



SAFETY DATA SHEET

Issuing Date No data available

Revision Date 28-Mar-2019

Revision Number 2

NGHS - English

1. IDENTIFICATION

Product identifier

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

Other means of identification

EPA Pesticide registration number 67619-29

Recommended use of the chemical and restrictions on use

Recommended Use Disinfectant (Aerosol)
Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Identification The Clorox Company

Address 1221 Broadway
Oakland
CA
94612
US

Telephone 1-510-271-7000

Emergency telephone number

Emergency Telephone Number For Medical Emergencies call: 1-800-446-1014. Transportation Emergencies, call Chemtrec: 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

Flammable aerosols	Category 2
Gases under pressure	Liquefied Gas

Appearance Clear Colorless

Physical state Liquid spray

Odor Orange Citrus

GHS Label elements, including precautionary statements

Warning

Hazard statements

Flammable Aerosol
Contains gas under pressure; may explode if heated



Precautionary Statements - Prevention

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
Do not spray on an open flame or other ignition source
Pressurized container: Do not pierce or burn, even after use

Precautionary Statements - Storage

Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F
Store in well-ventilated place

Other information

Not applicable.

Unknown acute toxicity

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Chemical Name	CAS-No	Weight-%
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

Inhalation

Remove to fresh air.

Eye contact

Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention if irritation develops and persists.

Skin contact

Wash skin with soap and water. Get medical attention if irritation develops and persists.

Ingestion

Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects, both acute and delayed

Symptoms

Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

Indication of any immediate medical attention and special treatment needed

Note to physicians

Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Dry chemical, CO2, alcohol-resistant foam or water spray.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	Cylinders may rupture under extreme heat.
Hazardous Combustion Products	Carbon oxides.
Explosion Data	
Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	None.
Special protective equipment for fire-fighters	Cylinders may rupture under extreme heat. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions	Ensure adequate ventilation.
Other Information	Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area).

Environmental precautions

Environmental precautions	See Section 12 for additional Ecological Information.
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Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice.
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Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep cool. Protect from sunlight. Keep container tightly closed in a dry and well-ventilated place.
Incompatible products	None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits

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: 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

Appropriate engineering controls

Engineering controls Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection No special protective equipment required.

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, ventilation and evacuation may be required.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical state Liquid spray
Appearance Clear Colorless
Odor Orange Citrus
Color No information available
Odor Threshold No information available

<u>Property</u>	<u>Values</u>	<u>Remarks</u>	<u>Method</u>
pH	6.5 - 8.5 (liquid)	None known	
Melting / freezing point	No data available	None known	
Boiling point / boiling range	No data available	None known	
Flash Point	19	None known	
Evaporation Rate	No data available	None known	
Flammability (solid, gas)	No data available	None known	
Flammability Limit in Air			
Upper flammability limit	No data available		
Lower flammability limit	No data available		
Vapor pressure	No data available	None known	
Vapor density	No data available	None known	
Relative density	~0.85 (liquid)	None known	
Water Solubility	Soluble in water	None known	
Solubility(ies)	No data available	None known	
Partition coefficient: n-octanol/water	0	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

Other Information

Explosive properties	No information available
Oxidizing properties	No information available
Softening Point	No information available
Molecular Weight	No information available
VOC Content (%)	No information available
Liquid Density	No information available
Bulk Density	No information available
Particle Size	No information available
Particle Size Distribution	No information available

10. STABILITY AND REACTIVITY

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of Hazardous Reactions	None under normal processing.
Conditions to avoid	Extremes of temperature and direct sunlight. Keep away from open flames, hot surfaces and sources of ignition.
Incompatible materials	Strong oxidizing agents. Inorganic acids. Halogens.
Hazardous Decomposition Products	None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	Inhalation of vapors in high concentration may cause irritation of respiratory system.
Eye contact	No known effects under normal use conditions.
Skin contact	No known effects under normal use conditions.
Ingestion	No known effect.

Information on toxicological effects

Symptoms	No information available.
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Numerical measures of toxicity

Acute Toxicity

Unknown acute toxicity	No information available
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Component Information

Chemical Name	LD50 Oral	LD50 Dermal	Inhalation LC50
Ethanol	-	-	124.7 mg/L (Rat) 4 h
Propane	-	-	658 mg/L (Rat) 4 h
D-Limonene	4.4 g/kg (Rat)	>5 g/kg (Rabbit)	-
Sodium nitrite	85 mg/kg (Rat)	-	>5.5 mg/L (Rat)

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

Skin corrosion/irritation	No information available.
Serious eye damage/eye irritation	No information available.
Respiratory or skin sensitization	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	Based on available data, the classification criteria are not met.
Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Aspiration hazard	No information available.

12. ECOLOGICAL INFORMATION

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

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Ethanol		LC50: 12.0 - 16.0 mL/L (96 h static) Oncorhynchus mykiss LC50: 13400 - 15100 mg/L (96 h flow-through) Pimephales promelas LC50: > 100 mg/L (96 h static) Pimephales promelas	EC50 = 34634 mg/L 30 min EC50 = 35470 mg/L 5 min	LC50: 9268 - 14221 mg/L (48 h) Daphnia magna EC50: 10800 mg/L (24 h) Daphnia magna EC50: 2 mg/L (48 h Static) Daphnia magna

Persistence and Degradability No information available.

Bioaccumulation

Chemical Name	Log Pow
Propane	2.3
Sodium nitrite	-3.7

Mobility No information available.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Do not reuse empty containers.
US EPA Waste Number	D001
California Waste Codes	232

This product may contain one or more substances that are listed with the State of California as a hazardous waste.

14. TRANSPORT INFORMATION

DOT Limited Quantity

TDG
UN Number UN1950
Proper Shipping Name AEROSOLS
Hazard Class 2.1
Packing Group None
Description UN1950, AEROSOLS, 2.1

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

IATA
UN Number UN1950
Proper Shipping Name AEROSOLS, FLAMMABLE
Hazard Class 2.1
Packing Group None
Description UN1950, AEROSOLS, FLAMMABLE, 2.1

IMDG
UN Number UN1950
Proper Shipping Name AEROSOLS
Hazard Class 2
Packing Group None
EmS-No. 5F
Description UN1950, AEROSOLS, 2.1

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

International Regulations

Ozone-depleting substances (ODS) Not applicable

Persistent Organic Pollutants Not applicable

Export Notification requirements Not applicable

International Inventories

TSCA	Contact supplier for inventory compliance status
DSL/NDSL	Contact supplier for inventory compliance status
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AICS	Contact supplier for inventory compliance status.

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
 DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
 EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
 ENCS - Japan Existing and New Chemical Substances
 KECL - Korean Existing and Evaluated Chemical Substances
 PICCS - Philippines Inventory of Chemicals and Chemical Substances
 AICS - Australian Inventory of Chemical Substances

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

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	Yes
Sudden release of pressure hazard	Yes
Reactive Hazard	No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants 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, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

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

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
Propane 74-98-6	X	X	X		
D-Limonene 5989-27-5					X
Sodium nitrite 7632-00-0	X	X	X	X	

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:

EPA 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.

16. OTHER INFORMATION

NFPA	Health hazards 0	Flammability 3	Instability 0	Physical and Chemical Properties - Personal Protection A
HMIS	Health hazards 0	Flammability 3	Physical hazards 0	

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

Revision Date 28-Mar-2019

Revision Note No information available

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



Clorox Professional Products Company
 1221 Broadway
 Oakland, CA 94612
 Tel. (510) 271-7000

Material Safety Data Sheet

I Product: COMMERCIAL SOLUTIONS® ULTRA CLOROX® GERMICIDAL BLEACH I		
Description: CLEAR, LIGHT YELLOW LIQUID WITH CHLORINE ODOR		
Other Designations	Distributor	Emergency Telephone Nos.
EPA Reg. No. 67619-8 Sodium Hypochlorite Solution	Clorox Sales Company 1221 Broadway Oakland, CA 94612	For Medical Emergencies, call 1-800-446-1014 For Transportation Emergencies, call Chemtrec 1-800-424-9300

II Health Hazard Data

DANGER: CORROSIVE. May cause severe irritation or damage to eyes and skin. Harmful if Swallowed. The following medical conditions may be aggravated by exposure to high concentrations of vapor or mist; heart conditions or chronic respiratory problems such as asthma, chronic bronchitis, or obstructive lung disease. Some clinical reports suggest a low potential for sensitization upon exaggerated exposure to sodium hypochlorite, particularly on damaged or irritated skin. Routine clinical tests conducted on intact skin with Clorox Liquid Bleach found no sensitization in the test subjects. Under normal consumer use conditions the likelihood of any adverse health effects are low.

FIRST AID:

EYE CONTACT: Rinse with plenty of water for at least 15 minutes. Get prompt medical attention.

SKIN CONTACT: Wash skin thoroughly with soap and water.

INGESTION: Drink large amounts of water. DO NOT induce vomiting. Call a physician or poison control center immediately.

INHALATION: If breathing problems develop, remove to fresh air.

III Hazardous Ingredients

Ingredient	Concentration	Worker Exposure Limit
Sodium hypochlorite CAS # 7681-52-9	6.0 - 7.35%	Not established.
Sodium hydroxide CAS # 1310-73-2	< 0.2%	2 mg/m ³ TLV-STEL ^a 2 mg/m ³ PEL ^b

^aTLV-STEL = ACGIH Threshold Limit Value - Short Term Exposure Limit
^bPEL = OSHA Permissible Exposure Limit - Time Weighted Average

None of the ingredients in this product are on the IARC, NTP or OSHA carcinogen list.

IV Special Protection and Precautions

Hygienic Practices: Wear safety glasses. With repeated or prolonged use, wear nitrile, neoprene, or butyl rubber gloves. Wash after contact with product. Avoid breathing vapors.

Engineering Controls: Use general ventilation to minimize exposure to vapor or mist.

Work Practices: Avoid eye and skin contact and inhalation of vapor or mist.

KEEP OUT OF THE REACH OF CHILDREN.

V Transportation and Regulatory Data

DOT: Not restricted per 49CFR172.101(c)(12)(iv).

IMDG: Not restricted per IMDG Code Page 0021 Paragraph 5.3.5.

IATA: Not restricted per IATA D.G.R. Special provision A3.

EPA - SARA Title III/CERCLA:
 This product is regulated under Sections 311/312. This product contains no chemicals regulated under Section 313 and contains sodium hypochlorite and sodium hydroxide which are regulated under Section 304/CERCLA.

TSCA Status: All components of this product are on the TSCA Inventory.

VI Spill Procedures/Waste Disposal

Spill Procedures: Absorb and containerize. Wash residual down to sanitary sewer. Contact the sanitary treatment facility in advance to assure ability to process washed-down material. For spills of multiple products, responders should evaluate the MSDS's of the products for incompatibility with sodium hypochlorite. Breathing protection should be worn in enclosed, and/or poorly ventilated areas until hazard assessment is complete.

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

VII Reactivity Data

Stable under normal use and storage conditions. Strong oxidizing agent. Reacts with other household chemicals such as toilet bowl cleaners, rust removers, vinegar, acids or ammonia containing products to produce hazardous gases, such as chlorine and other chlorinated species. Prolonged contact with metal may cause pitting or discoloration.

VIII Fire and Explosion Data

Not flammable or explosive.

In a fire, cool containers to prevent rupture and release of sodium chlorate.

IX Physical Data

Boiling point 212°F/100°C (decomposes)
 Specific gravity (H₂O=1, 21°C) ~1.10
 Solubility in water Complete
 pH ~11.4

