



SAFETY DATA SHEET

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Revision Date New

Revision Number 0

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

Product Identifier

Product Name Clorox Commercial Solutions® Clorox® 4 in One Disinfectant & Sanitizer

Other means of identification

EPA Registration Number 67619-29

Recommended use of the chemical and restrictions on use

Recommended Use Aerosol disinfectant, sanitizer, and deodorizer

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

Eye damage/irritation	Category 2B
Carcinogenicity	Category 1B
Flammable aerosols	Category 2

GHS Label elements, including precautionary statements

Emergency Overview

Signal word	Danger	
Hazard statements	Causes eye irritation May cause cancer Flammable aerosol	
Appearance	Clear, colorless	Physical State Thin liquid
		Odor Orange, citrus

Precautionary Statements - Prevention

Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Wear eye protection such as safety glasses.
 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 Pressurized container: Do not pierce or burn, even after use.
 Do not spray on an open flame or other ignition source.
 Wash hands and any exposed skin thoroughly after handling.

Precautionary Statements - Response

If exposed or concerned: Get medical attention.
 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.

Precautionary Statements - Storage

Store locked up.
 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

Precautionary Statements - Disposal

Dispose of contents/container in accordance with all applicable federal, state, and local regulations.

Hazards not otherwise classified (HNOC)

Not applicable

Unknown Toxicity

None

Other information

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

Chemical Name	CAS-No	Weight %	Trade Secret
Ethanol	64-17-5	50 - 75	*
Propane	74-98-6	1 - 5	*
d-Limonene	5989-27-5	0.5 - 2	*
Sodium nitrite	7632-00-0	<0.2	*

* 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. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

Skin Contact

Wash skin with soap and water. If irritation persists, call a doctor.

Inhalation

Move to fresh air. If breathing is affected, call a doctor.

Ingestion

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

Most important symptoms and effects, both acute and delayed**Most Important Symptoms/Effects**

May cause moderate eye irritation. Inhalation of high concentrations may cause irritation of the respiratory tract, headaches, dizziness, nausea, vomiting, and malaise.

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

Do not extinguish a leaking gas fire unless leak can be stopped.

Specific Hazards Arising from the Chemical

Containers may rupture at temperatures greater than 50°C.

NFPA Aerosol Classification: Level 2

Explosion Data

Sensitivity to Mechanical Impact None

Sensitivity to Static Discharge Yes.

Protective Equipment and Precautions for Firefighters

Containers may rupture at temperatures greater than 50°C. Cool exposed containers to avoid potential bursting or venting. Use equipment or shielding to protect personnel from bursting containers. As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Avoid contact with eyes, skin, and clothing. Wear respiratory protection for large spills.

Other Information Eliminate all potential sources of ignition, and ventilate area. Take precautionary measures against static discharge. Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental Precautions Prevent entry into waterways, sewers, basements, and confined areas.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so. Keep out of drains, sewers, ditches, and waterways.

Methods for Cleaning Up Absorb and containerize. Wash residual down to sanitary sewer. Contact the sanitary treatment facility in advance to assure ability to process washed-down material.

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. Avoid breathing vapors. Contents under pressure. Do not puncture or incinerate containers. Keep away from heat, sparks, open flames, and hot surfaces. Do not eat, drink, or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage Store in accordance with NFPA 30B for Level 2 aerosols. Do not store at temperatures above 50°C. Keep containers in a dry, cool, and well-ventilated place. Keep away from heat and ignition sources. Protect from sunlight.

Incompatible Products Strong oxidizers, inorganic acids, and halogens.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ethanol 64-17-5	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m ³	IDLH: 3300 ppm 10% LEL TWA: 1000 ppm TWA: 1900 mg/m ³
Propane 74-98-6	TWA: 1000 ppm	TWA: 1000 ppm TWA: 1800 mg/m ³	IDLH: 2100 ppm TWA: 1000 ppm TWA: 1800 mg/m ³
d-Limonene 5989-27-5	None	None	None
Sodium nitrite 7632-00-0	None	None	None

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

Wear safety glasses.

Skin and Body Protection

Wear rubber or neoprene gloves if there is the potential for repeated or prolonged skin contact.

Respiratory Protection

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene Measures

Do not eat, drink, or smoke when using this product. Wash hands with soap and water after use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical State	Thin liquid	Odor	Orange, citrus
Appearance	Clear	Odor Threshold	No information available
Color	Colorless		

<u>Property</u>	<u>Values</u>	<u>Remarks/ Method</u>
pH	6.5 - 8.5 (liquid)	None known
Melting/freezing point	No data available	None known
Boiling Point/Range	No data available	None known
Flash Point	19°C (liquid, closed cup)	None known
Flame extension	18 inches (46 cm) without flashback	None known
Evaporation rate	No data available	
Flammability (solid, gas)	No data available	None known
Flammability Limits in Air		
Upper flammability limit	No data available	None known
Lower flammability limit	No data available	None known
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Specific Gravity	~0.85 (liquid)	None known
Water Solubility	Soluble in water.	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Explosive Properties	Not explosive	
Oxidizing Properties	No data available	

Other Information

Softening Point	No data available
VOC Content (%)	No data available
Particle Size	No data available
Particle Size Distribution	No data available

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 under normal processing.

Conditions to avoid

Do not store at temperatures above 50°C. Keep away from heat, sparks, open flames, and hot surfaces.

Incompatible materials

Strong oxidizers, inorganic acids, and halogens

Hazardous Decomposition Products

None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	Inhalation of high concentrations may cause irritation of the respiratory tract, headaches, dizziness, nausea, vomiting, and malaise.
Eye Contact	May cause moderate eye irritation.
Skin Contact	Prolonged contact may cause slight irritation.
Ingestion	Ingestion may cause central nervous system depression, gastrointestinal irritation, nausea, vomiting, and diarrhea.

Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ethanol 64-17-5	-	-	124.7 mg/L (Rat) 4 h
Propane 74-98-6	-	-	658 mg/L (Rat) 4 h
d-Limonene 5989-27-5	4.4 g/kg (Rat)	>5 g/kg (Rabbit)	-
Sodium nitrite 7632-00-0	85 mg/kg (Rat)	-	5.5 mg/L (Rat) 4 h

Information on toxicological effects

Symptoms May cause redness and tearing of the 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.

Chemical Name	ACGIH	IARC	NTP	OSHA
Ethanol 64-17-5	A3	Group 1	Known	X
d-Limonene 5989-27-5		Group 3		X
Sodium nitrite 7632-00-0		Group 2A		X

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans Group 2A - Probably 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 No information available

STOT - single exposure No information available.

11. TOXICOLOGICAL INFORMATION

STOT - repeated exposure Chronic Toxicity	No information available. Contains a known or suspected carcinogen. Ethanol has been shown to be carcinogenic in long-term studies only when consumed as alcoholic beverage. Sodium nitrite produced stomach tumors in female mice when fed exaggerated doses. 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.
Target Organ Effects	Eyes, blood, central nervous system (CNS), liver, reproductive system, respiratory system.
Aspiration Hazard	No information available.

Numerical measures of toxicity Product Information

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

ATEmix (oral)
63.6 g/kg

ATEmix (Inhalation-gas)
10,425,000

ATEmix (Inhalation-dust/mist)
188 mg/L

12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic life with long lasting effects.

Persistence and Degradability

No information available.

Bioaccumulation

Chemical Name	Log Pow
Ethanol 64-17-5	-0.32
Propane 74-98-6	2.3
Sodium nitrite 7632-00-0	-3.7

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

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

14. TRANSPORT INFORMATION

DOT Limited quantity.

TDG
 UN-No UN1950
 Proper Shipping Name AEROSOLS
 Hazard Class 2.1
 Description UN1950, AEROSOLS, 2.1

ICAO
 UN-No UN1950
 Proper Shipping Name AEROSOLS
 Hazard Class 2.1
 Description UN1950, AEROSOLS, 2.1

IATA
 UN-No UN1950
 Proper Shipping Name AEROSOLS, FLAMMABLE
 Hazard Class 2.1
 Description UN1950, AEROSOLS, FLAMMABLE, 2.1

IMDG/IMO
 UN-No UN1950
 Proper Shipping Name AEROSOLS
 Hazard Class 2.1
 EMs No. 5F
 Description UN1950, AEROSOLS, 2.1

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 contains the following chemical that is subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical Name	CAS-No	Weight %	SARA 313 Threshold Values %
Sodium nitrite 7632-00-0	7632-00-0	0.1 - 1	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard Yes
 Chronic Health Hazard Yes
 Fire Hazard Yes
 Sudden Release of Pressure Hazard Yes
 Reactive Hazard No

Clean Water Act

This product contains the following substance that is regulated as a pollutant pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium nitrite 7632-00-0	100 lb.			X

CERCLA

This material, as supplied, contain the following substance regulated as a hazardous substance 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.

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sodium nitrite 7632-00-0	100 lb		RQ 100 lb final RQ RQ 45.4 kg final RQ

EPA Statement

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

CAUTION: Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

U.S. State Regulations**California Proposition 65**

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

Chemical Name	California Proposition 65
Ethanol 64-17-5	Developmental

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
Ethanol 64-17-5		X			
Dipropylene glycol 25265-71-8			X		
Propane 74-98-6	X	X	X		
d-Limonene 5989-27-5					X
Sodium nitrite 7632-00-0	X	X	X	X	

International Regulations

Canada

WHMIS Hazard Class

- D2A Very toxic Materials
- A Compressed gases
- B5 Flammable aerosol



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 A

**Indicates a chronic health hazard*

Prepared By Product Stewardship
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Revision Note New

Reference CLX184832-001/184832.001/1118256-B

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

