



# Material Safety Data Sheet

## Section 1: Product & Company Identification

**Product Name:** Electro Clean HD™ (Aerosol)

**Product Number (s):** 04025

**Manufactured By:**

CRC Industries, Inc.  
885 Louis Drive  
Warminster, PA 18974  
[www.crcindustries.com](http://www.crcindustries.com)

General Information	(215) 674-4300
Technical Assistance	(800) 521-3168
Customer Service	(800) 272-4620
24-Hr Emergency (CHEMTREC)	(800) 424-9300

## Section 2: Hazards Identification

### Emergency Overview

Appearance & Odor: Clear, colorless liquid with a strong odor

### WARNING

Vapor Harmful. Contents Under Pressure

As defined by OSHA's Hazard Communication Standard, this product is hazardous.

### Potential Health Effects:

**EYE:** May cause moderate irritation ranging from redness to burning.

**SKIN:** May cause moderate irritation ranging from redness to burning.

**INHALATION:** May irritate nose, throat and lungs. Symptoms include coughing, wheezing, and laryngitis. Exposure to high doses may cause central nervous system depression, including headache, nausea, giddiness, confusion and delirium. Such doses may also cause adverse effect in liver, kidney and lung.

**INGESTION:** Low toxicity; not expected to be a hazard in normal use.

**CHRONIC EFFECTS:** Long term overexposure may lead to central nervous system, liver or kidney effects.

**TARGET ORGANS:** Central nervous system, liver, kidney

Medical Conditions Aggravated by Exposure:

Dermatitis, respiratory disorders, central nervous system disorders

See Section 11 for toxicology and carcinogenicity information on product ingredients.

**Section 3: Composition/Information on Ingredients**

COMPONENT	CAS NUMBER	% by Wt.
1-Bromopropane (nPB)	106-94-5	80 - 90
t-Butanol	75-65-0	< 3
1,2-Butylene oxide	106-88-7	< 1
COzol™ 202	Trade Secret	3 - 5
Carbon Dioxide	124-38-9	4 - 6

**Section 4: First Aid Measures**

**Eye Contact:** Immediately flush with plenty of water for 15 minutes. Call a physician if irritation persists.

**Skin Contact:** Remove contaminated clothing and wash affected area with soap and water. Call a physician if irritation persists. Wash contaminated clothing prior to re-use.

**Inhalation:** Remove person to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult give oxygen. Call a physician.

**Ingestion:** Wash mouth with plenty of water. If conscious, give person a glass of water to drink. Call a physician.

*Note to Physicians:* None

**Section 5: Fire-Fighting Measures**

**Flammable Properties:** This material is nonflammable according to OSHA definitions.

Flash Point: none (TCC)                      Upper Explosive Limit: 8.0  
 Autoignition Temperature: 914 F                      Lower Explosive Limit: 3.0

**Suitable Extinguishing Media:** Carbon dioxide, dry chemical, foam. Class B fire extinguisher.

**Products of Combustion:** Hydrogen bromide or bromine, oxides of carbon

**Protection of Fire-Fighters:** Firefighters should wear self-contained, NIOSH-approved breathing apparatus for protection against suffocation and possible toxic decomposition products. Proper eye and skin protection should be provided. Use water spray to keep fire-exposed containers cool and to knock down vapors which may result from product decomposition.

**Section 6: Accidental Release Measures**

**Personal Precautions:** Use personal protection recommended in Section 8.

Environmental Precautions: Take precautions to prevent contamination of ground and surface waters. Do not flush into sewers or storm drains.

Methods for Containment & Clean-up: Dike area to contain spill. Ventilate the area with fresh air. If in confined space or limited air circulation area, clean-up workers should wear appropriate respiratory protection. Recover or absorb spilled material using an absorbent designed for chemical spills. Place used absorbents into proper waste containers.

## Section 7: Handling and Storage

Handling Procedures: Wear appropriate personal protective equipment. Use only with adequate ventilation. Open doors or windows to provide fresh air in poor circulation areas.

Storage Procedures: Store in a cool dry area out of direct sunlight. Aerosol cans must be maintained below 120 F to prevent cans from rupturing.

Aerosol Storage Level: I

## Section 8: Exposure Controls/Personal Protection

Exposure Guidelines:

COMPONENT	OSHA		ACGIH		OTHER		UNIT
	TWA	STEL	TWA	STEL	TWA	SOURCE	
1-Bromopropane (nPB)	N.E.	N.E.	10	N.E.	N.E.		ppm
t-Butanol	100	N.E.	100	N.E.	N.E.		ppm
1,2-Butylene oxide	N.E.	N.E.	N.E.	N.E.	2	AIHA	ppm
COzol™ 202	400	500(v)	200	400	N.E.		ppm
Carbon dioxide	5000	30000(v)	5000	30000	N.E.		ppm
N.E. – Not Established      (c) – ceiling      (s) – skin      (v) – vacated							

Engineering Controls: Area should have ventilation to provide fresh air. Use local exhaust to prevent accumulation of vapors. Use mechanical means if necessary to maintain vapor levels below the exposure guidelines. If working in a confined space, follow applicable OSHA regulations

Respiratory Protection: None required for normal work where adequate ventilation is provided. Use NIOSH-approved self-contained positive pressure respirators in low circulation areas and for emergencies.

Eye/face Protection: For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear splash-proof goggles.

Skin Protection: Use protective gloves such as Viton or Norfoil. Also, use full protective clothing if there is prolonged or repeated contact of liquid with skin.

## Section 9: Physical and Chemical Properties

Physical State: liquid

Color: clear, colorless

Odor: strong solvent odor

Specific Gravity: 1.27

Initial Boiling Point: 160 F

Freezing Point: NE

Vapor Pressure: 139 mmHg @ 68 F

Vapor Density: ~ 4.3 (air = 1)

Evaporation Rate: &gt; 1 (ether = 1)

Solubility: 0.25 g/100 ml at 68 F

pH: NA

Volatile Organic Compounds: wt %: 95 g/L: 1205 lbs./gal: 10.08

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**Section 10: Stability and Reactivity**

Stability: Stable

Conditions to Avoid: Keep away from ignition sources.

Incompatible Materials: Strong oxidizers and strong bases.

Hazardous Decomposition Products: Hydrogen bromide and/or bromine, oxides of carbon.

Possibility of Hazardous Reactions: No

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**Section 11: Toxicological Information**

Long-term toxicological studies have not been conducted for this product. The following information is available for components of this product.

**ACUTE EFFECTS**

<u>Component</u>	<u>Test</u>	<u>Result</u>	<u>Route</u>	<u>Species</u>
1-Bromopropane	LD50	4260 mg/kg	Oral	Rat
1-Bromopropane	LC50	253 g/m <sup>3</sup> /0.5Hr	Inhalation	Rat
1,2-Butylene oxide	LD50	500 mg/kg	Oral	Rat
1,2-Butylene oxide	LD50	2100 µL/kg	Dermal	Rabbit
t-Butanol	LD50	3500 mg/kg	Oral	Rat

**CHRONIC EFFECTS****Carcinogenicity:**

	<u>Component</u>	<u>Result</u>
OSHA:	1,2-Butylene oxide	Hazard communication carcinogen
IARC:	1,2-Butylene oxide	2B – possibly carcinogenic to humans
NTP:	none	

Mutagenicity: Ames test negative

Other: none

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**Section 12: Ecological Information**

Ecological studies have not been conducted for this product. The following information is available for components of this product.

Ecotoxicity: 1-Bromopropane – 96 Hr LC50 Fathead minnow: 67.3 mg/L (flow-through)  
Persistence / Degradability: no information available  
Bioaccumulation / Accumulation: no information available  
Mobility in Environment: no information available

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**Section 13: Disposal Considerations**

Disposal: The dispensed liquid product is not a RCRA hazardous waste. (See 40 CFR Part 261.20 – 261.33) Aerosol containers should be emptied and depressurized before disposal. Empty containers may be recycled.

All disposal activities must comply with federal, state and local regulations. Local regulations may be more stringent than state or national requirements.

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**Section 14: Transport Information**

Proper shipping description:

US DOT (ground): Consumer Commodity, ORM-D

Special Provisions: None

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**Section 15: Regulatory Information**

**U.S. Federal**

Toxic Substances Control Act (TSCA):

All ingredients are either listed on the TSCA inventory or are exempt.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):

Reportable Quantities (RQ's) exist for the following ingredients: 1,2-Butylene oxide (100 lbs)

**Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.**

Superfund Amendments Reauthorization Act (SARA) Title III:

Section 302 Extremely Hazardous Substances (EHS): None

Section 311/312 Hazard Categories:

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

Section 313 Toxic Chemicals: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and

Reauthorization Act of 1986 and 40 CFR Part 372:  
1,2-Butylene oxide ( < 1%), t-Butanol ( < 3%)

Clean Air Act:

Section 112 Hazardous Air Pollutants (HAPs): 1,2-Butylene oxide

**State Regulations**

California Safe Drinking Water and Toxic Enforcement Act (Prop 65):

This product contains the following chemicals known to the state of California to cause cancer, birth defects or other reproductive harm: 1-bromopropane

State Right to Know:

New Jersey: 75-05-8, 106-88-7, 75-65-0, 124-38-9, 67-63-0, 109-87-5  
Pennsylvania: 106-94-5, 75-05-8, 106-88-7, 75-65-0, 124-38-9, 67-63-0, 109-87-5  
Massachusetts: 106-94-5, 75-05-8, 106-88-7, 75-65-0, 124-38-9, 67-63-0, 109-87-5  
Rhode Island : 75-05-8, 106-88-7, 75-65-0, 124-38-9, 67-63-0, 109-87-5

**Additional Regulatory Information:** This product contains less than 0.05% isopropyl bromide.

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**Section 16: Other Information**

NFPA: Health: 2 Flammability: 0 Reactivity: 0  
HMIS: Health: 2 Flammability: 0 Reactivity: 0 PPE: B

Prepared By: Michelle Rudnick  
CRC #: 00658  
Revision Date: 05/12/2006

Changes since last revision: Sections 3, 8, 12, 15 Removed mention of Acetonitrile 75-05-8

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label.

CAS: Chemical Abstract Service NA: Not Applicable  
ppm: Parts per Million ND: Not Determined  
TCC: Tag Closed Cup NE: Not Established  
PMCC: Pinsky-Martens Closed Cup g/L: grams per Liter  
PPE: Personal Protection Equipment lbs./gal: pounds per gallon  
TWA: Time Weighted Average STEL: Short Term Exposure Limit  
OSHA: Occupational Safety and Health Administration  
ACGIH American Association of Governmental Industrial Hygienists  
NIOSH National Institute of Occupational Safety & Health