

**PROVON® Antibacterial Foam Handwash**

Version 2.0      Revision Date: 04/17/2015      MSDS Number: 31786-00005      Date of last issue: 03/19/2015  
Date of first issue: 11/24/2014

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**SECTION 1. IDENTIFICATION**

Product name : PROVON® Antibacterial Foam Handwash

**Manufacturer or supplier's details**

Company name of supplier : GOJO Industries, Inc.  
Address : One GOJO Plaza, Suite 500  
Akron OH 44311  
Telephone : 1 (330) 255-6000  
Emergency telephone : 1-800-424-9300 CHEMTREC

**Recommended use of the chemical and restrictions on use**

Recommended use : Antibacterial Soap

Restrictions on use : This is a personal care or cosmetic product that is safe for consumers and other users under normal and reasonably foreseeable use. Cosmetics and consumer products, specifically defined by regulations around the world, are exempt from the requirement of an SDS for the consumer. While this material is not considered hazardous, this SDS contains valuable information critical to the safe handling and proper use of the product for industrial workplace conditions as well as unusual and unintended exposures such as large spills. This SDS should be retained and available for employees and other users of this product. For specific intended-use guidance, please refer to the information provided on the package or instruction sheet.

**SECTION 2. HAZARDS IDENTIFICATION****GHS Classification**

Flammable liquids : Category 3  
Serious eye damage : Category 1

**GHS Label element**

Hazard pictograms : 

Signal Word : Danger

Hazard Statements : H226 Flammable liquid and vapor.  
H318 Causes serious eye damage.

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Precautionary Statements            :    **Prevention:**  
P210 Keep away from heat/sparks/open flames/hot surfaces.  
No smoking.  
P233 Keep container tightly closed.  
P241 Use explosion-proof electrical/ ventilating/ lighting/  
equipment.  
P242 Use only non-sparking tools.  
P243 Take precautionary measures against static discharge.  
P280 Wear protective gloves/ eye protection/ face protection.  
**Response:**  
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately  
all contaminated clothing. Rinse skin with water/shower.  
P305 + P351 + P338 + P310 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.  
**Storage:**  
P403 + P235 Store in a well-ventilated place. Keep cool.  
**Disposal:**  
P501 Dispose of contents/ container to an approved waste  
disposal plant.

**Other hazards**

Vapors may form explosive mixture with air.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture                    : Mixture

**Hazardous ingredients**

Chemical Name	CAS-No.	Concentration (%)
Propylene glycol	57-55-6	>= 10 - < 20
Ethanol	64-17-5	>= 5 - < 10
Dodecanoic acid	143-07-7	>= 5 - < 10
Ethanolamine	141-43-5	>= 1 - < 5
Imidazolium compounds, 1-[2-( carboxymethoxy)ethyl]-1-(carboxymethyl)-4,5- dihydro-2-norcoco alkyl, hydroxides, sodium salts	68650-39-5	>= 1 - < 5
l-(+)-Lactic acid	79-33-4	>= 1 - < 5

**SECTION 4. FIRST AID MEASURES**

General advice                            : In the case of accident or if you feel unwell, seek medical  
advice immediately.  
When symptoms persist or in all cases of doubt seek medical  
advice.

If inhaled                                    : If inhaled, remove to fresh air.  
Get medical attention if symptoms occur.

In case of skin contact                    : Wash with water and soap as a precaution.



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- Get medical attention if symptoms occur.
- In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.  
If easy to do, remove contact lens, if worn.  
Get medical attention immediately.
- If swallowed : If swallowed, DO NOT induce vomiting.  
Get medical attention if symptoms occur.  
Rinse mouth thoroughly with water.
- Most important symptoms and effects, both acute and delayed : Causes serious eye damage.
- Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists.
- Notes to physician : Treat symptomatically and supportively.
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### SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Water spray  
Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during fire fighting : Do not use a solid water stream as it may scatter and spread fire.  
Flash back possible over considerable distance.  
Vapors may form explosive mixtures with air.  
Exposure to combustion products may be a hazard to health.
- Hazardous combustion products : Carbon oxides  
Nitrogen oxides (NO<sub>x</sub>)  
Metal oxides
- Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Use water spray to cool unopened containers.  
Remove undamaged containers from fire area if it is safe to do so.  
Evacuate area.
- Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.  
Use personal protective equipment.
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### SECTION 6. ACCIDENTAL RELEASE MEASURES


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- Personal precautions, protective equipment and emergency procedures : Remove all sources of ignition.  
Use personal protective equipment.  
Follow safe handling advice and personal protective equipment recommendations.
- Environmental precautions : Discharge into the environment must be avoided.  
Prevent further leakage or spillage if safe to do so.  
Prevent spreading over a wide area (e.g. by containment or oil barriers).  
Retain and dispose of contaminated wash water.  
Local authorities should be advised if significant spillages cannot be contained.
- Methods and materials for containment and cleaning up : Non-sparking tools should be used.  
Soak up with inert absorbent material.  
Suppress (knock down) gases/vapors/mists with a water spray jet.  
For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container.  
Clean up remaining materials from spill with suitable absorbent.  
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.  
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

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**SECTION 7. HANDLING AND STORAGE**

- Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
- Local/Total ventilation : Use with local exhaust ventilation.  
Use only in an area equipped with explosion proof exhaust ventilation.
- Advice on safe handling : Avoid inhalation of vapor or mist.  
Do not swallow.  
Do not get in eyes.  
Avoid prolonged or repeated contact with skin.  
Handle in accordance with good industrial hygiene and safety practice.  
Non-sparking tools should be used.  
Keep container tightly closed.  
Keep away from heat and sources of ignition.  
Take precautionary measures against static discharges.  
Take care to prevent spills, waste and minimize release to the environment.
- Conditions for safe storage : Keep in properly labeled containers.  
Keep tightly closed.

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Keep in a cool, well-ventilated place.  
 Store in accordance with the particular national regulations.  
 Keep away from heat and sources of ignition.

Materials to avoid : Do not store with the following product types:  
 Strong oxidizing agents  
 Organic peroxides  
 Flammable solids  
 Pyrophoric liquids  
 Pyrophoric solids  
 Self-heating substances and mixtures  
 Substances and mixtures which in contact with water emit flammable gases  
 Explosives  
 Gases

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**
**Ingredients with workplace control parameters**

Ingredients	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Propylene glycol	57-55-6	TWA	10 mg/m <sup>3</sup>	US WEEL
Ethanol	64-17-5	TWA	1,000 ppm 1,900 mg/m <sup>3</sup>	NIOSH REL
		TWA	1,000 ppm 1,900 mg/m <sup>3</sup>	OSHA Z-1
		STEL	1,000 ppm	ACGIH
Ethanolamine	141-43-5	TWA	3 ppm	ACGIH
		STEL	6 ppm	ACGIH
		TWA	3 ppm 8 mg/m <sup>3</sup>	NIOSH REL
		ST	6 ppm 15 mg/m <sup>3</sup>	NIOSH REL
		TWA	3 ppm 6 mg/m <sup>3</sup>	OSHA Z-1

**Hazardous components without workplace control parameters**

Ingredients	CAS-No.
Dodecanoic acid	143-07-7
Imidazolium compounds, 1-[2-(carboxymethoxy)ethyl]-1-(carboxymethyl)-4,5-dihydro-2-norcoco alkyl, hydroxides, sodium salts	68650-39-5
l-(+)-Lactic acid	79-33-4

**Engineering measures** : Minimize workplace exposure concentrations.  
 Use only in an area equipped with explosion proof exhaust ventilation.  
 Use with local exhaust ventilation.



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### Personal protective equipment

- Respiratory protection : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.
- Hand protection
- Material : Impervious gloves
- Material : Flame retardant gloves
- Remarks : Choose gloves to protect hands against chemicals depending on the concentration specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.
- Eye protection : Wear the following personal protective equipment:  
Chemical resistant goggles must be worn.  
If splashes are likely to occur, wear:  
Face-shield
- Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.  
Wear the following personal protective equipment:  
Flame retardant antistatic protective clothing.  
Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).
- Hygiene measures : Ensure that eye flushing systems and safety showers are located close to the working place.  
When using do not eat, drink or smoke.  
Wash contaminated clothing before re-use.

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### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : liquid
- Color : clear, Colorless to pale yellow
- Odor : slight alcoholic

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Odor Threshold	:	No data available
pH	:	7.8 - 9.7
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	No data available
Flash point	:	56.00 °C
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Vapor pressure	:	No data available
Relative vapor density	:	No data available
Density	:	1.00 g/cm <sup>3</sup>
Solubility(ies)		
Water solubility	:	soluble
Partition coefficient: n-octanol/water	:	Not applicable
Autoignition temperature	:	No data available
Decomposition temperature	:	The substance or mixture is not classified self-reactive.
Viscosity		
Viscosity, kinematic	:	10 - 20 mm <sup>2</sup> /s (20.00 °C)
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

**SECTION 10. STABILITY AND REACTIVITY**

Reactivity	:	Not classified as a reactivity hazard.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Flammable liquid and vapor. Vapors may form explosive mixture with air. Can react with strong oxidizing agents.
Conditions to avoid	:	Heat, flames and sparks.

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Incompatible materials : Oxidizing agents

Hazardous decomposition products : No hazardous decomposition products are known.

**SECTION 11. TOXICOLOGICAL INFORMATION**
**Information on likely routes of exposure**

Inhalation  
 Skin contact  
 Ingestion  
 Eye contact

**Acute toxicity**

Not classified based on available information.

**Product:**

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg  
 Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: > 40 mg/l  
 Exposure time: 4 h  
 Test atmosphere: vapor  
 Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: > 5,000 mg/kg  
 Method: Calculation method

**Ingredients:**
**Propylene glycol:**

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rabbit): > 159 mg/l, > 51091 ppm  
 Exposure time: 4 h  
 Test atmosphere: dust/mist  
 Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg  
 Assessment: The substance or mixture has no acute dermal toxicity

**Ethanol:**

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

**Dodecanoic acid:**

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg  
 Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): > 0.162 mg/l



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		Exposure time: 4 h
		Test atmosphere: vapor
		Remarks: Based on data from similar materials
Acute dermal toxicity	:	LD50 (Rabbit): > 2,000 mg/kg
		Assessment: The substance or mixture has no acute dermal toxicity
		Remarks: Based on data from similar materials
<b>Ethanolamine:</b>		
Acute oral toxicity	:	LD50 (Rat): 1,515 mg/kg
Acute inhalation toxicity	:	Acute toxicity estimate: 11 mg/l
		Test atmosphere: vapor
		Method: Expert judgment
		Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI
Acute dermal toxicity	:	LD50 (Rabbit): 1,025 mg/kg
<b>Imidazolium compounds, 1-[2-(carboxymethoxy)ethyl]-1-(carboxymethyl)-4,5-dihydro-2-norcoco alkyl, hydroxides, sodium salts:</b>		
Acute oral toxicity	:	LD50 (Rat, male): > 5,000 mg/kg
		Remarks: Based on data from similar materials
Acute dermal toxicity	:	LD50 (Rat): > 5,000 mg/kg
		Method: OECD Test Guideline 402
		Remarks: Based on data from similar materials
<b>l-(+)-Lactic acid:</b>		
Acute oral toxicity	:	LD50 (Rat, female): 3,543 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): > 7.94 mg/l
		Exposure time: 4 h
		Test atmosphere: dust/mist
		Method: OECD Test Guideline 403
Acute dermal toxicity	:	LD50 (Rabbit): > 2,000 mg/kg

**Skin corrosion/irritation**

Not classified based on available information.

**Product:**

Result: No skin irritation

**Ingredients:**
**Propylene glycol:**

Species: Rabbit

Method: OECD Test Guideline 404

Result: No skin irritation

**Ethanol:**

Species: Rabbit

Method: OECD Test Guideline 404

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Result: No skin irritation

**Dodecanoic acid:**

Species: Rabbit  
Method: OECD Test Guideline 404  
Result: No skin irritation

**Ethanolamine:**

Species: Rabbit  
Result: Corrosive after 3 minutes to 1 hour of exposure

**Imidazolium compounds, 1-[2-(carboxymethoxy)ethyl]-1-(carboxymethyl)-4,5-dihydro-2-norcoco alkyl, hydroxides, sodium salts:**

Species: Rabbit  
Method: OECD Test Guideline 404  
Result: No skin irritation  
Remarks: Based on data from similar materials

**l-(+)-Lactic acid:**

Species: Rabbit  
Result: Skin irritation

**Serious eye damage/eye irritation**

Causes serious eye damage.

**Ingredients:****Propylene glycol:**

Species: Rabbit  
Result: No eye irritation  
Method: OECD Test Guideline 405

**Ethanol:**

Species: Rabbit  
Result: Irritation to eyes, reversing within 21 days  
Method: OECD Test Guideline 405

**Dodecanoic acid:**

Species: Rabbit  
Result: Irreversible effects on the eye  
Method: OECD Test Guideline 405

**Ethanolamine:**

Species: Rabbit  
Result: Irreversible effects on the eye

**Imidazolium compounds, 1-[2-(carboxymethoxy)ethyl]-1-(carboxymethyl)-4,5-dihydro-2-norcoco alkyl, hydroxides, sodium salts:**

Species: Rabbit  
Result: Irreversible effects on the eye  
Method: OECD Test Guideline 405  
Remarks: Based on data from similar materials

**l-(+)-Lactic acid:**

Species: Chicken eye  
Result: Irreversible effects on the eye

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**II****Respiratory or skin sensitization**

Skin sensitization: Not classified based on available information.

Respiratory sensitization: Not classified based on available information.

**Product:**

Assessment: Does not cause skin sensitization.

**Ingredients:****Propylene glycol:**

Test Type: Maximization Test (GPMT)

Routes of exposure: Skin contact

Species: Guinea pig

Result: negative

**Ethanol:**

Test Type: Local lymph node assay (LLNA)

Routes of exposure: Skin contact

Species: Mouse

Result: negative

**Dodecanoic acid:**

Test Type: Maximization Test (GPMT)

Routes of exposure: Skin contact

Species: Guinea pig

Result: negative

**Ethanolamine:**

Test Type: Maximization Test (GPMT)

Routes of exposure: Skin contact

Species: Guinea pig

Result: negative

**Imidazolium compounds, 1-[2-(carboxymethoxy)ethyl]-1-(carboxymethyl)-4,5-dihydro-2-norcoco alkyl, hydroxides, sodium salts:**

Test Type: Maximization Test (GPMT)

Routes of exposure: Skin contact

Species: Guinea pig

Method: OECD Test Guideline 406

Result: negative

Remarks: Based on data from similar materials

**I-(+)-Lactic acid:**

Test Type: Buehler Test

Routes of exposure: Skin contact

Species: Guinea pig

Result: negative

**Germ cell mutagenicity**

Not classified based on available information.

**Ingredients:****Propylene glycol:**

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Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
 Result: negative

Genotoxicity in vivo : Test Type: In vivo micronucleus test  
 Species: Mouse  
 Application Route: Intraperitoneal injection  
 Result: negative

**Ethanol:**

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test  
 Result: negative

Genotoxicity in vivo : Test Type: Rodent dominant lethal test (germ cell) (in vivo)  
 Species: Mouse  
 Application Route: Ingestion  
 Result: negative

**Dodecanoic acid:**

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test  
 Method: OECD Test Guideline 476  
 Result: negative  
 Remarks: Based on data from similar materials

**Ethanolamine:**

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test  
 Method: OECD Test Guideline 476  
 Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo  
 cytogenetic assay)  
 Species: Mouse  
 Application Route: Ingestion  
 Method: OECD Test Guideline 474  
 Result: negative

**Imidazolium compounds, 1-[2-(carboxymethoxy)ethyl]-1-(carboxymethyl)-4,5-dihydro-2-norcoco alkyl, hydroxides, sodium salts:**

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro  
 Method: OECD Test Guideline 473  
 Result: negative  
 Remarks: Based on data from similar materials

: Test Type: Bacterial reverse mutation assay (AMES)  
 Result: negative  
 Remarks: Based on data from similar materials

: Test Type: In vitro mammalian cell gene mutation test  
 Method: OECD Test Guideline 476  
 Result: negative  
 Remarks: Based on data from similar materials

**L-(+)-Lactic acid:**

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro  
 Metabolic activation: with and without metabolic activation  
 Result: negative

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Remarks: Based on data from similar materials

: Test Type: Bacterial reverse mutation assay (AMES)  
 Metabolic activation: with and without metabolic activation  
 Result: negative

**Carcinogenicity**

Not classified based on available information.

**Ingredients:**
**Propylene glycol:**

Species: Rat  
 Application Route: Ingestion  
 Exposure time: 2 Years  
 Result: negative

**l-(+)-Lactic acid:**

Species: Rat  
 Application Route: Ingestion  
 Exposure time: 2 Years  
 Result: negative  
 Remarks: Based on data from similar materials

**IARC**

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**OSHA**

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**NTP**

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**Reproductive toxicity**

Not classified based on available information.

**Ingredients:**
**Propylene glycol:**

Effects on fertility : Species: Mouse  
 Application Route: Ingestion  
 Result: negative

Effects on fetal development : Test Type: Embryo-fetal development  
 Species: Mouse  
 Application Route: Ingestion  
 Result: negative

**Ethanol:**

Effects on fertility : Test Type: Two-generation reproduction toxicity study  
 Species: Mouse  
 Application Route: Ingestion  
 Method: OECD Test Guideline 416

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Result: negative

**Dodecanoic acid:**

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test  
 Species: Rat  
 Application Route: Ingestion  
 Method: OECD Test Guideline 422  
 Result: negative  
 Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test  
 Species: Rat  
 Application Route: Ingestion  
 Method: OECD Test Guideline 422  
 Result: negative  
 Remarks: Based on data from similar materials

**Ethanolamine:**

Effects on fertility : Test Type: Two-generation reproduction toxicity study  
 Species: Rat  
 Application Route: Ingestion  
 Result: negative

Effects on fetal development : Test Type: Embryo-fetal development  
 Species: Rat  
 Application Route: Ingestion  
 Method: OECD Test Guideline 414  
 Result: negative

**STOT-single exposure**

Not classified based on available information.

**Ingredients:**
**Ethanolamine:**

Assessment: May cause respiratory irritation.

**I-(+)-Lactic acid:**

Assessment: May cause respiratory irritation.

**STOT-repeated exposure**

Not classified based on available information.

**Ingredients:**
**Ethanolamine:**

Routes of exposure: inhalation (dust/mist/fume)

Assessment: No significant health effects observed in animals at concentrations of 0.2 mg/l/6h/d or less.

**Repeated dose toxicity**
**Ingredients:**

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**Propylene glycol:**

Species: Rat  
 NOAEL: 1,700 mg/kg  
 Application Route: Ingestion  
 Exposure time: 2 y

**Ethanol:**

Species: Rat  
 NOAEL: 2,400 mg/kg  
 Application Route: Ingestion  
 Exposure time: 2 y

**Dodecanoic acid:**

Species: Rat  
 NOAEL: 10,000 mg/kg  
 Application Route: Ingestion  
 Exposure time: 18 w

**Ethanolamine:**

Species: Rat  
 NOAEL: 150 mg/m<sup>3</sup>  
 Application Route: inhalation (dust/mist/fume)  
 Exposure time: 28 d

**Imidazolium compounds, 1-[2-(carboxymethoxy)ethyl]-1-(carboxymethyl)-4,5-dihydro-2-norcoco alkyl, hydroxides, sodium salts:**

Species: Rat, female  
 NOAEL: 250 mg/kg  
 LOAEL: 500 mg/kg  
 Application Route: Ingestion  
 Exposure time: 28 d  
 Remarks: Based on data from similar materials

**l-(+)-Lactic acid:**

Species: Rat  
 NOAEL: >= 886 mg/kg  
 Application Route: Skin contact  
 Exposure time: 13 w

**Aspiration toxicity**

Not classified based on available information.

**SECTION 12. ECOLOGICAL INFORMATION**
**Ecotoxicity**
**Ingredients:**
**Propylene glycol:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 40,613 mg/l  
 Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Ceriodaphnia dubia (water flea)): 18,340 mg/l  
 Exposure time: 48 h

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Toxicity to algae	: EC50 (Skeletonema costatum (marine diatom)): 19,000 mg/l Exposure time: 48 h Method: OECD Test Guideline 201
Toxicity to fish (Chronic toxicity)	: Chronic Toxicity Value: 2,500 mg/l Exposure time: 30 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC (Ceriodaphnia dubia (water flea)): 29,000 mg/l Exposure time: 7 d
Toxicity to bacteria	: NOEC (Pseudomonas putida): > 20,000 mg/l Exposure time: 18 h

**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

**Dodecanoic acid:**

Toxicity to fish	: LC50 (Oryzias latipes (Japanese medaka)): 5 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 3.6 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae	: EC50 (Selenastrum capricornutum (green algae)): > 7.6 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: No toxicity at the limit of solubility.  NOEC (Selenastrum capricornutum (green algae)): > 7.6 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: No toxicity at the limit of solubility.
Toxicity to fish (Chronic toxicity)	: NOEC (Danio rerio (zebra fish)): 2 mg/l Exposure time: 28 d Remarks: Based on data from similar materials



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Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.47 mg/l  
 Exposure time: 21 d  
 Method: OECD Test Guideline 211

Toxicity to bacteria : EC10 (Pseudomonas putida): > 1,000 mg/l  
 Exposure time: 30 min  
 Method: OECD Test Guideline 209

**Ethanolamine:**

Toxicity to fish : LC50 (Cyprinus carpio (Carp)): 349 mg/l  
 Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 65 mg/l  
 Exposure time: 48 h

Toxicity to algae : ErC50 (Selenastrum capricornutum (green algae)): 2.8 mg/l  
 Exposure time: 72 h

NOEC (Scenedesmus capricornutum (fresh water algae)): 1 mg/l  
 Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC (Oryzias latipes (Orange-red killifish)): 1.24 mg/l  
 Exposure time: 41 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.85 mg/l  
 Exposure time: 21 d

Toxicity to bacteria : EC50 (Pseudomonas putida): 110 mg/l  
 Exposure time: 17 h

**Imidazolium compounds, 1-[2-(carboxymethoxy)ethyl]-1-(carboxymethyl)-4,5-dihydro-2-norcoco alkyl, hydroxides, sodium salts:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 4.2 mg/l  
 Exposure time: 96 h  
 Method: OECD Test Guideline 203  
 Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 17.9 mg/l  
 Exposure time: 48 h  
 Method: OECD Test Guideline 202  
 Remarks: Based on data from similar materials

Toxicity to algae : NOEC (Pseudokirchneriella subcapitata (green algae)): 3.2 mg/l  
 Exposure time: 72 h  
 Method: Directive 67/548/EEC, Annex V, C.3.  
 Remarks: Based on data from similar materials

ErC50 (Pseudokirchneriella subcapitata (green algae)): 10 mg/l  
 Exposure time: 72 h  
 Method: Directive 67/548/EEC, Annex V, C.3.  
 Remarks: Based on data from similar materials

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**II**
**I-(+)-Lactic acid:**

- Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 130 mg/l  
 Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 250 mg/l  
 Exposure time: 48 h  
 Method: OECD Test Guideline 202
- Toxicity to algae : NOEC (Selenastrum capricornutum (fresh water algae)): 1.9 g/l  
 Exposure time: 72 h  
 Method: OECD Test Guideline 201
- EC50 (Selenastrum capricornutum (fresh water algae)): 3.5 g/l  
 Exposure time: 72 h  
 Method: OECD Test Guideline 201
- Toxicity to bacteria : EC50: > 100 mg/l  
 Exposure time: 3 h  
 Method: OECD Test Guideline 209

**Persistence and degradability**
**Ingredients:**
**Propylene glycol:**

- Biodegradability : Result: Readily biodegradable.  
 Biodegradation: 98.3 %  
 Exposure time: 28 d  
 Method: OECD Test Guideline 301F

**Ethanol:**

- Biodegradability : Result: Readily biodegradable.  
 Biodegradation: 84 %  
 Exposure time: 20 d

**Dodecanoic acid:**

- Biodegradability : Result: Readily biodegradable.  
 Biodegradation: 86 %  
 Exposure time: 30 d  
 Method: OECD Test Guideline 301D

**Ethanolamine:**

- Biodegradability : Result: Readily biodegradable.  
 Biodegradation: > 90 %  
 Exposure time: 21 d

**Imidazolium compounds, 1-[2-(carboxymethoxy)ethyl]-1-(carboxymethyl)-4,5-dihydro-2-norcoco alkyl, hydroxides, sodium salts:**

- Biodegradability : Result: Readily biodegradable.  
 Biodegradation: 79 %  
 Exposure time: 28 d  
 Method: OECD Test Guideline 301F  
 Remarks: Based on data from similar materials

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**I-(+)-Lactic acid:**

Biodegradability : Result: Not readily biodegradable.  
 Biodegradation: 67 %  
 Exposure time: 20 d

**Bioaccumulative potential**
**Ingredients:**
**Propylene glycol:**

Partition coefficient: n-octanol/water : log Pow: -1.07

**Ethanol:**

Partition coefficient: n-octanol/water : log Pow: -0.35

**Dodecanoic acid:**

Bioaccumulation : Species: Fish  
 Bioconcentration factor (BCF): 234 - 288  
 Remarks: Based on data from similar materials

Partition coefficient: n-octanol/water : Pow: 4.6

**Ethanolamine:**

Partition coefficient: n-octanol/water : log Pow: -1.91

**I-(+)-Lactic acid:**

Partition coefficient: n-octanol/water : log Pow: -0.6

**Mobility in soil**

No data available

**Other adverse effects**

No data available

**SECTION 13. DISPOSAL CONSIDERATIONS**
**Disposal methods**

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging : Dispose of as unused product.  
 Empty containers should be taken to an approved waste handling site for recycling or disposal.  
 Do not burn, or use a cutting torch on, the empty drum.

**SECTION 14. TRANSPORT INFORMATION**
**International Regulation**


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**UNRTDG**

UN number	: UN 1170
Proper shipping name	: ETHYL ALCOHOL SOLUTION
Class	: 3
Packing group	: III
Labels	: 3

**IATA-DGR**

UN/ID No.	: UN 1170
Proper shipping name	: Ethanol solution
Class	: 3
Packing group	: III
Labels	: Flammable Liquids
Packing instruction (cargo aircraft)	: 366
Packing instruction (passenger aircraft)	: 355

**IMDG-Code**

UN number	: UN 1170
Proper shipping name	: ETHYL ALCOHOL SOLUTION (Triclosan)
Class	: 3
Packing group	: III
Labels	: 3
EmS Code	: F-E, S-D
Marine pollutant	: yes

**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 1170
Proper shipping name	: ETHYL ALCOHOL SOLUTIONS
Class	: 3
Packing group	: III
Labels	: FLAMMABLE LIQUID
ERG Code	: 127
Marine pollutant	: yes (Triclosan)

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**SECTION 15. REGULATORY INFORMATION**
**EPCRA - Emergency Planning and Community Right-to-Know**
**CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.


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- SARA 311/312 Hazards** : Fire Hazard  
Acute Health Hazard
- SARA 302** : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
- SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**US State Regulations**
**Pennsylvania Right To Know**

Water	7732-18-5	50 - 70 %
Propylene glycol	57-55-6	10 - 20 %
Ethanol	64-17-5	5 - 10 %
Dodecanoic acid	143-07-7	5 - 10 %
Ethanolamine	141-43-5	1 - 5 %
Propan-2-ol	67-63-0	0.1 - 1 %

**New Jersey Right To Know**

Water	7732-18-5	50 - 70 %
Propylene glycol	57-55-6	10 - 20 %
Ethanol	64-17-5	5 - 10 %
Dodecanoic acid	143-07-7	5 - 10 %
Ethanolamine	141-43-5	1 - 5 %

- California Prop 65** : This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

**The ingredients of this product are reported in the following inventories:**

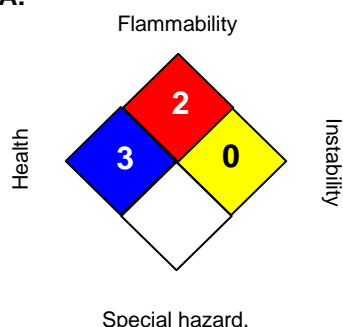
AICS : All ingredients listed or exempt.

**Inventories**

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

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**SECTION 16. OTHER INFORMATION**
**Further information**
**NFPA:**

**HMIS III:**

<b>HEALTH</b>	<b>3</b>
<b>FLAMMABILITY</b>	<b>2</b>
<b>PHYSICAL HAZARD</b>	<b>0</b>

0 = not significant, 1 = Slight,  
 2 = Moderate, 3 = High  
 4 = Extreme, \* = Chronic

**Full text of other abbreviations**

ACGIH	: USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL	: USA. NIOSH Recommended Exposure Limits
OSHA Z-1	: USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
US WEEL	: USA. Workplace Environmental Exposure Levels (WEEL)
ACGIH / TWA	: 8-hour, time-weighted average
ACGIH / STEL	: Short-term exposure limit
NIOSH REL / TWA	: Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
NIOSH REL / ST	: STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
OSHA Z-1 / TWA	: 8-hour time weighted average
US WEEL / TWA	: 8-hr TWA

Sources of key data used to compile the Material Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

Revision Date : 04/17/2015

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

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 is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, in-

# SAFETY DATA SHEET



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cluding an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

US / Z8