

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product number	015
Product name	Lemon Aire Hospital Use Disinfectant Spray
Effective date	07-Apr-2008
Company information	KSS Enterprises 616 East Vine Kalamazoo, MI 49001 United States
Company phone	General Assistance 800-638-4191
Emergency telephone US	866-836-8855
Emergency telephone outside US	703-527-3887
Version #	05
Supersedes date	18-Mar-2008

2. Hazards Identification

Emergency overview	CONTENTS UNDER PRESSURE. Aerosol. Pressurized container may explode when exposed to heat or flame. Harmful in contact with eyes. Can cause adverse reproductive effects. Prolonged exposure may cause chronic effects.
OSHA regulatory status	This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).
Potential health effects	
Eyes	Contact may irritate or burn eyes. Eye contact may result in corneal injury.
Skin	Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash). Harmful if absorbed through the skin.
Inhalation	Intentional misuse by concentrating and inhaling the product can be harmful or fatal. Prolonged inhalation may be harmful.
Ingestion	Exposure by ingestion of an aerosol is unlikely. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause delayed lung damage.
Target organs	Blood. Central nervous system. Gastrointestinal tract. Liver. Respiratory system.
Chronic effects	Unconsciousness. Conjunctiva. Sterility. Liver injury may occur. May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. May cause delayed lung damage. Can cause adverse reproductive effects. Pregnant women or women of child-bearing age should not be exposed to this product.
Signs and symptoms	Discomfort in the chest. Corneal damage. Narcosis. Cyanosis. Liver enlargement. Jaundice. Conjunctivitis. Defatting of the skin. Irritation. Birth defects. Sterility.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Ethyl Alcohol	64-17-5	40 - 50
n-Butane	106-97-8	15 - 20
Propane	74-98-6	5 - 8
Methanol	67-56-1	3 - 5
Non-hazardous and other components below reportable levels		20 - 40

4. First Aid Measures

First aid procedures	
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical attention immediately.
Skin contact	Immediately take off all contaminated clothing. Wash off with warm water and soap. Get medical attention if irritation develops or persists.
Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.

Ingestion Rinse mouth. Get medical attention immediately. Do not induce vomiting without medical advice. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Notes to physician Symptoms may be delayed.

General advice Call a physician if symptoms develop or persist.

5. Fire Fighting Measures

Flammable properties Containers may explode when heated. Vapor or gas may spread to distant ignition sources and flash back.

Extinguishing media

Suitable extinguishing media Foam. Dry chemical. Carbon dioxide (CO2).

Unsuitable extinguishing media Do not use a solid water stream as it may scatter and spread fire.

Protection of firefighters

Protective equipment and precautions for firefighters In the event of fire and/or explosion do not breathe fumes. Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. Containers should be cooled with water to prevent vapor pressure build up. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

6. Accidental Release Measures

Personal precautions Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering. Keep unnecessary personnel away.

Methods for containment Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable.

Methods for cleaning up Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean contaminated surface thoroughly.

7. Handling and Storage

Handling Pressurized container: Do not pierce or burn, even after use. Do not handle or store near an open flame, heat or other sources of ignition. Use only in area provided with appropriate exhaust ventilation. Do not use if spray button is missing or defective. Do not get this material in contact with eyes. Do not get this material in contact with skin. Avoid prolonged exposure.

Storage Level 2 Aerosol.

Contents under pressure. Do not puncture, incinerate or crush. The pressure in sealed containers can increase under the influence of heat. Keep away from heat, sparks, and flame. Avoid exposure to long periods of sunlight. Store in cool place. Keep in an area equipped with sprinklers. Keep out of the reach of children. Use care in handling/storage.

8. Exposure Controls / Personal Protection

Exposure limits

ACGIH

Components	CAS #	TWA	STEL	Ceiling
Ethyl Alcohol	64-17-5	1000 ppm	Not established	Not established
n-Butane	106-97-8	1000 ppm	Not established	Not established
Propane	74-98-6	1000 ppm	Not established	Not established
Methanol	67-56-1	200 ppm	250 ppm	Not established

OSHA

Components	CAS #	TWA	STEL	Ceiling
Ethyl Alcohol	64-17-5	1000 ppm	Not established	Not established
Propane	74-98-6	1000 ppm	Not established	Not established
Methanol	67-56-1	200 ppm	Not established	Not established

Engineering controls	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
Personal protective equipment	
Eye / face protection	Wear chemical goggles.
Skin protection	Protective gloves.
Respiratory protection	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
General hygiene considerations	When using do not smoke. Avoid contact with eyes. Avoid contact with skin. Handle in accordance with good industrial hygiene and safety practice.

9. Physical & Chemical Properties

Appearance	Compressed liquefied gas.
Color	colorless
Odor	fruity alcoholic
Physical state	Liquid.
Form	Aerosol.
Flammability (HOC)	25 kJ/g
Flash back	No
Pressure	52 - 62 psig @ 70F
Solubility	Partially
Flash point	-156 °F (-104.4 °C) estimated
Boiling point	134.6 °F (57.2 °C) estimated
Specific gravity	0.7515
pH	9.04 - 10.04

10. Chemical Stability & Reactivity Information

Chemical stability	Risk of ignition. Stable at normal conditions.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	Isocyanates.
Hazardous decomposition products	May include oxides of nitrogen.

11. Toxicological Information

Acute effects	Acute LC50: 83 mg/l/4h estimated, Rat, Inhalation
Sensitization	Not expected to be hazardous by OSHA criteria.
Local effects	Contact may irritate or burn eyes. Liver toxicity. Blood disorder may occur after ingestion. Components of the product may be absorbed into the body through the skin.
Chronic effects	Hazardous by OSHA criteria. Repeated absorption may cause disorder of central nervous system, liver, kidneys and blood. Prolonged or repeated exposure may cause lung injury. Prolonged exposure may cause chronic effects.
Subchronic effects	Blood disorder may occur after prolonged inhalation. Blood disorder may occur after prolonged skin contact.
Neurological effects	Hazardous by OSHA criteria.
Mutagenicity	Not expected to be hazardous by OSHA criteria.
Reproductive effects	Hazardous by OSHA criteria. Possible reproductive hazard. Can cause adverse reproductive effects - such as birth defects, miscarriages, and infertility.
Teratogenicity	Not expected to be hazardous by OSHA criteria.
Epidemiology	Hazardous by OSHA criteria.
Further information	Symptoms may be delayed.

12. Ecological Information

Ecotoxicity	LC50 1806 mg/L estimated, Fish, 96.00 Hours, EC50 17771 mg/L estimated, Daphnia, 48.00 Hours, Components of this product have been identified as having potential environmental concerns.
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13. Disposal Considerations

Waste codes	D001: Waste Flammable material with a flash point <140 F
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Disposal instructions

Consult authorities before disposal. Contents under pressure. Incinerate the material under controlled conditions in an approved incinerator. Do not incinerate sealed containers. Do not allow this material to drain into sewers/water supplies. If discarded, this product is considered a RCRA ignitable waste, D001. Dispose in accordance with all applicable regulations.

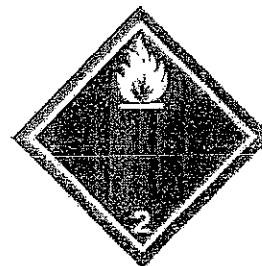
14. Transport Information

Department of Transportation (DOT) Requirements**Basic shipping requirements:**

Proper shipping name	Consumer commodity
Hazard class	ORM-D
Subsidiary hazard class	None
Additional information:	
Packaging exceptions	156, 306
Packaging non bulk	156, 306
Packaging bulk	None

IMDG**Basic shipping requirements:**

Proper shipping name	AEROSOLS, flammable
Hazard class	2.1
UN number	1950
Additional information:	
Packaging exceptions	LTD QTY
Item	5F
Labels required	None
Transport Category	2

**IATA****Basic shipping requirements:**

Proper shipping name	Aerosols, flammable
Hazard class	2.1
UN number	1950
Additional information:	
Packaging exceptions	LTD QTY
Labels required	None



15. Regulatory Information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

Methanol	67-56-1	1.0 % de minimis concentration
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Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical	Yes
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CERCLA (Superfund) reportable quantity

Methanol: 5000.0000

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - Yes Pressure Hazard - Yes Reactivity Hazard - No
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Section 302 extremely hazardous substance	No
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Section 311 hazardous chemical	Yes
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Inventory status		On inventory (yes/no)*
Country(s) or region	Inventory name	
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of New and Existing Chemicals (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations

U.S. - Pennsylvania - RTK (Right to Know) List

Ethyl Alcohol	64-17-5	Present
Methanol	67-56-1	Environmental hazard
n-Butane	106-97-8	Present
Propane	74-98-6	Present

16. Other Information

HMIS® ratings

Health: 1*
 Flammability: 3
 Physical hazard: 0
 Personal protection: X

Prepared by

Regulatory Compliance

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.

Issue date

07-Apr-2008

MSDS sections updated

Product and Company Identification; Alternate Trade Names