



Material Safety Data Sheet

Section 1: Product & Company Identification

Product Name: Heavy Duty Degreaser (Bulk)

Product Number (s): 03096, 03097, 03098

Manufactured By:

CRC Industries, Inc.
885 Louis Drive
Warminster, PA 18974
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: Colorless liquid; irritating odor at high concentrations

WARNING
Vapor Harmful.

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

Potential Health Effects:

EYE: May cause pain and slight eye irritation. Corneal injury is unlikely. Vapors may irritate eyes.

SKIN: Prolonged or repeated exposure may cause skin irritation. May cause drying or flaking of skin. A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts.

INHALATION: Low level exposure may cause anesthetic or irritant effects. Higher exposure levels may lead to dizziness and drunkenness. Progressively higher levels or longer exposure may cause unconsciousness and death.

INGESTION: Single dose oral toxicity is considered to be low. Swallowing large amounts may cause serious injury, even death. If aspirated into lungs, during swallowing or vomiting, liquid may be rapidly absorbed through the lungs and result in injury to other body systems.

CHRONIC EFFECTS: Chronic immersion of skin in this liquid may lead to absorption through skin. This may cause numbness in the immersed area. Excessive inhalation of vapors may increase sensitivity to epinephrine and increase myocardial irritability.

TARGET ORGANS: Central nervous system. Possibly peripheral nervous system, liver or kidney.

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

Section 3: Composition/Information on Ingredients

COMPONENT	CAS NUMBER	% by Wt.
Trichloroethylene (TCE)	79-01-6	> 99
1,2-Butylene Oxide	106-88-7	0.5

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:	Do not induce vomiting. Call a physician immediately.
<i>Note to Physicians:</i>	Because rapid absorption may occur through lungs if aspirated and cause systemic effects, the decision of whether to induce vomiting or not should be made by a physician. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. Exposure may increase myocardial irritability. Do not administer sympathomimetic drugs unless absolutely necessary. No specific antidote. Supportive care.

Section 5: Fire-Fighting Measures

Flammable Properties: This material is nonflammable according to OSHA definitions, however, it can be made to burn under certain conditions.

Flash Point:	None (TCC)	Upper Explosive Limit:	44.8%
Autoignition Temperature:	788 F	Lower Explosive Limit:	8.0%

Suitable Extinguishing Media: Water fog or fine spray. Carbon dioxide, dry chemical, foam. Class B fire extinguisher.

Products of Combustion: Hydrogen chloride, trace amounts of phosgene, chlorine, and carbon monoxide.

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. Gases may accumulate in low areas.

Section 6: Accidental Release Measures

Personal Precautions: Use personal protection recommended in Section 8. Do not breathe vapors

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: Vapors of this product are heavier than air and will collect in low areas. Make sure ventilation removes vapors from low areas. Keep containers closed when not in use. Do not eat, drink or smoke while using this product. Do not cut, drill or weld on or near empty containers.

Storage Procedures: Store in a cool dry area out of direct sunlight.

Aerosol Storage Level: NA

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines:

COMPONENT	OSHA		ACGIH		OTHER		UNIT
	TWA	STEL	TWA	STEL	TWA	SOURCE	
Trichloroethylene (TCE)	100	200 (v)	10	25	5	mfg*	ppm
1,2-Butylene oxide	N.E.	N.E.	N.E.	N.E.	2	AIHA	ppm
N.E. – Not Established (c) – ceiling (s) – skin (v) – vacated							

* TCE manufacturer's internal PEL

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 NIOSH-approved cartridge respirator with organic vapor cartridges. 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 PVA and Viton. 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: Colorless

Odor: Irritating odor at high concentrations

Specific Gravity: 1.46 @ 70 F

Initial Boiling Point: 189 F

Freezing Point: ND

Vapor Pressure: 60 mmHg @ 68 F (20 C)

Vapor Density: 4.53 (air = 1)

Evaporation Rate: > 1 (ether = 1)

Solubility: 0.1 g / 100 g @ 25 C (in water)

pH: NA

Volatile Organic Compounds: wt %: 100 g/L: 1460 lbs./gal: 12.16

Section 10: Stability and Reactivity

Stability: Stable

Conditions to Avoid: Avoid direct sunlight or ultraviolet sources. Avoid open flames, welding arcs, or other high temperature sources which induce thermal decomposition.

Incompatible Materials: Avoid contact with metals such as: aluminum powders, magnesium powders, potassium, sodium, and zinc powder. Avoid unintended contact with amines. Avoid contact with strong bases and strong oxidizers.

Hazardous Decomposition Products: Hydrogen chloride, trace amounts of chlorine and phosgene

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 EFFECTS

<u>Component</u>	<u>Test</u>	<u>Result</u>	<u>Route</u>	<u>Species</u>
trichloroethylene	LD50	10,000 mg/kg	dermal	rabbit
trichloroethylene	LD50	4920 mg/kg	oral	rat
trichloroethylene	LC50	12,500 ppm (4H)	inhalation	rat
1,2-butylene oxide	LD50	500 mg/kg	oral	rat

CHRONIC EFFECTS

Carcinogenicity:

	<u>Component</u>	<u>Result</u>
OSHA:	trichloroethylene	hazard communication carcinogen
	1,2-butylene oxide	hazard communication carcinogen
IARC:	trichloroethylene	2A (probably carcinogenic)
	1,2-butylene oxide	2B (possibly carcinogenic)
NTP:	trichloroethylene	Reasonably anticipated to be a carcinogen

Mutagenicity:	trichloroethylene	in vitro mutagenicity studies were negative
	1,2-butylene oxide	animal mutagenicity studies were predominantly negative
		in vitro mutagenicity studies were positive
		animal mutagenicity studies were negative
Other:	None	

Section 12: Ecological Information

Ecotoxicity:	Material is moderately toxic to aquatic organisms on an acute basis.
Persistence / Degradability:	Biodegradation may occur under both aerobic and anaerobic conditions.
Bioaccumulation / Accumulation:	Bioconcentration potential is low (BCF less than 100).
Mobility in Environment:	Potential for mobility in soil is high.

Section 13: Disposal Considerations

Disposal: This product is a RCRA hazardous waste for toxicity with the following potential waste codes: U228, F001, F002, D040. (See 40 CFR Part 261.20 – 261.33)
If this waste is mixed with other wastes, the mixture will be a hazardous waste.

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

Section 14: Transport Information

Proper shipping description:

US DOT (ground):	03096	Consumer Commodity, ORM-D
	03097	Trichloroethylene Solution, 6.1, UN1710, PG III
	03098	Trichloroethylene Solution, 6.1, UN1710, PG III, RQ

Special Provisions: None

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: trichloroethylene (100 lbs)
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:
trichloroethylene (99.5%), 1,2-butylene oxide (0.5%)

Clean Air Act:

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

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

This product may contain the following chemicals known to the state of California to cause cancer, birth defects or other reproductive harm: trichloroethylene

State Right to Know:

New Jersey: 79-01-6, 106-88-7, 124-38-9
Pennsylvania: 79-01-6, 106-88-7, 124-38-9
Massachusetts: 79-01-6, 106-88-7, 124-38-9
Rhode Island : 79-01-6, 106-88-7, 124-38-9

Additional Regulatory Information: None

Section 16: Other Information

NFPA:	Health: 2	Flammability: 1	Reactivity: 0	
HMIS:	Health: 2	Flammability: 1	Reactivity: 0	PPE: B

Prepared By: Michelle Rudnick
CRC #: 458
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Changes since last revision: Section 8 – exposure guidelines

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:	Pensky-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		