

MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

Product identifier/Trade name: SOLUTION of CHLORHEXIDINE GLUCONATE with ISOPROPYL ALCOHOL

Product code/Internal Identification: N/Av

Product use/Description: Skin antiseptic solution

Product chemical name: N/Av

Chemical family: Mixture.

MSDS preparation/review date: September 23, 2008

Supplier identifier: Les Entreprises Solumed Inc.
3281, rue Jean-Béraud, Laval, Québec (Canada), H7T 2L2
Telephone : 450-682-6669

Manufacturer identifier: Refer to supplier

Emergency phone number: N/Av

WHMIS Classification: This product is not a WHMIS controlled product. This product is regulated under the Food and Drugs Act in Canada. However, for informational purposes only, this product would have the following WHMIS classification:

Class B2 – Flammable liquid

Class D2B – Toxic material, Other toxic effects

SECTION 2 - COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Ingredients	CAS #	% (weight)	LD ₅₀ (route, species)	LC ₅₀ (species)
Chlorhexidine gluconate	18472-51-0	0,2 - 5	2000 mg/kg (oral, rat); > 2000 (dermal, rabbit)	N/Av
Isopropanol	67-63-0	60 - 100	4720 mg/kg (oral, rat); 12,890 mg/kg (dermal, rabbit)	17,000 ppm / 4 hours (rat)

SECTION 3 - HAZARDS IDENTIFICATION

Emergency Overview

Clear liquid. May in some cases contain a light red tint. Alcohol odour. Danger! FLAMMABLE LIQUID AND VAPOUR. Vapours may cause flash fire. May be harmful if inhaled or swallowed in large amounts. May cause headache, nausea, dizziness, drowsiness and other symptoms of central nervous system depression. IRRITANT. Causes eye irritation. May cause respiratory tract irritation.

POTENTIAL HEALTH EFFECTS

Primary entry route(s): Skin, eyes, ingestion and inhalation.

Effects of short-term (acute) exposure:

Inhalation:

May cause irritation to the nose, throat and respiratory tract. Inhaling high concentrations may cause central nervous system depression, with effects ranging from dizziness and headache to unconsciousness.

Skin:

May cause little or no irritation.

Eyes:

May cause moderate to severe eye irritation and injury.

Ingestion:

May cause irritation to the mouth, throat and stomach. Ingestion of large amounts may cause nausea, vomiting, diarrhea, as well as depression of the central nervous system. Product may present an aspiration hazard. Aspiration into the lungs following ingestion and subsequent vomiting, may cause life-threatening lung injury.

Effects of long-term (chronic) exposure:

Prolonged and excessive skin contact may cause drying and irritation.

Other important hazards:

Refer to Section 11, Toxicological Information, for further information.

SECTION 4 - FIRST AID MEASURES**Inhalation:**

Remove source of contamination or have victim move to fresh air. If breathing is difficult, give oxygen by qualified medical personnel only. If not breathing, give artificial respiration. Obtain medical attention.

Skin contact:

Flush contaminated area with gently running water for at least 5 to 10 minutes, or until the chemical is removed. Under running water, remove contaminated clothing. If irritation persists, obtain medical advice. Launder contaminated clothing before re-use.

Eye contact:

Immediately flush the contaminated eye(s) with gently flowing water for at least 20 minutes, or until the chemical is removed. Obtain medical attention immediately.

Ingestion:

NEVER give anything by mouth if victim is rapidly losing consciousness, or is unconscious. Do not induce vomiting. Rinse mouth thoroughly with water. Have victim drink one to two glasses of water. Obtain medical attention.

SECTION 5 - FIRE FIGHTING MEASURES**Fire hazards/conditions of flammability:**

Flammable liquid and vapour. Vapours may be heavier than air and may collect in confined and low-lying areas. The vapours may travel considerable distances and flashback to a source of ignition. Closed containers may build up pressure and may rupture if exposed to excess heat.

Flash point (Method): 13°C (55.4°F) (closed cup)

Lower flammable limit (% by volume): 2.0 (Isopropanol)

Upper flammable limit (% by volume): 12.0 (Isopropanol)

Sensitivity to mechanical impact: Not sensitive.

Sensitivity to static discharge:

Product will accumulate static charge. Mixtures of vapour and air at concentrations in the flammable range may be ignited by a static discharge of sufficient energy.

Auto-ignition temperature: N/A

Suitable extinguishing media: Water fog, carbon dioxide, dry chemical powder and appropriate foam.

Special fire-fighting procedures/equipment:

During a fire, irritating/toxic smoke and fumes may be generated. Do not enter fire area without proper protection. Firefighters should wear proper protective equipment and self-contained breathing apparatus with full facepiece. Move containers from fire area if it can be done without risk. Water spray may be useful in cooling equipment and containers exposed to heat and flame.

Hazardous combustion products: Carbon oxides, aldehydes, unburned alcohols and other irritating fumes and smoke.

SECTION 6 - ACCIDENTAL RELEASE MEASURES**Personal precautions:**

Restrict access to area until completion of clean-up. Ensure clean-up is conducted by trained personnel only. All persons dealing with clean-up should wear the appropriate protective equipment (See Section 8).

Spill response/Cleanup:

Ventilate area of release. Eliminate all sources of ignition. Remove or isolate flammable and combustible materials. Use only non-sparking tools during the clean-up process. Stop the leak if it can be done safely. Contain and absorb spilled liquid with inert, non-combustible absorbent material, then place material into a suitable, labelled container for later disposal (see Section 13). Do not use combustible absorbent material, such as sawdust. For large spills: Remove liquid by explosion-proof pumps or vacuum equipment. Contaminated absorbent material may pose the same hazards as the spilled product. Notify the appropriate authorities as required.

Environmental precautions:

Confine spill, preventing it from entering waterways. Dispose of as per local, provincial and federal regulations.

SECTION 7 - HANDLING AND STORAGE

Safe handling procedures:

Use in well-ventilated areas. Ensure that appropriate personal hygiene measures are being followed (ie. Do not eat, drink, or smoke immediately following application of the product; do not rub eyes immediately following application of the product). Inspect containers for leaks before handling. Label containers appropriately. Avoid breathing vapours or mists. Avoid contact with eyes. Avoid excessive, prolonged contact with skin and clothing. Keep away from heat, sparks and flame. Do not use near welding operations, flames or hot surfaces. Avoid generating high concentrations of vapours or mists. Keep away from acids and other incompatible materials. Keep containers closed when not in use. Assume that empty containers contain residues which are hazardous.

Storage requirements:

Store in a cool, well-ventilated area, out of direct sunlight and away from heat and ignition sources. Store away from incompatible materials. Inspect all incoming containers to make sure they are properly labelled and not damaged. Keep containers tightly closed. Storage area should be clearly identified, clear of obstruction and accessible only to trained personnel. Inspect periodically for damage or leaks. Have appropriate fire extinguishers and spill clean-up equipment in or near storage area.

Incompatible materials:

Avoid STRONG OXIDIZING AGENTS (e.g. Chlorides, Peroxides), STRONG ACIDS (e.g. Sulfuric acid), ALKALI METALS (e.g. Sodium).

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION
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Exposure limits: There is no available data for the product. See below for individual ingredient exposure limits.

Ingredient	OSHA PEL		ACGIH TLV	
	TWA	STEL	TWA	STEL
Chlorhexidine gluconate	N/Av	N/Av	N/Av	N/Av
Isopropanol	400 ppm	N/Av	200 ppm	400 ppm

Engineering controls:

Use adequate ventilation to maintain air contaminants below exposure limits.

Respiratory Protection:

Respiratory protection is required if the concentrations are higher than the exposure limits. Use a NIOSH approved respirator if the exposure limits are unknown.

Protective Clothing/Equipment:

Protective gloves and an apron may be necessary when excessive or prolonged contact is anticipated, or when dispensing product into smaller containers. Wear protective chemical safety goggles when there is a potential for splashing. Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area. Launder contaminated clothing before reuse.

Comments:

Avoid generating high concentrations of vapours or mists. Avoid contact with eyes. Avoid prolonged contact with skin. Avoid breathing vapours or mists. Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material. Remove and wash contaminated work clothing before re-use.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical state, colour and odour: Clear liquid. May in some cases contain a light red tint. Alcohol odour.

Odour threshold: N/Av

pH: 5 – 8 @ 25°C

Boiling point: N/Av

Melting/freezing point: N/Av

Vapour pressure: N/Av

Solubility in water: 100%

Coefficient of oil/water distribution: N/Av

Specific gravity or density (water = 1): 0.872 – 0.887

Vapour density (Air = 1): N/Av

Evaporation rate: N/Av

% volatile by volume: N/Av

SECTION 10 - STABILITY AND REACTIVITY

Stability and reactivity: Stable under the recommended storage and handling conditions prescribed.

Polymerisation: Hazardous polymerisation will not occur.

Conditions to avoid: Avoid extreme heat and flame. Avoid direct sunlight.

Materials to avoid: Incompatible materials (see Section 7).

Hazardous decomposition products: None known. Refer to 'Hazardous combustion products', Section 5.

SECTION 11 - TOXICOLOGICAL INFORMATION**Toxicological data:**

There is no available data for the product itself, only for the ingredients. **For more details, refer to Section 2.**

Carcinogenicity:

None of the ingredients listed are classified by IARC, ACGIH, NTP or OSHA as carcinogens.

Teratogenicity, mutagenicity, other reproductive effects:

This product contains Isopropanol. Isopropanol is no longer considered a developmental toxin. Teratogenic / fetotoxic effects were observed in animals, however the effects were observed in the presence of maternal toxicity or at concentrations where maternal toxicity is expected to occur.

Skin sensitization: None known.

Respiratory tract sensitization: None known.

Synergistic materials:

Isopropanol has enhanced the toxicity of carbon tetrachloride, 1,1,2-trichloroethane, chloroform, trichloroethylene and dimethylnitrosamine in rodents.

SECTION 12 - ECOLOGICAL INFORMATION

Environmental effects: There is no available data on the product itself. The product should not be allowed to enter drains or water courses or be deposited where it can affect ground or surface waters

Important environmental characteristics: N/Av

Aquatic toxicity: N/Av

SECTION 13 - DISPOSAL CONSIDERATIONS**Handling and storage conditions for disposal:**

Store material for disposal as indicated in Handling and Storage (Section 7). Empty containers are always dangerous.

Assume that empty containers contain residues which are hazardous.

Methods of disposal: Review federal, provincial and local government requirements prior to disposal.

SECTION 14 - TRANSPORT INFORMATION**Canadian Transportation of Dangerous Goods Regulations (TDGR) :**

Shipping information: This product is regulated according to the TDGR.

Proper shipping name: ISOPROPANOL

Class: 3

Identification number: UN1219

Packing group: II

Special case: For shipments by ground for Canada, the Limited Quantity / Consumer Commodity Exemption may apply for containers which hold 1 Litre or less of the material. Under the TDG, refer to Section 1.17 for additional exemption requirements, if shipping under this exemption.

SECTION 15 - REGULATORY INFORMATION**WHMIS information:**

This product is not a WHMIS Controlled Product. This product is regulated under the Food and Drugs Act & Regulations. Refer to Section 1 for an informational WHMIS classification.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and this MSDS contains all the information required by the CPR.

SECTION 15 - REGULATORY INFORMATION Continued**Canadian Environmental Protection Act (CEPA) information:**

This product is a mixture. The individual ingredients in this product are listed on the DSL.

Hazardous Materials Identification System (HMIS):

HEALTH: *2 FLAMMABILITY: 3 REACTIVITY: 0 PERSONAL PROTECTION: See Section 8.
HAZARD SCALE: * = Chronic hazard 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

National Fire Protection Association (NFPA):

HEALTH: 2 FLAMMABILITY: 3 INSTABILITY: 0 SPECIAL HAZARDS: None.
HAZARD SCALE: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

SECTION 16 - OTHER INFORMATION

Prepared by: ICC The Compliance Center Inc. for Les Entreprises Solumed Inc.

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Please direct all inquiries to Les Entreprises Solumed Inc.

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Abbreviations:

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstract Service
DSL	Domestic Substance List
IARC	International Agency for Research on Cancer
LC	Lethal concentration
LD	Lethal Dosage
N/Ap	Not applicable
N/Av	Not available
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program (U.S.A.)
OSHA	Occupational Safety and Health Administration (U.S.A.)
PEL	Permissible Exposure Limit
RTECs	Registry of Toxic Effects of Chemical Substances
STEL	Short-term Exposure Limit
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
TWA	Time Weighted Average
WHMIS	Workplace Hazardous Materials Information System

References:

1. Material Safety Data Sheets from manufacturer.
2. International Agency for Research on Cancer Monographs, 2008.
3. Canadian Centre for Occupational Health and Safety, CCInfoWeb databases, 2008 (Chempendium, and RTECs).
4. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices for 2007.

DISCLAIMER OF LIABILITY

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