	TWA: 0.5 ppm F TWA: 2.5 mg/m ³ F S* Ceiling: 2 ppm F	TWA: 3 ppm F TWA: 2.5 mg/m ³ F (vacated) TWA: 3 ppm F (vacated) TWA: 2.5 mg/m ³ (vacated) STEL: 6 ppm F	IDLH: 30 ppm Ceiling: 6 ppm 15 min Ceiling: 5 mg/m ³ 15 min TWA: 3 ppm TWA: 2.5 mg/m ³
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m ³ thoracic fraction	TWA: 1 mg/m ³ (vacated) TWA: 1 mg/m ³	IDLH: 15 mg/m ³ TWA: 1 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.
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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	Pungent
Appearance	Clear pink liquid	Odor threshold	Not determined
Color	Clear pink		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	1.0	
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	1.09	
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**

Not reactive under normal conditions

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

Product will react violently with the addition of incompatible materials.

Conditions to avoid

Incompatible materials. Keep out of reach of children.

Incompatible materials

Alkali. Ammonia. chlorine bleach. OXIDIZERS. Alkaline materials.

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**

Overexposure may produce hypocalcaemia therefore systemic administration of calcium gluconate may be necessary

Inhalation

Fatal if inhaled.

Eye contact	Causes severe eye damage.
Skin Contact	Causes severe skin burns. Fatal in contact with skin.
Ingestion	Fatal if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Water 7732-18-5	> 90 mL/kg (Rat)	-	-
Hydrofluoric acid 7664-39-3	-	-	= 850 mg/m ³ (Rat) 1 h = 1276 ppm (Rat) 1 h
Sulfuric acid 7664-93-9	2140 mg/kg (Rat)	-	347 ppm (Rat) 1 h 510 mg/m ³ (Rat) 2 h

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 Note: The agencies below have listed Strong Inorganic Acid Mists, Containing Sulfuric Acid as a known carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X

Numerical measures of toxicity- Product

Not determined

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

ATEmix (oral)	45 mg/kg
ATEmix (dermal)	40 mg/kg
ATEmix (inhalation-gas)	3033 mg/l
ATEmix (inhalation-dust/mist)	0.4 mg/l

12. ECOLOGICAL INFORMATION**Ecotoxicity**

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Hydrofluoric acid 7664-39-3		660: 48 h Leuciscus idus mg/L LC50		270: 48 h Daphnia species mg/L EC50
Sulfuric acid 7664-93-9		>500: 96 h Brachydanio rerio mg/L LC50 static		29: 24 h Daphnia magna mg/L EC50

Persistence and degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Not determined.

Chemical Name	Partition coefficient
Hydrofluoric acid 7664-39-3	-1.4

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	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Hydrofluoric acid 7664-39-3	U134			U134

Chemical Name	California Hazardous Waste Status
Sulfuric acid 7664-93-9	Toxic Corrosive

14. TRANSPORT INFORMATION

DOT

UN/ID No UN2922
Proper shipping name Corrosive liquids, toxic, n.o.s. (Hydrofluoric Acid, Sulfuric Acid)
Hazard Class 8
Subsidiary class 6.1
Packing Group II

IATA

UN/ID No UN3264
Proper shipping name Hydrofluoric acid and Sulfuric acid mixture
Hazard Class 8
Subsidiary hazard class 6.1
Packing Group II

IMDG

UN/ID No UN3264
Proper shipping name Hydrofluoric acid and Sulfuric acid mixture
Hazard Class 8
Subsidiary hazard class 6.1
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**

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Hydrofluoric acid - 7664-39-3	7664-39-3	<25	1.0
Sulfuric acid - 7664-93-9	7664-93-9	<20	1.0

SARA 311/312 Hazard Categories

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Hydrofluoric acid 7664-39-3	100 lb			X
Sulfuric acid 7664-93-9	1000 lb			X
Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)	
Hydrofluoric acid 7664-39-3	100 lb	100 lb	RQ 100 lb final RQ RQ 45.4 kg final RQ	
Sulfuric acid 7664-93-9	1000 lb	1000 lb	RQ 1000 lb final RQ RQ 454 kg final RQ	

US State Regulations

Chemical Name	California Proposition 65
Sulfuric acid - 7664-93-9	Carcinogen

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Hydrofluoric acid 7664-39-3	X	X	X
Sulfuric acid 7664-93-9	X	X	X

U.S. EPA Label Information**16. OTHER INFORMATION**

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

Issue Date 01-Jun-2010

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 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