



# SAFETY DATA SHEET

Issue Date 05-May-2016

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

<b>General advice</b>	Overexposure may produce hypocalcaemia therefore systemic administration of calcium gluconate may be necessary.
<b>Inhalation</b>	Remove to fresh air. If breathing has stopped, give artificial respiration. Call a physician or poison control center immediately.
<b>Eye contact</b>	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.
<b>Ingestion</b>	Rinse mouth thoroughly with water. Do NOT induce vomiting. If swallowed, call a poison control center or physician immediately.
<b>Skin Contact</b>	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

<b>Symptoms</b>	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

<b>Note to physicians</b>	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

<b>Personal precautions</b>	Use personal protective equipment as required. Wash thoroughly after handling. Wear self-contained breathing apparatus (SCBA).
<b>For emergency responders</b>	Overexposure may produce hypocalcaemia therefore systemic administration of calcium gluconate may be necessary.

**Methods and material for containment and cleaning up**

<b>Methods for containment</b>	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.
<b>Methods for cleaning up</b>	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**

<b>Advice on safe handling</b>	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**

<b>Storage Conditions</b>	Store locked up. Keep container tightly closed in a dry and well-ventilated place.
<b>Incompatible materials</b>	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 <sup>3</sup> F S* Ceiling: 2 ppm F	TWA: 3 ppm F TWA: 2.5 mg/m <sup>3</sup> F (vacated) TWA: 3 ppm F (vacated) TWA: 2.5 mg/m <sup>3</sup> (vacated) STEL: 6 ppm F	IDLH: 30 ppm Ceiling: 6 ppm 15 min Ceiling: 5 mg/m <sup>3</sup> 15 min TWA: 3 ppm TWA: 2.5 mg/m <sup>3</sup>
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m <sup>3</sup> thoracic fraction	TWA: 1 mg/m <sup>3</sup> (vacated) TWA: 1 mg/m <sup>3</sup>	IDLH: 15 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup>

**Appropriate engineering controls**

<b>Engineering Controls</b>	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**

<b>Eye/face protection</b>	Use tight fitting, splash proof safety goggles. Contact lenses should not be worn when handling this material. Face Mask.
<b>Skin and body protection</b>	Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact. Wear protective Neoprene™ gloves.
<b>Respiratory protection</b>	Ensure adequate ventilation, especially in confined areas.
<b>General Hygiene Considerations</b>	Handle in accordance with good industrial hygiene and safety practice.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Information on basic physical and chemical properties**

<b>Physical state</b>	Liquid	<b>Odor</b>	Pungent
<b>Appearance</b>	Clear pink liquid	<b>Odor threshold</b>	Not determined
<b>Color</b>	Clear pink		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>	1.0	
<b>Melting point/freezing point</b>	Not determined	
<b>Boiling point/boiling range</b>	Not determined	
<b>Flash point</b>	Not determined	
<b>Evaporation rate</b>	Not determined	
<b>Flammability (solid, gas)</b>	Not determined	
<b>Flammability Limits in Air</b>		
<b>Upper flammability limits</b>	Not determined	
<b>Lower flammability limit</b>	Not determined	
<b>Vapor pressure</b>	Not determined	
<b>Vapor density</b>	Not determined	
<b>Specific Gravity</b>	1.09	
<b>Water solubility</b>	Not determined	
<b>Solubility in other solvents</b>	Not determined	
<b>Partition coefficient</b>	Not determined	
<b>Autoignition temperature</b>	Not determined	
<b>Decomposition temperature</b>	Not determined	
<b>Kinematic viscosity</b>	Not determined	
<b>Dynamic viscosity</b>	Not determined	
<b>Explosive properties</b>	Not determined	
<b>Oxidizing properties</b>	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.

<b>Eye contact</b>	Causes severe eye damage.
<b>Skin Contact</b>	Causes severe skin burns. Fatal in contact with skin.
<b>Ingestion</b>	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 <sup>3</sup> ( 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 <sup>3</sup> ( 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.

<b>ATEmix (oral)</b>	45 mg/kg
<b>ATEmix (dermal)</b>	40 mg/kg
<b>ATEmix (inhalation-gas)</b>	3033 mg/l
<b>ATEmix (inhalation-dust/mist)</b>	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 <i>Leuciscus idus</i> mg/L LC50		270: 48 h <i>Daphnia</i> species mg/L EC50
Sulfuric acid 7664-93-9		>500: 96 h <i>Brachydanio rerio</i> mg/L LC50 static		29: 24 h <i>Daphnia magna</i> 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** UN2922  
**Proper shipping name** Corrosive liquids, toxic, n.o.s. (Hydrofluoric Acid, Sulfuric Acid)  
**Hazard Class** 8  
**Subsidiary hazard class** 6.1  
**Packing Group** II

**IMDG**

**UN/ID No** UN2922  
**Proper shipping name** Corrosive liquids, toxic, n.o.s. (Hydrofluoric Acid, Sulfuric Acid)  
**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**

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

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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 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