MATERIAL SAFETY DATA SHEET

IN CASE OF A MEDICAL EMERGENCY, PLEASE CONTACT YOUR LOCAL POISON CONTROL

SECTION I Identification

Product identifier

Product Name

80% Ethyl Alcohol Hand Sanitizer

Other means of identification

UN/ID no

Other information

UN1170

Greenerways 80% Ethyl Alcohol Hand Sanitizer, per the Food and Drug Administration (FDA) "Policy for Temporary Compounding of Certain Alcohol-Based Hand Sanitizer Products During the Public Health Emergency Immediately in Effect Guidance for Industry https://www.fda.gov/media/136118/download is made to these standards and formulation.

Date Issued: April 20, 2020

The hand sanitizer is compounded using only ingredients acceptable to the FDA's policy and the preparation of the product (percentage in final product formulation) is consistent with the World Health Organization (WHO) recommendations.

The compounder does not add other active or inactive ingredients. Different or additional ingredients may impact the quality and potency of the product. This SDS contains useful information for the safe handling and proper use of the product for industrial workplace conditions as well as unintended exposures as might occur with large spills.

Consumers should refer to the product label for appropriate consumer-specific information about this product when used according to the manufacturer's directions.

Recommended use of the chemical and restrictions on use

Recommended use Hand sanitizer, antiseptic rub

Restrictions on use No information available

Manufactured for: Emergency Telephone Number:

Greenerways LLC 800-777-1603

Address:

688 Stony Hill Rd, Suite 143

Yardley, PA 19067

SECTION II Hazards Identification

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Serious eye damage/eye irritation	Category 2A
Flammable liquids	Category 2

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Danger

Hazard statements

Highly flammable liquid and vapor Causes serious eye irritation.



Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

Keep container tightly closed

Ground/bond container and receiving equipment

Use explosion-proof electrical/ ventilating/ lighting/ equipment

Use only non-sparking tools

Take precautionary measures against static discharge

Wear protective gloves/eye protection/face protection

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing

If eye irritation persists: Get medical advice/attention

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower

In case of fire: Use dry chemical, CO2, water spray or alcohol-resistant foam to extinguish

Precautionary Statements - Storage

Store in a well-ventilated place. Keep cool

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other information

May be harmful if inhaled. Causes mild skin irritation. May cause drowsiness or dizziness.

SECTION III Material Composition / Information on Ingredients

Substance/Mixture:

Mixture

Hazardous ingredients

Chemical name	CAS No	Weight
Ethanol	64-17-5	80%
Water	7732-18	18.425%
Glycerin	56-81-5	1.45%
Hydrogen Peroxide	7722-84-1	0.125%

SECTION IV First Aid Measures

Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance.

Inhalation Remove to fresh air.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and

persists.

Skin contactNone under normal use conditions. If skin irritation occurs: Get medical advice/attention.

Ingestion Clean mouth with water and drink afterwards plenty of water. Never give anything by

mouth to an unconscious person. Do NOT induce vomiting. Call a physician.

Self-protection of the first aider Remove all sources of ignition. Ensure that medical personnel are aware of the

material(s) Involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. See section 8 for more

information. Avoid contact with skin, eyes or clothing.

Most important symptoms and effects, both acute and delayed

Symptoms May cause redness and tearing of the eyes. Burning sensation. Prolonged contact may

cause redness and irritation.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

SECTION V Fire and Explosion Hazard Data

Suitable Extinguishing Media Dry chemical. Carbon dioxide (CO2). Water spray. Alcohol resistant foam.

Unsuitable extinguishing mediaNone known based on information supplied.

Specific hazards arising from the

Chemical Risk of ignition. Keep product and empty container away from heat and sources of

ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated

fire extinguishing water must be disposed of in accordance with local regulations.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge

Yes.

Special protective equipment for

fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting

turnout gear. Use personal protection equipment.

SECTION VI Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Personal precautions

Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material.

Other information

Ventilate the area. Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment

Stop leak if you can do it without risk. Do not touch or walk through spilled material. A vapor suppressing foam may be used to reduce vapors. Dike far ahead of spill to collect runoff water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

Methods for cleaning up

Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

SECTION VII Handling and Storage

Precautions for safe handling

Advice on safe handling

Use personal protection equipment. Avoid breathing vapors or mists. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use with local exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations.

SECTION VIII Exposure Controls/ Personal Protection

Ingredient	CAS No	Value type (Form of	Control parameters/	Basis
		exposure)	Permissible	
			Concentration	
Ethanol	64-17-5	TWA	1,000 ppm	NIOSH REL
			1,900 mg/m3	
		TWA	1,000 ppm	OSHA Z-1
			1,900mg/m3	
		STEL	1,000 ppm	ACGIH

Appropriate engineering controls

Engineering controls Showers

Eyewash stations Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles.

Hand protection Wear suitable gloves.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing. Chemical resistant

apron. Antistatic boots.

Respiratory protectionNo protective equipment is needed under normal use conditions. If exposure

limits are exceeded or irritation is experienced, ventilation and evacuation may

be required.

General hygiene considerations Do not eat, drink or smoke when using this product. Contaminated work clothing

should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear

suitable gloves and eye/face protection.

SECTION IX Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance

Physical stateLiquidColorColorlessOdorAlcohol

Odor threshold No data available

pH: 6.0 -7.5

Melting point/freezing point: No data available

Initial boiling point and boiling range: 70 °C Flash point: 25 °C

Evaporation rate:

Flammability (solid, gas):

Upper explosion limit:

No data available

No data available

Lower explosion limit:

Vapor pressure:

Relative vapor density:

No data available No data available No data available

Density:

0.8750 g/cm3

soluble

Solubility(ies)

Water solubility:

Partition coefficient: Autoignition temperature: No data available No data available

Decomposition temperature:

The substance or mixture is not classified self-reactive.

Viscosity

Viscosity, kinematic: Explosive properties: Oxidizing properties: No data available Not explosive

The substance or mixture is not classified as oxidizing.

SECTION X Stability and Reactivity

Reactivity

None under normal use conditions. Stable under normal conditions. None under normal processing.

Possibility of hazardous reactions Conditions to avoid

Chemical stability

Heat, flames and sparks.

Incompatible materials Hazardous decomposition products

None known based on information supplied. None known based on information supplied.

SECTION XI Toxicological Information

Information on likely routes of exposure

Product Information

Inhalation

Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract. May be harmful if inhaled. May cause drowsiness or dizziness.

Eve contact

Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.

Skin contact

Specific test data for the substance or mixture is not available. Causes mild skin irritation. Prolonged contact may cause redness and irritation.

Ingestion

Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms May cause redness and tearing of the eyes. Prolonged contact may cause redness and irritation.

Acute toxicity

Numerical measures of toxicity

Ingredients:

Ethanol: 64-17-5

Acute oral toxicity: LD50 (Rat): > 5,000 mg/kg Acute inhalation toxicity: LC50 (Rat): 124.7 mg/l

Exposure time: 4 h Test atmosphere: vapor

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Classification based on data available for ingredients. May cause skin irritation.

Serious eye damage/eye irritation Respiratory or skin sensitization Classification based on data available for ingredients. Causes serious eye irritation.

No information available.
No information available.

Germ cell mutagenicity
No information available.

Carcinogenicity
Ethanol has been shown to be carcinogenic in long-term studies only when consumedas

alcoholic beverage. Based on available data, the classification criteria are not met.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

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Chemical name	ACGIH	IARC	NTP	OSHA
64-17-5	A3	Group 1	Known	x

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Target organ effects

Aspiration hazard

Other adverse effects

Interactive effects

Eyes, Skin, Respiratory system.

No information available.

No information available.

No information available.

SECTION XII Ecological Information

Ecotoxicity The environmental impact of this product has not been fully investigated.

Ingredients:

Ethanol:

Toxicity to fish

: LC50 (Pimephales promelas (fathead minnow)): > 1,000 mg/l Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): > 1,000 mg/l Exposure time: 48 h

Toxicity to algae

: EC50 (Chlorella vulgaris (Fresh water algae)): 275 mg/l Exposure time: 72 h

Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)

: NOEC (Daphnia magna (Water flea)): 9.6 mg/l

Exposure time: 9 d

Toxicity to bacteria

: EC50 (Photobacterium phosphoreum): 32.1 mg/l

Exposure time: 0.25 h

Persistence and degradability No information available.

Bioaccumulation

There is no data for this product.

Component Information

Chemical Name	Partition coefficient
Ethanol	-0.32
64-17-5	

Other adverse effects No information available.

SECTION XIII Disposal Considerations

Waste treatment methods

Waste from residues/unused

Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

California Hazardous Waste Status This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status	
Ethanol	Toxic	
64-17-5	Ignitable	

SECTION XIV Transport Information

Note:

This is a consumer product and as such may usually be shipped as ORM-D (other regulated materials for domestic transport only) Consumer Commodity for transport within the United States. While this product is a hazardous material, it may be shipped in a limited quantity that presents a limited hazard during transportation, due to its form, quantity, and packaging. The information listed below is for shipping bulk material.

International Regulation

UNRTDG

UN number : UN 1987

Proper shipping name : ALCOHOLS, N.O.S.

(Ethanol, Propan-2-ol)

Class 3
Packing group III
Labels 3

IATA-DGR

UN/ID No. : UN 1987
Proper shipping name : Alcohols, n.o.s.

(Ethanol, Propan-2-ol)

Class 3 Packing group III

Labels : Flammable Liquids

Packing instruction

(cargo aircraft) 366

Packing instruction

(passenger aircraft) 355

IMDG-Code

UN number : UN 1987

Proper shipping name : ALCOHOLS, N.O.S.

(Ethanol, Propan-2-ol)

Class 3
Packing group III
Labels 3

EmS Code : F-E, S-D

Marine pollutant : no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

49 CFR

UN/ID/NA number : UN 1987

Proper shipping name : ALCOHOLS, N.O.S.

Class 3 Packing group III

Labels : FLAMMABLE LIQUID

ERG Code 127

SECTION XV Regulatory Information

International Inventories

TSCA

Chemical name	CAS No	US TSCA Inventory	US TSCA active/inactive
		listing	designation
Ethanol	64-17-5	Present	Active

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

US State Regulations

California Proposition 65

Ethyl alcohol is only a considered a Proposition 65 developmental hazard when it is ingested as an alcoholic beverage. This product contains the following Proposition 65 chemicals:

Chemical name	California Proposition 65
Ethanol 64-17-5	Carcinogen
	Developmental

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Ethanol	x	x	X
64-17-5			

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

SECTION XVI Other Information

NFPA Health hazards 2 Flammability 3 Instability 0 Physical and chemical properties -

HMIS Health hazards 2 Flammability 3 Physical hazards 0 Personal protection X

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)

Ceiling Maximum limit value * Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)

U.S. Environmental Protection Agency ChemView Database

European Food Safety Authority (EFSA)

EPA (Environmental Protection Agency)

Acute Exposure Guideline Level(s) (AEGL(s))

U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

U.S. Environmental Protection Agency High Production Volume Chemicals

Food Research Journal

Hazardous Substance Database

International Uniform Chemical Information Database (IUCLID)

Japan GHS Classification

Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

NIOSH (National Institute for Occupational Safety and Health)

National Library of Medicine's ChemID Plus (NLM CIP)

National Library of Medicine's PubMed database (NLM PUBMED)

National Toxicology Program (NTP)

New Zealand's Chemical Classification and Information Database (CCID)

Organization for Economic Co-operation and Development Environment, Health, and Safety Publications Organization for Economic Co-operation and Development High Production Volume Chemicals Program

Organization for Economic Co-operation and Development Screening Information Data Set

World Health Organization

Issuing Date 8-Apr-2020
Revision Date 20-Apr-2020
Revision Note Version 2

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.

End of Safety Data Sheet



Mfg. Date: 03/29/2020 Exp. Date: 03/01/2022

HAND SANITIZER SPRAY Certificate of Analysis

Test Method	Specification	Result
Appearance (TMHS0001)	Clear Liquid	Pass
Color (TMHS0002)	Uncolored	Pass
Odor (TMHS0003)	Medicinal (alcohol)	Pass
PH (TMHS0004)	5-7	6.8
Specific Gravity @ 25 (TMHS0005)	0.85 - 0.95	0.85
Viscosity (TMHS0006) RVT 5/10 rpm	n/a	n/a
Ethyl Alcohol	80% - 85%	81.21%
TPC (Outside Lab)	<100 cfu/gm	<10 cfu/gm
Yeast/Mold (Outside Lab)	<10 cfu/gm	<10 cfu/gm



April 23, 2020

Re. Hand Sanitizers (80%).

To whom it may concern:

Greenerways 80% Ethyl Alcohol Hand Sanitizer, per the Food and Drug Administration (FDA) "Policy for Temporary Compounding of Certain Alcohol-Based Hand Sanitizer Products During the Public Health Emergency Immediately in Effect Guidance for Industry https://www.fda.gov/media/136118/download is made to these standards and formulation.

The hand sanitizer is compounded using only ingredients acceptable to the FDA's policy and the preparation of the product (percentage in final product formulation) is consistent with the World Health Organization (WHO) recommendations.

The compounder does not add other active or inactive ingredients. Different or additional ingredients may impact the quality and potency of the product.

Consumers should refer to the product label for appropriate consumer-specific information about this product when used according to the manufacturer's directions.

Healthfully,

Jayme Bella CEO