# CRC

# SAFETY DATA SHEET

# 1. Identification

Product identifier Contact Cleaner 2000® VC Precision Cleaner

Other means of identification

Product Code No. 02240 (Item# 1003249)

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
 800-272-4620

 24-Hour Emergency
 800-424-9300 (US)

(CHEMTREC) 703-527-3887 (International)
Website www.crcindustries.com

# 2. Hazard(s) identification

Physical hazardsGases under pressureLiquefied gasHealth hazardsAcute toxicity, oralCategory 4Skin corrosion/irritationCategory 2

Serious eye damage/eye irritation Category 2

Specific target organ toxicity, single exposure Category 3 narcotic effects

Aspiration hazard Category 1

Environmental hazards Not classified.

OSHA defined hazards Simple asphyxiant

Label elements



Signal word Danger

**Hazard statement**Contains gas under pressure; may explode if heated. May displace oxygen and cause rapid suffocation. Harmful if swallowed. May be fatal if swallowed and enters airways. Causes skin

irritation. Causes serious eye irritation. May cause drowsiness or dizziness.

Precautionary statement Prevention

Do not puncture or incinerate container. Do not expose to heat or store at temperatures above 49°C/120°F. Keep container tightly closed. 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. Avoid breathing mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear eye protection/face protection. Wear protective gloves. Wear respiratory protection.

Material name: Contact Cleaner 2000® VC Precision Cleaner

**Response** If swallowed: Immediately call a poison center/doctor. Rinse mouth. Do NOT induce vomiting. If

on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. 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 advice/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

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 phospene.

# 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
trans-1,2-dichloroethylene		156-60-5	20 - 30
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 from further exposure. For those providing assistance, avoid exposure to yourself or

others. Use adequate respiratory protection. If respiratory tract irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation. 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. Get medical attention immediately. Do NOT give

epinephrine (adrenaline).

**Skin contact** Remove contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical

advice/attention. 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. Rinse mouth. Do not induce vomiting. If

vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Most important

symptoms/effects, acute and

delayed

Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Fatigue. Nausea, vomiting. Very high exposure can cause suffocation from lack of oxygen. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. Asphyxiation may bring about unconsciousness without warning and so rapidly that victim may be unable to protect themself. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. Vapors have a narcotic effect and may

cause headache, fatigue, dizziness and nausea. May cause redness and pain.

Indication of immediate medical attention and special treatment needed

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.

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.

General information In the case of accident or if you feel unwell, seek medical advice immediately (show the label

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. Show this safety data sheet to the doctor in attendance.

## 5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2). Use fire-extinguishing media

appropriate for surrounding materials.

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

Material name: Contact Cleaner 2000® VC Precision Cleaner

Specific hazards arising from the chemical

Pressurized container may rupture when exposed to heat or flame. During fire, gases hazardous to health may be formed. 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 Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire-fighting equipment/instructions General fire hazards

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.

Contents under pressure. Pressurized container may rupture when exposed to heat or flame.

## 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

In the event of a leak evacuate all personnel until ventilation can restore oxygen concentrations to safe levels. Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

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. 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 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. Do not taste or swallow. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Do not enter storage areas or confined spaces unless adequately ventilated. Use only outdoors or in a well-ventilated area. Oxygen concentration should not fall below 19.5 % at sea level (pO2 = 135 mmHg). Mechanical ventilation or local exhaust ventilation may be required. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices. For product usage instructions, 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

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

# US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Туре	Value	
trans-1,2-dichloroethylene (CAS 156-60-5)	PEL	790 mg/m3	
		200 ppm	
US. ACGIH Threshold Limit Value	s		
Components	Type	Value	
trans-1,2-dichloroethylene (CAS 156-60-5)	TWA	200 ppm	

Material name: Contact Cleaner 2000® VC Precision Cleaner

**US. NIOSH: Pocket Guide to Chemical Hazards** 

trans-1,2-dichloroethylene TWA 790 mg/m3

Type

(CAS 156-60-5)

Components

200 ppm

Value

US. Workplace Environmental Exposure Level (WEEL) Guides

Components Type Value

1,1,1,2-tetrafluoroethane TWA 4240 mg/m3

(CAS 811-97-2)

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

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. Eye wash fountain and emergency showers are recommended.

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/butyl.

Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

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 smoke. Keep away from food and drink. 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 Colorless.
Odor Slight ethereal.
Odor threshold Not available.

Melting point/freezing point -119.2 °F (-84 °C) estimated Initial boiling point and boiling 104.2 °F (40.1 °C) estimated

range

Flash point None.

Evaporation rate Fast.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower

2 % estimated

Not available.

(%)

Flammability limit - upper

19.9 % estimated

(%)

Vapor pressure 3470.7 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 temperatureNot available.Viscosity (kinematic)Not available.Percent volatile100 % 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 acids. Strong bases. Alkaline metals. Alkaline earth metals. Powdered metal. Strong

oxidizing agents.

Hazardous decomposition

products

Hydrogen chloride. Hydrogen fluoride. Carbonyl fluoride. Carbon oxides. Phosgene.

# 11. Toxicological information

## Information on likely routes of exposure

Inhalation Suffocation (asphyxiant) hazard - if allowed to accumulate to concentrations that reduce oxygen

below safe breathing levels. May cause drowsiness and dizziness. Headache. Nausea, vomiting.

Prolonged inhalation may be harmful.

**Skin contact**Causes skin irritation. Prolonged skin contact may cause temporary irritation.

**Eye contact** Causes serious eye irritation.

**Ingestion** Harmful if swallowed. Droplets of the product aspirated into the lungs through ingestion or

vomiting may cause a serious chemical pneumonia.

Symptoms related to the physical, chemical and toxicological characteristics

Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Fatigue. Nausea, vomiting. Very high exposure can cause suffocation from lack of oxygen. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. Asphyxiation may bring about unconsciousness without warning and so rapidly that victim may be unable to protect themself. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

> 5000 mg/kg

### Information on toxicological effects

Acute toxicity In high concentrations, vapors are anesthetic and may cause headache, fatigue, dizziness and

central nervous system effects. May be fatal if swallowed and enters airways.

Components Species Test Results

decafluoropentane (CAS 138495-42-8)

Acute Dermal

LD50 Rabbit

Inhalation

LC50 Rat 11058 mg/kg, 4 hours calculated

Oral

LD50 Rat > 5000 mg/kg

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

<u>Acute</u>

Oral

LD50 Rat 1235 mg/kg

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

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye

irritation

Causes serious eye irritation.

Material name: Contact Cleaner 2000® VC Precision Cleaner

**Respiratory sensitization** Not a respiratory sensitizer.

**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** Not classifiable as to carcinogenicity to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

**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. If aspirated into lungs during swallowing or vomiting,

may cause chemical pneumonia, pulmonary injury or death.

Chronic effects Prolonged inhalation may be harmful.

# 12. Ecological information

Ecotoxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

	Species	Test Results
3495-42-8)		
EC50	Water flea (Daphnia magna)	11.7 mg/l, 48 hours
LC50	Zebra danio (Danio rerio)	13 mg/l, 96 hours
CAS 156-60-5)		
LC50	Bluegill (Lepomis macrochirus)	120 - 160 mg/l, 96 hours
EC50	Water flea (Daphnia magna)	220 mg/l, 48 hours
	EC50 LC50 :AS 156-60-5) LC50	EC50 Water flea (Daphnia magna) LC50 Zebra danio (Danio rerio) EAS 156-60-5)  LC50 Bluegill (Lepomis macrochirus)

<sup>\*</sup> Estimates for product may be based on additional component data not shown.

## Persistence and degradability

# Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

1,1,1,2-tetrafluoroethane 1.274

decafluoropentane 2.7, Pow at 20 °C

trans-1,2-dichloroethylene 2.06

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. Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Dispose in

accordance with all applicable regulations.

Hazardous waste code Not regulated.

Contaminated packaging

Since emptied containers may retain product residue, follow label warnings even after container is

emptied. Empty containers should be taken to an approved waste handling site for recycling or

disposal.

# 14. Transport information

DOT

UN1950 **UN** number

**UN** proper shipping name Aerosols, non-flammable, Limited Quantity

Transport hazard class(es)

2.2 Subsidiary risk 2.2 Label(s)

**Packing group** Not applicable.

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

Packaging exceptions Packaging non bulk None None Packaging bulk

IATA

UN1950 **UN** number

**UN** proper shipping name Aerosols, non-flammable, Limited Quantity

Transport hazard class(es)

Class 2.2 Subsidiary risk

Packing group Not applicable.

**ERG Code** 

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

Other information

Passenger and cargo

aircraft

Allowed with restrictions.

Cargo aircraft only

Allowed with restrictions.

**IMDG** 

UN1950 **UN** number

**UN proper shipping name** AEROSOLS, Limited Quantity

Transport hazard class(es)

2 Class Subsidiary risk

Packing group Not applicable.

**Environmental hazards** 

Marine pollutant Nο

Not available.

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

# 15. Regulatory information

**US** federal regulations All components are on the U.S. EPA TSCA Inventory List.

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication

Standard, 29 CFR 1910.1200.

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.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

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) Listed.

**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

Not regulated.

(SDWA)

Food and Drug
Administration (FDA)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

No

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

## **US** state regulations

# US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd.

(a))

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

## 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** 30.9 %

51.100(s))

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)	No
Canada	Non-Domestic Substances List (NDSL)	Yes
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

Country(s) or region Inventory name On inventory (yes/no)\*

United States & Puerto Rico Toxic Substances Control Act (TSCA) Inventory

\*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 date06-17-2014Revision date09-25-2017Prepared byAllison Yoon

Version # 02

Further information CRC # 657B/1002685

HMIS® ratings Health: 2

Flammability: 1 Physical hazard: 0 Personal protection: B

NFPA ratings Health: 2

Flammability: 1 Instability: 0

Special hazards: SA

NFPA ratings



**Disclaimer**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's 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 (M)SDS consult your supervisor, a health & safety

professional, or CRC Industries, Inc..

**Revision Information** This document has undergone significant changes and should be reviewed in its entirety.