### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

#### Product identifier

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Clorox Commercial Solutions® Clorox® Bleach-Free Hand Sanitizer</th>
</tr>
</thead>
</table>

#### Other means of identification

- **Synonyms**: None

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

- **Recommended use**: Hand sanitizer
- **Uses advised against**: No information available

#### Details of the supplier of the safety data sheet

**Supplier Address**
Clorox Professional Products Company  
1221 Broadway  
Oakland, CA 94612

**Phone**: 1-510-271-7000

#### Emergency telephone number

- **Emergency Phone Numbers**  
  For Medical Emergencies call: 1-800-446-1014  
  For Transportation Emergencies, call Chemtrec: 1-800-424-9300
2. HAZARDS IDENTIFICATION

Classification

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

Flammable liquids Category 2

GHS Label elements, including precautionary statements

Emergency Overview

<table>
<thead>
<tr>
<th>Signal word</th>
<th>Danger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard statements</td>
<td>Highly flammable liquid and vapor</td>
</tr>
</tbody>
</table>

Appearance Clear, colorless Physical State Thin liquid Odor Alcohol

Precautionary Statements - Prevention
Keep away from heat/sparks/open flames/hot surfaces. - 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 eye protection such as safety glasses.

Precautionary Statements - Response
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
In case of fire: Use dry chemical, carbon dioxide (CO₂), foam, or water spray to extinguish.

Precautionary Statements - Storage
Store in a well-ventilated place. Keep cool.

Precautionary Statements - Disposal
Dispose of contents in accordance with all applicable federal, state, and local regulations.

Hazards not otherwise classified (HNOC)
Inhalation of high concentrations of vapor or mist may cause irritation of the respiratory tract, headaches, dizziness, nausea, vomiting, and malaise. Ingestion may cause central nervous system depression, gastrointestinal irritation, nausea, vomiting, and diarrhea.

Unknown Toxicity
0.2% of the mixture consists of ingredient(s) of unknown toxicity

Other information
May cause slight eye irritation.
Toxic to aquatic life with long lasting effects.

Interactions with Other Chemicals
Can react with strong oxidizers, inorganic acids, and halogens.
3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No.</th>
<th>Weight %</th>
<th>Trade Secret</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>60 - 75</td>
<td>*</td>
</tr>
<tr>
<td>Isopropyl alcohol</td>
<td>67-63-0</td>
<td>5 - 10</td>
<td>*</td>
</tr>
</tbody>
</table>

* The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First aid measures

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

Eye Contact
Hold eye open and rinse slowly and gently with water for 15–20 minutes. If present, remove contact lenses after the first 5 minutes of rinsing, then continue rinsing eye. Call a poison control center or doctor for further treatment advice.

Skin Contact
Not applicable.

Inhalation
Move to fresh air. If breathing problems develop, call a doctor.

Ingestion
Drink a glassful of water. Call a doctor or poison control center.

Protection of First-aiders
Remove all ignition sources. Use personal protective equipment as required. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects
May cause slight eye irritation.

Indication of any immediate medical attention and special treatment needed

Notes to Physician
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Dry chemical, carbon dioxide (CO₂), foam, or water spray.

Unsuitable Extinguishing Media
Use of water spray when fighting fire may be inefficient.

Specific Hazards Arising from the Chemical
Alcohol flames may not be readily visible. Vapors are heavier than air and may travel to source of ignition and flash back. Vapors may form explosive mixtures with air.

Hazardous Combustion Products
Oxides of carbon.

Explosion Data

Sensitivity to Mechanical Impact
No.

Sensitivity to Static Discharge
Yes.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Keep containers cool with water spray.
6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions
Ensure adequate ventilation. Use personal protective equipment as required. Eliminate all potential sources of ignition. Take precautionary measures against static discharges.

Other Information
Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental Precautions
Prevent entry into surface water or sanitary sewers. See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for Containment
Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up
Eliminate all potential sources of ignition, and ventilate area. Absorb and containerize. Do not flush into surface water or sanitary sewer system.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling
Handle in accordance with good industrial hygiene and safety practice. Avoid contact with eyes, skin, and clothing. Do not eat, drink, or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage
Store in accordance all applicable regulations and fire codes. Keep containers tightly closed in a cool, well-ventilated place away from heat, sparks, open flames, and hot surfaces.

Incompatible Products
Strong oxidizers, inorganic acids, and halogens.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
</table>
| Ethanol 64-17-5 | STEL: 1000 ppm | TWA: 1000 ppm  
TWA: 1900 mg/m³ | IDLH: 3300 ppm 10% LEL  
TWA: 1000 ppm  
TWA: 1900 mg/m³ |

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value.  
OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits.  
NIOSH IDLH: Immediately Dangerous to Life or Health.

Appropriate engineering controls

Engineering Measures
Showers  
Eyewash stations  
Ventilation systems
Individual protection measures, such as personal protective equipment

Eye/Face Protection
None required for consumer use. If splashes are likely to occur, wear safety glasses.

Skin and Body Protection
No special protective equipment required.

Respiratory Protection
No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.

Hygiene Measures
Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Physical and Chemical Properties</th>
<th>Values</th>
<th>Remarks/ Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Thin liquid</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Clear</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>colorless</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Alcohol</td>
<td>No information available</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Property</td>
<td>Values</td>
<td>Remarks/ Method</td>
</tr>
<tr>
<td>pH</td>
<td>6 - 9</td>
<td>None known</td>
</tr>
<tr>
<td>Melting/freezing point</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Flash Point</td>
<td>~21°C (closed cup)</td>
<td>None known</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Flammability Limits in Air</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Upper flammability limit</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Lower flammability limit</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>~0.84</td>
<td>None known</td>
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<tr>
<td>Water Solubility</td>
<td>Complete</td>
<td>None known</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
<td>None known</td>
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<tr>
<td>Kinematic viscosity</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>Not explosive</td>
<td></td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>No data available</td>
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</tr>
<tr>
<td>Other Information</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Softening Point</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>VOC Content (%)</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Particle Size</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Particle Size Distribution</td>
<td>No data available</td>
<td></td>
</tr>
</tbody>
</table>
10. STABILITY AND REACTIVITY

Reactivity
Can react with strong oxidizers, inorganic acids, and halogens.

Chemical stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None known.

Conditions to avoid
Keep away from heat, sparks, open flames, and hot surfaces.

Incompatible materials
Strong oxidizers, inorganic acids, and halogens.

Hazardous Decomposition Products
None known.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation
Inhalation of high concentrations of vapor or mist may cause irritation of the respiratory tract, headaches, dizziness, nausea, vomiting, and malaise.

Eye Contact
May cause slight irritation.

Skin Contact
Prolonged or repeated use may cause dryness and/or slight irritation.

Ingestion
Ingestion may cause central nervous system depression, gastrointestinal irritation, nausea, vomiting, and diarrhea.

Component Information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol 64-17-5</td>
<td>-</td>
<td>-</td>
<td>125 mg/L (Rat, 4 h)</td>
</tr>
<tr>
<td>Isopropyl alcohol 67-63-0</td>
<td>4.4 g/kg (Rat)</td>
<td>12.9 g/kg (Rabbit)</td>
<td>16000 (Rat, 8 h)</td>
</tr>
</tbody>
</table>

Information on toxicological effects

Symptoms
May cause slight redness and tearing of eyes.
Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization
No information available.

Mutagenic Effects
No information available.

Carcinogenicity
The table below indicates whether each agency has listed any ingredient as a carcinogen. Ethanol has been shown to be carcinogenic in long-term studies only when consumed as alcoholic beverage.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol 64-17-5</td>
<td>A3</td>
<td>Group 1</td>
<td>Known</td>
<td>X</td>
</tr>
<tr>
<td>Isopropyl alcohol 67-63-0</td>
<td>-</td>
<td>Group 3</td>
<td>-</td>
<td>X</td>
</tr>
</tbody>
</table>

ACGIH (American Conference of Governmental Industrial Hygienists)
A3 - Animal Carcinogen
IARC (International Agency for Research on Cancer)
Group 1 - Carcinogenic to Humans; Group 3 - Not Classifiable as to Carcinogenicity in Humans
NTP (National Toxicology Program)
Known - Known Carcinogen
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Reproductive Toxicity
Ethanol has been shown to be a reproductive toxin only when consumed as an alcoholic beverage.

STOT - single exposure
No information available.

STOT - repeated exposure
Contains a known or suspected carcinogen. Ethanol has been shown to be carcinogenic in long-term studies only when consumed as alcoholic beverage. Contains a known or suspected reproductive toxin. Ethanol has been shown to be a reproductive toxin only when consumed as an alcoholic beverage. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects. Repeated abuse can have long-term health effects.

Chronic Toxicity
Eyes, blood, central nervous system (CNS), liver, reproductive system, respiratory system.

Target Organ Effects
Eyes, blood, central nervous system (CNS), liver, reproductive system, respiratory system.

Aspiration Hazard
Not an aspiration hazard.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)
49.6 g/kg

ATEmix (inhalation-dust/mist)
184 mg/l

ATEmix (inhalation-vapor)
627 ATEmix
12. ECOLOGICAL INFORMATION

**Ecotoxicity**
Toxic to aquatic life with long lasting effects.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Toxicity to Algae</th>
<th>Toxicity to Fish</th>
<th>Toxicity to Microorganisms</th>
<th>Daphnia Magna (Water Flea)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol 64-17-5</td>
<td>LC50: 12.0 - 16.0 mL/L (96 h static)</td>
<td>Oncorhynchus mykiss</td>
<td>EC50 = 34634 mg/L 30 min</td>
<td>LC50: 9268 - 14221 mg/L (48 h) Daphnia magna</td>
</tr>
<tr>
<td></td>
<td>LC50: 13400 - 15100 mg/L (96 h flow-through)</td>
<td>Pimephales promelas</td>
<td>EC50 = 35740 mg/L 5 min</td>
<td>EC50: 10800 mg/L (24 h) Daphnia magna</td>
</tr>
<tr>
<td></td>
<td>LC50: &gt; 100 mg/L (96 h static) Pimephales promelas</td>
<td>Daphnia magna</td>
<td></td>
<td>EC50: 2 mg/L (48 h Static) Daphnia magna</td>
</tr>
<tr>
<td>Isopropyl alcohol</td>
<td>96h EC50: &gt; 1000 mg/L (Desmodesmus subspicatus)</td>
<td>96h LC50: = 9640 mg/L (Pimephales promelas) 96h LC50: = 11130 mg/L (Pimephales promelas)</td>
<td>96h LC50: &gt; 140000 µg/L (Lepomis macrochirus)</td>
<td>48h EC50: 13299 mg/L</td>
</tr>
<tr>
<td>67-63-0</td>
<td>72h EC50: &gt; 1000 mg/L (Desmodesmus subspicatus)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glycerin 56-81-5</td>
<td>LC50: 51 - 57 mL/L (96 h static) Oncorhynchus mykiss</td>
<td></td>
<td>EC50: &gt; 500 mg/L (24 h)</td>
<td></td>
</tr>
</tbody>
</table>

**Persistence and Degradability**
No information available.

**Bioaccumulation**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol 64-17-5</td>
<td>-0.32</td>
</tr>
<tr>
<td>Isopropyl alcohol</td>
<td>0.05</td>
</tr>
<tr>
<td>67-63-0</td>
<td></td>
</tr>
</tbody>
</table>

**Other adverse effects**
No information available.

13. DISPOSAL CONSIDERATIONS

**Disposal methods**
Dispose of in accordance with all applicable federal, state, and local regulations.

**Contaminated Packaging**
Do not reuse empty containers. Dispose of in accordance with all applicable federal, state, and local regulations.
14. TRANSPORT INFORMATION

DOT
Limited quantity.

TDG
<table>
<thead>
<tr>
<th>UN-No</th>
<th>UN1170</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Proper Shipping Name</strong></td>
<td>ETHANOL</td>
</tr>
<tr>
<td><strong>Hazard Class</strong></td>
<td>3</td>
</tr>
<tr>
<td><strong>Packing Group</strong></td>
<td>II</td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td>UN1170 ETHANOL, 3, II</td>
</tr>
</tbody>
</table>

ICAO
<table>
<thead>
<tr>
<th>UN-No</th>
<th>UN1170</th>
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<tr>
<td><strong>Proper Shipping Name</strong></td>
<td>ETHANOL</td>
</tr>
<tr>
<td><strong>Hazard Class</strong></td>
<td>3</td>
</tr>
<tr>
<td><strong>Packing Group</strong></td>
<td>II</td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td>UN1170 ETHANOL, 3, II</td>
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</table>

IATA
<table>
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<th>UN-No</th>
<th>UN1170</th>
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<tr>
<td><strong>Proper Shipping Name</strong></td>
<td>ETHANOL</td>
</tr>
<tr>
<td><strong>Hazard Class</strong></td>
<td>3</td>
</tr>
<tr>
<td><strong>Packing Group</strong></td>
<td>II</td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td>UN1170 ETHANOL, 3, II</td>
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</table>

IMDG/IMO
<table>
<thead>
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<th>UN1170</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Proper Shipping Name</strong></td>
<td>ETHANOL</td>
</tr>
<tr>
<td><strong>Hazard Class</strong></td>
<td>3</td>
</tr>
<tr>
<td><strong>Packing Group</strong></td>
<td>II</td>
</tr>
<tr>
<td><strong>EmS No.</strong></td>
<td>F-E, S-D</td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td>UN1170, ETHANOL, 3, II, FP 21C</td>
</tr>
</tbody>
</table>

15. REGULATORY INFORMATION

Chemical Inventories

TSCA
All components of this product are either on the TSCA 8(b) Inventory or otherwise exempt from listing.

DSL/NDSL
All components are on the DSL or NDSL.

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
U.S. 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
- Acute Health Hazard: No
- Chronic Health Hazard: No
- Fire Hazard: Yes
- Sudden Release of Pressure Hazard: No
- Reactive Hazard: No

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).

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Proposition 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol 64-17-5</td>
<td>Developmental</td>
</tr>
</tbody>
</table>

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
<th>Rhode Island</th>
<th>Illinois</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol 64-17-5</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Isopropyl alcohol 67-63-0</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Glycerin 56-81-5</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

International Regulations

Canada
WHMIS Hazard Class
B2 - Flammable liquid

16. OTHER INFORMATION
NFPA Health Hazard 1 Flammability 3 Instability 0 Physical and Chemical Hazards -
HMIS Health Hazard 1 Flammability 3 Physical Hazard 0 Personal Protection -

Prepared By Product Stewardship
23 British American Blvd.
Latham, NY 12110
1-800-572-6501

Preparation/Revision Date January 5, 2015
Revision Note New
Reference CLX51734-001/51734.001

General 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