MATERIAL SAFETY DATA SHEET

Section 1: Product & Company Identification

Product Name: **Electronic Degreaser** (aerosol)

Product Number (s): **03215**

Product Use: General purpose degreaser

Manufacturer / Supplier Contact Information:

In United States:
CRC Industries, Inc.
885 Louis Drive
Warminster, PA 18974
www.crcindustries.com
1-215-674-4300(General)
(800) 521-3168 (Technical)
(800) 272-4620 (Customer Service)

In Canada:
CRC Canada Co.
2-1246 Lorimar Drive
Mississauga, Ontario L5S 1R2
www.crc-canada.ca
1-905-670-2291

In Mexico:
CRC Industries Mexico
Av. Benito Juárez 4055 G
Colonia Orquídea
San Luís Potosí, SLP CP 78394
www.crc-mexico.com
52-444-824-1666

24-Hr Emergency – CHEMTREC: (800) 424-9300 or (703) 527-3887

Section 2: Hazards Identification

Emergency Overview

WARNING: Vapor Harmful. Contents Under Pressure.
As defined by OSHA's Hazard Communication Standard, this product is hazardous.
Appearance & Odor: Clear, colorless liquid with a strong odor

Potential Health Effects:

ACUTE 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	40 – 50
t-Butanol	75-65-0	< 2
1,2-Butylene oxide	106-88-7	< 1
COzol® 202	proprietary	2 – 5
1,1,1,2-Tetrafluoroethane (HFC-134a)	811-97-2	45 – 55
Carbon Dioxide	124-38-9	1 – 3

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: Treat symptomatically.

Section 5: Fire-Fighting Measures

Flammable Properties: This product is nonflammable in accordance with aerosol flammability definitions. (See 16 CFR 1500.3(c)(6))

Flash Point: None (TCC)
Autoignition Temperature: 914°F

Upper Explosive Limit: 8.0
Lower Explosive Limit: 3.0

Fire and Explosion Data:

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

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

Explosion Hazards: Aerosol containers, when exposed to heat from fire, may build pressure and explode.

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. Use caution around energized equipment. The metal container will conduct electricity if it contacts a live source. This may result in injury to the user from electrical shock and/or flash fire. For product use instructions, please see the product label.

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:

	OSHA		ACGIH		OTHER		
COMPONENT	TWA	STEL	TWA	STEL	TWA	SOURCE	UNIT
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
1,1,1,2-Tetrafluoroethane	NE	NE	NE	NE	1000	AIHA	ppm
Carbon dioxide	5000	30000(v)	5000	30000	N.E.		ppm
N.E. – Not Established (c) – ceiling (s) – skin (v) – vacated							

Controls and Protection:

Engineering Controls: Area should have ventilation to provide fresh air. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at the source, preventing dispersion into the general work area. 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. If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with organic vapor cartridge. Air monitoring is needed to determine actual employee exposure levels. Use a self-contained breathing apparatus in confined spaces 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
Odor Threshold: ND
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: > 1 (ether = 1)
Solubility: 0.25 g/100 ml at 68°F
Coefficient of water/oil distribution: ND
pH: NA
Volatile Organic Compounds: wt %: 49.9 g/L: 633.7 lbs./gal: 5.28

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

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 Toxicity:

Component	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 (rat)
1-Bromopropane (nPB)	4260 mg/kg	No data	253 g/m^3/0.5Hr
t-Butanol	3500 mg/kg	> 2 mg/kg	> 10,000 ppm/4H
1,2-Butylene oxide	500 mg/kg	2100 µL/kg	6300 mg/m^3/4H
COzol® 202 (Ingredient #1)	5000 mg/kg	12,800 mg/kg	16,000 ppm/8H
COzol® 202 (Ingredient #2)	6653 mg/kg	No data	15,000 ppm
1,1,1,2-Tetrafluoroethane	No data	No data	1500 g/m^3/4H
Carbon dioxide	No data	No data	470,000 ppm/30M

Chronic Toxicity:

Component	OSHA Carcinogen	IARC Carcinogen	NTP Carcinogen	Irritant	Sensitizer
1-Bromopropane (nPB)	No	No	No	E (mild) / S (mild) / R (mild)	Unknown
t-Butanol	No	No	No	No data	Unknown
1,2-Butylene oxide	No	Group 2B	No	E (mild) / S (mild) / R (mild)	Unknown
COzol® 202 (Ingredient #1)	No	No	No	E (moderate) / S (mild)	No
COzol® 202 (Ingredient #2)	No	No	No	E (moderate) / S (moderate) / R (moderate)	Unknown
1,1,1,2-Tetrafluoroethane	No	No	No	No	Unknown
Carbon dioxide	No	No	No	No	No

E – Eye S – Skin R - Respiratory

Reproductive Toxicity: No information available
Teratogenicity: No information available
Mutagenicity: Ames test negative
Synergistic Effects: No information available

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

Section 13: Disposal Considerations

Waste Classification: The dispensed liquid product is not a RCRA hazardous waste. Pressurized containers are a D003 reactive waste. (See 40 CFR Part 261.20 – 261.33)
Empty aerosol containers may be recycled.

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

Section 14: Transport Information

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

ICAO/IATA (air): Consumer Commodity, ID8000, 9

IMO/IMDG (water): Aerosols, UN1950, 2.2, Limited Quantity

Special Provisions: None

Section 15: Regulatory Information

U.S. Federal Regulations:

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

U.S. State Regulations:

Consumer Products VOC Regulations: This product is not labeled for use in California. In other states with Consumer Products VOC regulations, this product is compliant as a General Purpose Degreaser.

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

Canadian Regulations:

Canadian DSL Inventory: All ingredients are either listed on the DSL Inventory or are exempt.

WHMIS Hazard Class: A, D2A, D2B

European Union Regulations:

RoHS Compliance: This product is compliant with Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003. This product does not contain any of the restricted substances as listed in Article 4(1) of the RoHS Directive.

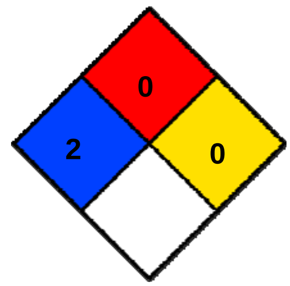
Additional Regulatory Information: This product contains less than 0.05% isopropyl bromide.

Section 16: Other Information

HMIS® (II)	
Health:	**2**
Flammability:	**0**
Reactivity:	**0**
PPE:	**B**

Ratings range from 0 (no hazard) to 4 (severe hazard)

NFPA



Prepared By: Michelle Rudnick
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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. For further clarification of any information contained on this MSDS consult your supervisor, a health & safety professional, or CRC Industries.

ACGIH:	American Conference of Governmental Industrial Hygienists
CAS:	Chemical Abstract Service
CFR:	Code of Federal Regulations
DOT:	Department of Transportation
DSL:	Domestic Substance List
g/L:	grams per Liter
HMIS:	Hazardous Materials Identification System
IARC:	International Agency for Research on Cancer
IATA:	International Air Transport Association
ICAO:	International Civil Aviation Organization
IMDG:	International Maritime Dangerous Goods
IMO:	International Maritime Organization
lbs./gal:	pounds per gallon
LC:	Lethal Concentration
LD:	Lethal Dose
NA:	Not Applicable
ND:	Not Determined
NIOSH:	National Institute of Occupational Safety & Health
NFPA:	National Fire Protection Association
NTP:	National Toxicology Program
OSHA:	Occupational Safety and Health Administration
PMCC:	Pensky-Martens Closed Cup
PPE:	Personal Protection Equipment
ppm:	Parts per Million
RoHS:	Restriction of Hazardous Substances
STEL:	Short Term Exposure Limit
TCC:	Tag Closed Cup
TWA:	Time Weighted Average
WHMIS:	Workplace Hazardous Materials Information System