



SAFETY DATA SHEET

1. Identification

Product identifier Contact Cleaner 2000® VC Precision Cleaner

Other means of identification

Product code 02240

Recommended use Precision electronics cleaner

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufactured or sold by:

Company name CRC Industries, Inc.
Address 885 Louis Dr.
Warminster, PA 18974 US

Telephone

General Information 215-674-4300

Technical Assistance 800-521-3168

Customer Service

24-Hour Emergency (CHEMTREC) 800-272-4620

800-424-9300 (US)

703-527-3887 (International)

Website www.crcindustries.com

2. Hazard(s) identification

Physical hazards	Gases under pressure	Liquefied gas
Health hazards	Serious eye damage/eye irritation	Category 2A
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Aspiration hazard	Category 1
Environmental hazards	Hazardous to the aquatic environment, long-term hazard	Category 3
OSHA defined hazards	Not classified.	

Label elements



Signal word Danger

Hazard statement Contains gas under pressure; may explode if heated. May be fatal if swallowed and enters airways. Causes serious eye irritation. May cause drowsiness or dizziness. Harmful to aquatic life with long lasting effects.

Precautionary statement

Prevention Do not puncture or incinerate container. Do not expose to heat or store at temperatures above 49°C/120°F. Avoid breathing mist or vapor. Avoid breathing gas. Use with adequate ventilation. Open doors and windows or use other means to ensure a fresh air supply during use and while product is drying. If you experience any symptoms listed on this label, increase ventilation or leave the area. Wash thoroughly after handling. Wear eye/face protection. Avoid release to the environment.

Response If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Storage Store locked up. Protect from sunlight. Store in a well-ventilated place. Exposure to high temperature may cause can to burst.

Disposal Dispose of contents/container in accordance with local/regional/national regulations.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information

65.75% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.
When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as hydrogen fluoride, hydrogen chloride and possibly phosgene.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
1,1,1,2-Tetrafluoroethane	HFC-134a	811-97-2	40 - 50
COzol® 401		Proprietary	40 - 50
Decafluoropentane	HFC 43-10mee	138495-42-8	5 - 10

Specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Do NOT give epinephrine (adrenaline). Call a POISON CENTER or doctor/physician.
Skin contact	Rinse skin with water/shower. Get medical attention if irritation develops and persists. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Call a physician or poison control center immediately. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Aspiration may cause pulmonary edema and pneumonitis. Immediately give 2 glasses of water. Do NOT give stimulants. Never give anything by mouth to a victim who is unconscious or is having convulsions.
Most important symptoms/effects, acute and delayed	Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. May cause drowsiness or dizziness.
Indication of immediate medical attention and special treatment needed	Because of possible disturbances of cardiac rhythm, catecholamine drugs such as adrenaline should be used with special caution and only in situations of emergency life support. Provide general supportive measures and treat symptomatically. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Powder. Foam. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Contents under pressure. When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as hydrogen fluoride, hydrogen chloride and possibly phosgene.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
Fire-fighting equipment/instructions	In case of fire: Stop leak if safe to do so. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Avoid breathing gas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
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Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water. Stop the flow of material, if this is without risk. Collect spillage. Prevent entry into waterways, sewer, basements or confined areas. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage**Precautions for safe handling**

Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. 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. Avoid breathing mist or vapor. Avoid breathing gas. Avoid contact with eyes. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices. Avoid release to the environment. Do not empty into drains. For product usage instructions, please see the product label.

Conditions for safe storage, including any incompatibilities

Level 1 Aerosol.

Contents under pressure. Do not expose to heat or store at temperatures above 120°F/49°C as can may burst. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection**Occupational exposure limits****US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Components	Type	Value
Trans-1,2-dichloroethylene (CAS 156-60-5)	PEL	790 mg/m3
		200 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Trans-1,2-dichloroethylene (CAS 156-60-5)	TWA	200 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Trans-1,2-dichloroethylene (CAS 156-60-5)	TWA	790 mg/m3
		200 ppm

US. AIHA Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
1,1,1,2-Tetrafluoroethane (CAS 811-97-2)	TWA	4240 mg/m3
		1000 ppm

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear protective gloves such as: Nitrile. Neoprene. Polyvinyl alcohol (PVA). Viton®.

Other Wear appropriate chemical resistant clothing.

Respiratory protection	If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with an organic vapor cartridge. Use a self-contained breathing apparatus in confined spaces and for emergencies. Air monitoring is needed to determine actual employee exposure levels.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state	Liquid.
Form	Aerosol.
Color	Clear. Colorless.
Odor	Slight ethereal.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	-112 °F (-80 °C) estimated
Initial boiling point and boiling range	104.2 °F (40.1 °C) estimated
Flash point	None (Tag Closed Cup)
Evaporation rate	Fast.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	2 % estimated
Flammability limit - upper (%)	19.9 % estimated
Vapor pressure	3507.8 hPa estimated
Vapor density	> 1 (air = 1)
Relative density	1.25 estimated
Solubility (water)	Slight.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	860 °F (460 °C) estimated
Decomposition temperature	Not available.
Viscosity (kinematic)	Not available.
Percent volatile	100 % estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Heat, flames and sparks. Contact with incompatible materials. When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as hydrogen fluoride, hydrogen chloride and possibly phosgene.
Incompatible materials	Strong oxidizing agents. Strong bases. Strong acids. Caustics. Alkali metals. Alkaline earth metals. Powdered metal.
Hazardous decomposition products	Carbonyl halides. Hydrogen fluoride. Hydrogen chloride. Phosgene. Formaldehyde. Carbon oxides.

11. Toxicological information

Information on likely routes of exposure

Ingestion	May be fatal if swallowed and enters airways.
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Inhalation Prolonged inhalation may be harmful. May cause drowsiness and dizziness. Headache. Nausea, vomiting.

Skin contact Prolonged skin contact may cause temporary irritation.

Eye contact Causes serious eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Information on toxicological effects

Acute toxicity May be fatal if swallowed and enters airways. Narcotic effects.

Product	Species	Test Results
Contact Cleaner 2000® VC Precision Cleaner		
Acute		
<i>Dermal</i>		
LD50	Rabbit	14239.6709 mg/kg estimated
<i>Inhalation</i>		
LC50	Rat	80292.2188 ppm, 4 hours estimated 1248.8724 mg/l, 4 hours estimated
<i>Oral</i>		
LD50	Rat	3094.1089 mg/kg estimated
Chronic		
<i>Inhalation</i>		
NOEL	Rat	20408.1641 ppm estimated
Subchronic		
<i>Inhalation</i>		
LC50	Rat	13675.2139 ppm, 90 days estimated

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation Causes serious eye irritation.

Respiratory sensitization Not available.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure May cause drowsiness and dizziness.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard May be fatal if swallowed and enters airways.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity Harmful to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected.

Product	Species	Test Results
Contact Cleaner 2000® VC Precision Cleaner		
Aquatic		
<i>Acute</i>		
Crustacea	EC50	Daphnia 157.5973 mg/l, 48 hours estimated
Fish	LC50	Fish 175.9796 mg/l, 96 hours estimated

Components	Species	Test Results
Decafluoropentane (CAS 138495-42-8)		
<i>Acute</i>		
Other	EC50	Pseudokirchnerella subcapitata > 120 mg/l, 72 hours
Aquatic		
<i>Acute</i>		
Crustacea	EC50	Water flea (Daphnia magna) 11.7 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas) 27.2 mg/l, 96 hours
		Rainbow trout,donaldson trout (Oncorhynchus mykiss) 13.9 mg/l, 96 hours
		Zebra danio (Danio rerio) 13 mg/l, 96 hours
<i>Chronic</i>		
Crustacea	NOEC	Water flea (Daphnia magna) 1.72 mg/l, 21 days

* Estimates for product may be based on additional component data not shown.

Persistence and degradability Not available.

Bioaccumulative potential Not available.

Partition coefficient n-octanol / water (log Kow)

1,1,1,2-Tetrafluoroethane 1.274
Decafluoropentane 2.7, Pow at 20 °C

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal of waste from residues / unused products This product is not a RCRA hazardous waste (See 40 CFR Part 261.20 – 261.33). Empty containers may be recycled. Consult authorities before disposal. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose in accordance with all applicable regulations.

Hazardous waste code Not regulated.

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN number UN1950
UN proper shipping name Aerosols, non-flammable, Limited Quantity
Transport hazard class(es)
Class 2.2
Subsidiary risk -
Label(s) 2.2
Packing group Not applicable.
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.
Special provisions Not available.
Packaging exceptions 306
Packaging non bulk None
Packaging bulk None

IATA

UN number UN1950
UN proper shipping name Aerosols, non-flammable, Limited Quantity
Transport hazard class(es)
Class 2.2
Subsidiary risk -
Packing group Not applicable.
Environmental hazards No.
ERG Code 2L

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Other information

Passenger and cargo aircraft Allowed.
Cargo aircraft only Allowed.

IMDG

UN number UN1950
UN proper shipping name AEROSOLS, LIMITED QUANTITY
Transport hazard class(es)
Class 2
Subsidiary risk -
Packing group Not applicable.
Environmental hazards
Marine pollutant No.
EmS Not available.
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Decafluoropentane (CAS 138495-42-8) 1.0 % One-Time Export Notification only.

SARA 304 Emergency release notification

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Trans-1,2-dichloroethylene (CAS 156-60-5)

CERCLA Hazardous Substances: Reportable quantity

Trans-1,2-dichloroethylene (CAS 156-60-5) 1000 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.

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Food and Drug Administration (FDA) Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Section 311/312 Immediate Hazard - Yes

Hazard categories Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - Yes
Reactivity Hazard - No

SARA 302 Extremely hazardous substance No

US state regulations

US. New Jersey Worker and Community Right-to-Know Act

Trans-1,2-dichloroethylene (CAS 156-60-5)

US. Massachusetts RTK - Substance List

Trans-1,2-dichloroethylene (CAS 156-60-5)

US. Pennsylvania Worker and Community Right-to-Know Law

Trans-1,2-dichloroethylene (CAS 156-60-5)

US. Rhode Island RTK

Trans-1,2-dichloroethylene (CAS 156-60-5)

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

US - California Proposition 65 - CRT: Listed date/Developmental toxin

Methanol (CAS 67-56-1)

Listed: March 16, 2012

Volatile organic compounds (VOC) regulations**EPA****VOC content (40 CFR 51.100(s))** 30.9 %**Consumer products (40 CFR 59, Subpt. C)** Not regulated**State****Consumer products** This product is regulated as an Electronic Cleaner. This product is compliant for use in all 50 states.**VOC content (CA)** 51 %**VOC content (OTC)** 30.9 %**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	06-17-2014
Prepared by	Allison Cho
Version #	01
Further information	CRC # 657B
HMIS® ratings	Health: 2 Flammability: 1 Physical hazard: 0 Personal protection: B
NFPA ratings	Health: 2 Flammability: 1 Instability: 0

NFPA ratings

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