



MATERIAL SAFETY DATA SHEET

Section 1: Product & Company Identification

Product Name: Electronic Degreaser (Bulk)

Product Number (s): 03217

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

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	80 - 90
t-Butanol	75-65-0	< 3
1,2-Butylene oxide	106-88-7	< 1
COzol® 202	proprietary	3 - 5

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 not a flammable liquid. However, it can be made to burn under certain conditions.

Flash Point:	None (TCC)	Upper Explosive Limit:	8.0
Autoignition Temperature:	914°F / 490°C	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: 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.

Storage Procedures: Store in a cool dry area out of direct sunlight. Containers should be tightly closed while in storage. Make sure storage area is properly ventilated. Keep away from incompatible materials.

Aerosol Storage Level: NA

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
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 / 71°C

Freezing Point: NE
 Vapor Pressure: 139 mmHg @ 68°F / 20°C
 Vapor Density: ~ 4.3 (air = 1)
 Evaporation Rate: fast
 Solubility: 0.25 g/100 ml at 68°F / 20°C
 Coefficient of water/oil distribution: ND
 pH: NA
 Volatile Organic Compounds: wt %: 100 g/L: 1270 lbs./gal: 10.61

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	> 2000 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

Chronic Toxicity:

Component	OSHA Carcinogen	IARC Carcinogen	NTP Carcinogen	Irritant	Sensitizer
1-Bromopropane (nPB)	No	No	No	eye, skin	Unknown
t-Butanol	No	No	No	eye	Unknown
1,2-Butylene oxide	No	Group 2B	No	eye, skin	Unknown
COzol® 202 (Ingredient #1)	No	No	No	eye	No
COzol® 202 (Ingredient #2)	No	No	No	eye, skin, respiratory	Unknown

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: This product is not a RCRA hazardous waste. (See 40 CFR Part 261.20 – 261.33)
Empty 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): Not Regulated
 ICAO/IATA (air): Not Regulated
 IMO/IMDG (water): Not Regulated
 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	No
	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

Occupational Safety and Health Administration (OSHA):

This product is regulated under the Hazard Communication Standard.

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 Not for Retail Sale. This product is for use in the manufacturing process only.

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

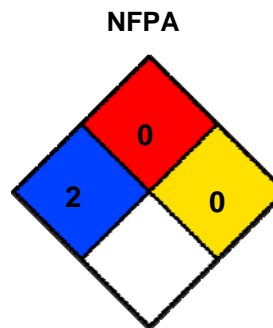
European Union Regulations:

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)

Prepared By: Michelle Rudnick
CRC #: 658
Revision Date: 09/07/2012

Changes since last revision: MSDS reformatted to meet the requirements of the Canadian Controlled Products Regulations.

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