

1. PRODUCT & COMPANY IDENTIFICATION

1.1	Product Name:	Relief Chemistry Hand Sanitizer 80% (Health Act Compliant)
1.2	Chemical Name:	Ethanol solution
1.3	Synonyms:	NA
1.4	Trade Names:	Relief Chemistry Hand Sanitizer 80% (Health Act Compliant)
1.5	Product Use:	Sundry
1.6	Distributor's Name:	Relief Chemistry
1.7	Distributor's Address:	
1.8	Emergency Phone:	
1.9	Business Phone / Fax:	

2. HAZARDS IDENTIFICATION

2.1	Hazard Identification:	This product is classified as a HAZARDOUS SUBSTANCE but not as DANGEROUS GOODS according to the classification criteria of NOHSC: 1088 (2004) and ADG Code (Australia). WARNING! HIGHLY FLAMMABLE LIQUID AND VAPOR. CAUSES SERIOUS EYE IRRITATION. Classification: Flam. Liq. 2; Eye Irrit. 2B	
2.2	Label Elements:	<p>Hazard Statements (H): H225 – Highly flammable liquid and vapor. H319 – Causes serious eye irritation.</p> <p>Precautionary Statements (P): P210 – Keep away from heat/sparks/open flame/hot surfaces – No Smoking. P233 – Keep container tightly closed. P261 – Avoid breathing vapors/mist/spray. P272 – Contaminated work clothing should not be allowed out of the workplace. P280 – Wear protective eye protection/face protection. P305+P351+P338 – IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. P370+P378 – In case of fire: Use CO₂, Halon (if permitted), dry chemical, or foam for extinction. P403+P235 – Store in a well-ventilated place. Keep cool. P501 – Dispose of contents/container to a licensed treatment, storage or disposal facility (TSDF).</p>	 
2.3	Other Warnings:	KEEP OUT OF REACH OF CHILDREN. In the event of an exposure or medical inquiry involving this product, please contact a physician or local poison control center, who may seek advice from the U.S. manufacturer, and show them this SDS.	

3. COMPOSITION & INGREDIENT INFORMATION

CHEMICAL NAME(S)	CAS No.	RTECS No.	EINECS No.	%	EXPOSURE LIMITS IN AIR (mg/m ³)									OTHER
					ACGIH		NOHSC			OSHA				
					ppm		ppm			ppm				
					TLV	STEL	ES-TWA	ES-STEL	ES-PEAK	PEL	STEL	IDLH		
ETHANOL (SD ALCOHOL 40B)	64-17-5	KQ6300000	200-578-6	80-90	1000	3000	1000	1800	NF	1000	1900	3300		
	Flam. Liq. 2; H225													
WATER	7732-18-5	ZC0110000	231-191-2	10-20	NE	NE	NF	NF	NF	NE	NE	NE		
GLYCERIN	56-81-5	MA8050000	200-289-5	1-5	NA	NA	NF	NF	NF	NA	NA	NA		
HYDROGEN PEROXIDE (33%)	7722-84-1	MX0900000	231-765-0	0-1	1.0	NE	1.0	NF	NF	1.0	NE	75		
	Eye Irrit. 2; H319													

4. FIRST AID MEASURES

4.1	First Aid:	<p>Ingestion: DO NOT INDUCE VOMITING. Contact ChemTrec at +1 (703) 527-3887 or the nearest Poison Control Center or local emergency telephone number for assistance and instructions. Seek immediate medical attention. If vomiting occurs spontaneously, keep victim's head lowered (forward) to reduce the risk of aspiration.</p> <p>Eyes: Flush eyes thoroughly with copious amounts of water for at least 15 minutes, holding eyelid(s) open to ensure complete flushing. If irritation persists, seek immediate medical attention.</p> <p>Skin: Remove contaminated clothing and wash affected areas with soap and water. If irritation persists, seek prompt medical attention. Do not wear contaminated clothing until after it has been properly cleaned.</p> <p>Inhalation: Remove victim to fresh air at once. If breathing is difficult, administer supplemental oxygen and seek immediate medical attention. If breathing stops, perform artificial respiration.</p>
4.2	Effects of Exposure:	<p>Ingestion: If product is swallowed, may cause nausea, vomiting and/or diarrhea.</p> <p>Eyes: Moderately irritating to the eyes.</p> <p>Skin: This product can cause mild, transient skin irritation with short-term exposure. This product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) upon prolonged or repeated exposure.</p> <p>Inhalation: Vapors of this product may be irritating to the nose, throat and other tissues of the respiratory system.</p>

4. FIRST AID MEASURES – cont'd

4.3	Symptoms of Overexposure:	Symptoms of skin overexposure may include redness, itching, and irritation of affected areas. Overexposure in eyes may cause redness, itching and watering. The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) upon prolonged or repeated exposure.			
4.4	Acute Health Effects:	Moderate irritation to eyes and skin near affected areas. Additionally, high concentrations of vapors can cause drowsiness, dizziness, headaches and nausea.			
4.5	Chronic Health Effects:	The material may accentuate any pre-existing dermatitis condition.			
4.6	Target Organs:	Eyes, Skin & Respiratory System.			
4.7	Medical Conditions Aggravated by Exposure:	Persons with pre-existing skin disorders, eye problems, or impaired kidney function may be more susceptible to the effects of the substance.	HEALTH	1	
			FLAMMABILITY	3	
			PHYSICAL HAZARDS	0	
			PROTECTIVE EQUIPMENT		B
			EYES	SKIN	

5. FIREFIGHTING MEASURES

5.1	Fire & Explosion Hazards:	Keep away from heat, lit cigarettes, sparks & open flame. Keep container closed. When exposed to high temperatures, may produce hazardous decomposition products such as oxides of carbon (e.g., CO, CO ₂) and nitrogen (e.g., NO _x) and smoke.	
5.2	Extinguishing Methods:	Water, Foam, CO ₂ , Dry Chemical, Halon (if permitted)	
5.3	Firefighting Procedures:	As in any fire, wear MSHA/NIOSH approved self-contained breathing apparatus (pressure-demand) and full protective gear. Keep containers cool until well after the fire is out. Use water spray to cool fire-exposed surfaces and to protect personnel. Fight fire upwind. Prevent runoff from fire control or dilution from entering sewers, drains, drinking water supply, or any natural waterway. Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies.	

6. ACCIDENTAL RELEASE MEASURES

6.1	Spills:	<p>Before cleaning any spill or leak, individuals involved in spill cleanup must wear appropriate Personal Protective Equipment. CAUTION – may be slippery if spilled.</p> <p>For <u>small spills</u> (e.g., < 1 gallon (3.8 L)) wear appropriate personal protective equipment (e.g., goggles, gloves). Maximize ventilation (open doors and windows) and secure all sources of ignition. Remove spilled material with absorbent material and place into appropriate closed container(s) for disposal. Dispose of properly in accordance with local, state and federal regulations. Wash all affected areas and outside of container with plenty of warm water and soap. Remove any contaminated clothing and wash thoroughly before reuse.</p> <p>For <u>large spills</u> (e.g., ≥ 1 gallon (3.8 L)), deny entry to all unprotected individuals. Dike and contain spill with inert material (e.g., sand or earth). Use ONLY non-sparking tools for recovery and cleanup. Transfer liquid to containers for recovery or disposal and solid diking material to separate containers for proper disposal. Remove contaminated clothing promptly and wash affected skin areas with soap and water. Keep spills and cleaning runoffs out of municipal sewers and open bodies of water.</p>
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7. HANDLING & STORAGE INFORMATION

7.1	Work & Hygiene Practices:	Use normal hygiene practices. Avoid direct skin contact. Wash hands thoroughly after using this product and before eating, drinking, or smoking. Good personal hygiene practices, such as washing any skin contact areas and removing contaminated clothing, are recommended.
7.2	Storage & Handling:	Keep away from sources of heat.
7.3	Special Precautions:	Follow all instructions on product label. Keep container closed when not in use. Keep this and all chemicals out of reach of children.

8. EXPOSURE CONTROLS & PERSONAL PROTECTION

8.1	Exposure Limits: ppm (mg/m ³)	ACGIH		NOHSC			OSHA			OTHER	
		CHEMICAL NAME(S)		TLV	STEL	ES-TWA	ES-STEL	ES-PEAK	PEL	STEL	IDLH
		ETHANOL (SD ALCOHOL 40B)		1000	3000	1000	1800	NF	1000	1900	3300
HYDROGEN PEROXIDE		1.0	NE	1.0	NF	NF	1.0	NE	75		
8.2	Ventilation & Engineering Controls:	General mechanical (e.g., fans) or natural ventilation is sufficient when this product is in use. Use local or general exhaust ventilation to effectively remove and prevent buildup of vapors or mist generated from the handling of this product. Ensure that an eyewash station, sink or washbasin is available in case of exposure to eyes.									
8.3	Respiratory Protection:	Not required under normal conditions of use. In instances where vapors or sprays of this product are generated, and respiratory protection is needed, use only protection authorized by 29 CFR §1910.134, applicable U.S. State regulations, or the Canadian CAS Standard Z94.4-93 and applicable standards of Canadian Provinces, EC member States, or Australia.									

8. EXPOSURE CONTROLS & PERSONAL PROTECTION – cont'd

8.4	Eye Protection:	AVOID EYE CONTACT DUE TO IRRITATION POTENTIAL. Wear protective eyewear (e.g., safety glasses with side-shield) at all times when handling large quantities (e.g., ≥ 1 gallon (3.8 L)) of this product. Always use protective eyewear when cleaning spills or leaks. Contact lenses pose a special hazard; soft lenses may absorb and concentrate irritants.	
8.5	Hand Protection:	None required under normal conditions of use. However, may cause skin irritation in some sensitive individuals. If anticipated that prolonged & repeated skin contact will occur during use of this product, wear latex or rubber gloves for routine industrial use. If necessary, refer to U.S. OSHA 29 CFR §1910.138, the appropriate standards of Canada, of the EU member states.	
8.6	Body Protection:	No special body protection is required under typical circumstances of use and handling. If necessary, refer to appropriate standards of Canada, the EU member states, or U.S. OSHA.	

9. PHYSICAL & CHEMICAL PROPERTIES

9.1	Appearance:	Clear to slightly hazy liquid
9.2	Odor:	NA
9.3	Odor Threshold:	NA
9.4	pH:	3
9.5	Melting Point/Freezing Point:	NA
9.6	Initial Boiling Point/Boiling Range:	78.3 °C (172.94 °F) as ethanol
9.7	Flashpoint:	17.22 - 18.33 °C (63 - 65 °F)
9.8	Upper/Lower Flammability Limits:	LEL 3.3, UEL 19.0
9.9	Vapor Pressure:	ND
9.10	Vapor Density:	NA
9.11	Relative Density:	0.86
9.12	Solubility:	Soluble in water
9.13	Partition Coefficient (log P _{ow}):	NA
9.14	Autoignition Temperature:	NA
9.15	Decomposition Temperature:	NA
9.16	Viscosity:	NA
9.17	Other Information:	NA

10. STABILITY & REACTIVITY

10.1	Stability:	Relatively stable under ambient conditions when stored properly.
10.2	Hazardous Decomposition Products:	If exposed to <u>extremely high temperatures</u> , products of thermal decomposition may include irritating vapors and toxic gases (e.g., oxides of carbon & nitrogen).
10.3	Hazardous Polymerization:	Will not occur.
10.4	Conditions to Avoid:	Exposure or contact to extreme temperatures, incompatible chemicals, strong light sources, sparks, flame.
10.5	Incompatible Substances:	Strong oxidizers, peroxides, strong acids or alkalis.

11. TOXICOLOGICAL INFORMATION

11.1	Routes of Entry:	Inhalation: YES	Absorption: YES	Ingestion: NO
11.2	Toxicity Data:	This product has NOT been tested on animals to obtain toxicology data.		
11.3	Acute Toxicity:	See Section 4.4		
11.4	Chronic Toxicity:	See Section 4.5		
11.5	Suspected Carcinogen:	Ethanol: California Proposition 65 ((CA65) ethanol in alcoholic beverages)		
11.6	Reproductive Toxicity:	This product is not reported to produce reproductive toxicity in humans.		
	Mutagenicity:	This product is not reported to produce mutagenic effects in humans.		
	Embryotoxicity:	This product is not reported to produce embryotoxic effects in humans.		
	Teratogenicity:	This product is not reported to produce teratogenic effects in humans.		
	Reproductive Toxicity:	This product is not reported to produce reproductive effects in humans.		
11.7	Irritancy of Product:	See Section 4.2		
11.8	Biological Exposure Indices:	NE		
11.9	Physician Recommendations:	Treat symptomatically.		

12. ECOLOGICAL INFORMATION

12.1	Environmental Stability:	There are no specific data available for this product. The components of this product will slowly degrade over time into a variety of organic compounds. Specific environmental data available for the components of this product are as follows: Ethanol: In water, will volatilize and probably degrade.
12.2	Effects on Plants & Animals:	There are no specific data available for this product.
12.3	Effects on Aquatic Life:	There are no specific data available for this product; however, very large releases of this product may be harmful or fatal to overexposed aquatic life.

13. DISPOSAL CONSIDERATIONS

13.1	Waste Disposal:	Waste disposal must be in accordance with appropriate Federal, state, and local regulations.
13.2	Special Considerations:	U.S. EPA Waste Number: D001 (characteristic - ignitable)

14. TRANSPORTATION INFORMATION

The basic description (ID Number, proper shipping name, hazard class & division, packing group) is shown for each mode of transportation. Additional descriptive information may be required by 49 CFR, IATA/ICAO, IMDG and the CTDGR.

14.1	49 CFR (GND):	UN1170, ETHANOL SOLUTION, 3, II, (LTD QTY, IP VOL ≤ 1.0 L); or CONSUMER COMMODITY, ORM-D – until 12/31/2020 *	
14.2	IATA (AIR):	UN1170, ETHANOL SOLUTION, 3, II, (LTD QTY, IP VOL ≤ 0.5 L); or ID8000, CONSUMER COMMODITY, 9 (IP VOL ≤ 0.5 L)	
14.3	IMDG (OCN):	UN1170, ETHANOL SOLUTION, 3, II, (LTD QTY, IP VOL ≤ 1.0 L)	
14.4	TDGR (Canadian GND):	UN1170, ETHANOL SOLUTION, 3, II, (LTD QTY, IP VOL ≤ 1.0 L)	
14.5	ADR/RID (EU):	UN1170, ETHANOL SOLUTION, 3, II, (LTD QTY, IP VOL ≤ 1.0 L)	
14.6	SCT (MEXICO):	UN1170, ETANOL EN SOLUCIÓN, 3, II, (CANT. LTDA., (IP VOL ≤ 1.0 L))	
14.7	ADGR (AUS):	UN1170, ETHANOL SOLUTION, 3, II, (LTD QTY, IP VOL ≤ 1.0 L)	

15. REGULATORY INFORMATION

15.1	SARA Reporting Requirements:	This product does not contain any substances subject to SARA Title III, section 313 reporting requirements.	
15.2	SARA TPQ:	There are no specific Threshold Planning Quantities for the components of this product.	
15.3	TSCA Inventory Status:	The components of this product are listed on the TSCA Inventory.	
15.4	CERCLA Reportable Quantity:	<u>Ethanol</u> : 2,270 kg (5,000 lbs)	
15.5	Other Federal Requirements:	This material does not contain any hazardous air pollutants. None of the components in this product are listed as priority pollutants under the CWA. None of the components in this product are listed as toxic pollutants under the CWA.	
15.6	Other Canadian Regulations:	This product has been classified according to the hazard criteria of the CPR and the SDS contains all of the information required by the CPR. The components of this product are listed on the DSL/NDL. None of the components of this product are listed on the Priorities Substances List. WHMIS B2, D2B (Flammable Liquid, Other Toxic Effects)	
15.7	State Regulatory Information:	<p><u>Ethanol</u> is found on the following state criteria list: CA, NJ, FL, MA, MN, PA and WA.</p> <p>No other ingredients in this product, present in a concentration of 1.0% or greater, are listed on any of the following state criteria lists: California Proposition 65 (CA65), Delaware Air Quality Management List (DE), Florida Toxic Substances List (FL), Massachusetts Hazardous Substances List (MA), Michigan Critical Substances List (MI), Minnesota Hazardous Substances List (MN), New Jersey Right-to-Know List (NJ), New York Hazardous Substances List (NY), Pennsylvania Right-to-Know List (PA), Washington Permissible Exposures List (WA), Wisconsin Hazardous Substances List (WI). This product does not contain any chemicals known to the State of California to cause cancer or other reproductive harm. For more information go to www.P65Warnings.ca.gov</p>	
15.8	Other Requirements:	This product is found on the following inventory lists: Australia - AICS, China – IECSC, Europe – ELINCS/EINEC, Japan – ENCS; Korea – KECL; New Zealand – NZIoC; {Philippines – PICCS; USA – TSCA	

16. OTHER INFORMATION

16.1	Other Information:	<p>WARNING! HIGHLY FLAMMABLE LIQUID AND VAPOR. CAUSES SERIOUS EYE IRRITATION. For external use only. Use only as directed. Discontinue use immediately if irritation develops. Keep away from sources of ignition, sparks, open flames, hot surfaces. No smoking. Avoid breathing vapors, mist or spray. Contaminated work clothing should not be allowed out of the workplace. IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. In case of fire use CO₂, Halon (if permitted), dry chemical, or foam for extinction. Keep container tightly closed when not in use.</p> <p>KEEP OUT OF REACH OF CHILDREN.</p>
16.2	Terms & Definitions:	See last page of this Safety Data Sheet.
16.3	Disclaimer:	This Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR §1910.1200. Other government regulations must be reviewed for applicability to this product. To the best of ShipMate's & Goodwin's knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness is not guaranteed and no warranties of any type, either expressed or implied, are provided. The information contained herein relates only to the specific product(s). If this product(s) is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.
16.4	Prepared for:	
16.5	Prepared by:	<p>ShipMate, Inc. P.O. Box 787 Sisters, Oregon 97759-0787 USA Tel: +1 (310) 370-3600 Fax: +1 (310) 370-5700 http://www.shipmate.com</p> <div style="text-align: right;">  </div>

DEFINITION OF TERMS

A large number of abbreviations and acronyms appear on a SDS. Some of these that are commonly used include the following:

GENERAL INFORMATION:

CAS No.	Chemical Abstract Service Number
RTECS No.	Registry of Toxic Effects of Chemical Substances Number
EINECS No.	European Inventory of Existing Commercial Chemical Substances Number

EXPOSURE LIMITS IN AIR:

ACGIH	American Conference on Governmental Industrial Hygienists
IDLH	Immediately Dangerous to Life and Health
NOHSC	National Occupational Health and Safety Commission (Australia)
OSHA	U.S. Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
STEL	Short Term Exposure Limit
TLV	Threshold Limit Value
TWA	Time Weighted Average

FIRST AID MEASURES:

CPR	Cardiopulmonary resuscitation - method in which a person whose heart has stopped receives manual chest compressions and breathing to circulate blood and provide oxygen to the body.
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HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: HMIS

HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

0	Minimal Hazard
1	Slight Hazard
2	Moderate Hazard
3	Severe Hazard
4	Extreme Hazard

HEALTH
FLAMMABILITY
PHYSICAL HAZARDS
PERSONAL PROTECTION

PERSONAL PROTECTION RATINGS:

A		G	
B		H	
C		I	
D		J	
E		K	
F		X	Consult your supervisor or SOPs for special handling directions.

Safety Glasses	Splash Goggles	Face Shield & Protective Eyewear	Gloves
Boots	Protective Apron	Protective Clothing & Full Suit	Dust Respirator
Full Face Respirator	Dust & Vapor Half-Mask Respirator	Full Face Respirator	Airline Hood/Mask or SCBA

OTHER STANDARD ABBREVIATIONS:

Carc	Carcinogenic
Irrit	Irritant
NA	Not Available
NR	No Results
ND	Not Determined
NE	Not Established
NF	Not Found
SCBA	Self-Contained Breathing Apparatus
Sens	Sensitization
STOT RE	Specific Target Organ Toxicity – Repeat Exposure
STOT SE	Specific Target Organ Toxicity – Single Exposure

NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

FLAMMABILITY LIMITS IN AIR:	
Autoignition Temperature	Minimum temperature required to initiate combustion in air with no other source of ignition
LEL	Lower Explosive Limit - lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source
UEL	Upper Explosive Limit - highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source

HAZARD RATINGS:

0	Minimal Hazard
1	Slight Hazard
2	Moderate Hazard
3	Severe Hazard
4	Extreme Hazard
ACD	Acidic
ALK	Alkaline
COR	Corrosive
W	Use No Water
OX	Oxidizer
TREFOIL	Radioactive

TOXICOLOGICAL INFORMATION:

LD₅₀	Lethal Dose (solids & liquids) which kills 50% of the exposed animals
LC₅₀	Lethal concentration (gases) which kills 50% of the exposed animal
ppm	Concentration expressed in parts of material per million parts
TD₁₀	Lowest dose to cause a symptom
TCLo	Lowest concentration to cause a symptom
TD₁₀, LD₁₀, & LD₀₁ or TC, TC₀₁, LC₁₀, & LC₀₁	Lowest dose (or concentration) to cause lethal or toxic effects
IARC	International Agency for Research on Cancer
NTP	National Toxicology Program
RTECS	Registry of Toxic Effects of Chemical Substances
BCF	Bioconcentration Factor
TL_m	Median threshold limit
log K_{ow} or log K_{oc}	Coefficient of Oil/Water Distribution

REGULATORY INFORMATION:

WHMIS	Canadian Workplace Hazardous Material Information System
DOT	U.S. Department of Transportation
TC	Transport Canada
EPA	U.S. Environmental Protection Agency
DSL	Canadian Domestic Substance List
NDSL	Canadian Non-Domestic Substance List
PSL	Canadian Priority Substances List
TSCA	U.S. Toxic Substance Control Act
EU	European Union (European Union Directive 67/548/EEC)
WGK	Wassergefährdungsklassen (German Water Hazard Class)

WORKPLACE HAZARDOUS MATERIALS IDENTIFICATION (WHMIS) SYSTEM:

Class A	Class B	Class C	Class D1	Class D2	Class D3	Class E	Class F
Compressed	Flammable	Oxidizing	Toxic	Irritation	Infectious	Corrosive	Reactive

CLP/GHS (1272/2008/EC) PICTOGRAMS:

GHS01	GHS02	GHS03	GHS04	GHS05	GHS06	GHS07	GHS08	GHS09
Explosive	Flammable	Oxidizer	Pressurized	Corrosive	Toxic	Harmful Irritating	Health Hazard	Environment