

Material Safety Data Sheet

According to 91/155 EEC(2001/58 EC)

Printing date: 20.05.2005

Reviewed on: 20.05.2005

* 1 Identification of substance:

· **Product details:**

· **Trade name:** **Contact Cleaner C**

Aerosol: MCC-DCCC

Bulk: MCC-CCCG, MCC-CCCP, MCC-CCCD

MCC-DCCCG, MCC-DCCCP, MCC-DCCCD

MCC-NCCCG, MCC-NCCCP, MCC-NCCCD

· **Application of the substance / the preparation**

Nonflammable, nonconductive, plastic-safe contact cleaner is used to dissolve and rinse contamination from hard-to-reach locations

· **Supplier/Manufacturer:**

Micro Care Corporation
595 John Downey Drive
New Britain, CT 06051
United States of America
Tel.: +1-860-827-0626
Fax: +1-860-827-8105

· **Information department:**

Tech support (Micro Care): Tel.: +1-860-827-0626
Email: techsupport@microcare.com

· **Emergency information:** National Poisons Information Centre Tel.: +44 (0)870 6006266

* 2 Composition/Data on components:

· **Chemical characterization**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 138495-42-8 1,1,1,2,3,4,4,5,5,5-decafluoropentane	25-50%
ELINCS: 420-640-8 Xn; R 52/53-65	

CAS: 811-97-2 1,1,1,2-tetrafluoroethane	10-25%
EINECS: 212-377-0	

CAS: 67-64-1 acetone	2.5-10%
EINECS: 200-662-2 Xi, F; R 11-36-66-67	

· **Additional information**

Contains: 1,1,1,3,3-Pentafluorobutane (CAS: 406-58-6)
Only the aerosol contains tetrafluoroethane (CAS: 811-79-2).
For the wording of the listed risk phrases refer to section 16.

3 Hazards identification

· **Hazard description:**



Xn Harmful

· **Information pertaining to particular dangers for man and environment:**

R 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R 65 Harmful: may cause lung damage if swallowed.

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.

Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition - No smoking.

Keep out of the reach of children

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· **Classification system:**

The classification was made according to the latest editions of the EU-lists, and expanded using company data and specialized literature.

· **Additional information:**

1,1,1,2-Tetrafluoroethane belongs to the group of fluorinated/Partly fluorinated hydrocarbons, which have no ozone-depleting properties.

See also item 15: Special label requirements for special mixtures.

* 4 First aid measures

· **General information:**

Take affected persons out of danger area and lay them down.

Immediately remove any clothing soiled by the product.

· **After inhalation:**

Remove victim from contaminated area. If breathing is difficult, give oxygen. If breathing stops, provide artificial respiration. Call a doctor.

In case of unconsciousness, place patients on their side in a stable position for transportation.

· **After skin contact:**

Wash with water and soap.

If skin irritation continues, consult a doctor.

· **After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:**

Do not induce vomiting.

If vomiting occurs spontaneously:

Hold the head of the casualty low with the body in a prone position in order to avoid penetration of vomit into the air tube.

Drink 3-4 glasses of milk or water.

Never give anything by mouth to a unconscious person.

Call a doctor immediately.

· **Information for doctor:**

· **The following symptoms may occur:**

Irritation of eyes and mucous membrane.

Redness of the skin

After inhalation vapour at high concentration levels:

Unconsciousness

Cardiac arrhythmia

5 Fire fighting measures

· **Suitable extinguishing agents:**

Carbon dioxide (CO₂)

Water jet spray

Water haze

Fire-extinguishing powder

Use fire fighting measures that suit the environment.

· **Special hazards caused by the material, its products of combustion or resulting gases:**

Dangerous decomposition product see chapter 10: stability and reactivity

· **Protective equipment:**

Wear fully protective suit.

Do not inhale explosion gases or combustion gases.

Wear self-contained respiratory protective device.

· **Additional information:**

Cool endangered receptacles with water spray.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

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Collect contaminated fire fighting water separately. It must not enter the sewage system.

6 Accidental release measures

- **Person-related safety precautions:**

Ensure adequate ventilation
 Use respiratory protective device against the effects of fumes/dust/aerosol.
 Do not smoke - keep ignition sources away



Wear protective equipment. Keep unprotected persons away.

- **Measures for environmental protection:**

Do not allow product to reach sewage system or any water course.
 Do not allow to penetrate the ground/soil.

- **Measures for cleaning/collecting:**

Absorb with non-combustible material like sand, soil or diatomite.
 Send for recovery or disposal in suitable receptacles.
 Dispose contaminated material as waste according to item 13.

* 7 Handling and storage

- **Handling**

- **Information for safe handling:**

Ensure good ventilation/exhaustion at the workplace.
 Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
 Avoid inhalation of vapours.
 Avoid contact with eyes and skin.
 Keep away from heat and direct sunlight.

- **Information about protection against explosions and fires:**



Keep ignition sources away - Do not smoke.

For aerosols you have additionally pay attention to:

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights. Do not pierce or burn, even after use.

Do not spray on a naked flame or any incandescent material.

- **Storage**

- **Requirements to be met by storerooms and receptacles:**

Store container tightly sealed at a cool and dry place with sufficient ventilation.

- **Information about storage in one common storage facility:**

Store away from foodstuffs.

Store away from feed.

- **Further information about storage conditions:** Keep receptacle tightly sealed.

- **Storage class** 10 Flammable liquids

* 8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

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· Components with limit values that require monitoring at the workplace:

811-97-2 1,1,1,2-tetrafluorethane

OES (Great Britain) Long-term value: 4240 mg/m³, 1000 ppm

67-64-1 acetone

OES (Great Britain) Short-term value: 3620 mg/m³, 1500 ppm
Long-term value: 1210 mg/m³, 500 ppm
New, IOELVTLV (European Union) Long-term value: 1210 mg/m³, 500 ppm

· **Additional information:** The lists that were valid during the creation were used as basis.

· Personal protective equipment

· General protective and hygienic measures:

The usual precautionary measures should be adhered to when handling chemicals.

Do not inhale gases / fumes / aerosols.

Apply solvent resistant skin cream before beginning work.

Avoid close or long term contact with the skin.

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

· Breathing equipment:



In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· Protection of hands:

Impervious gloves

Check the permeability prior to each renewed use of the glove.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

· Material of gloves:

The selection of suitable depends upon the material, and also upon the quality of the gloves. The degree of protection will vary from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material:

The exact break-through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection: Safety glasses

· Body protection: Protective work clothing.

9 Physical and chemical properties:

· General Information

Form: Fluid
Aerosol
Colour: Colourless
Odour: Ether-like

· Change in condition:

Melting point/Melting range: undetermined**Boiling point/Boiling range:** 44°C

· **Flash point:** not applicable

· **Ignition temperature:** 465°C

· **Self igniting:** Product is not self-igniting.

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

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- **Vapour pressure at 20°C:** 5716 hPa
- **Density at 20°C:** 1.41 g/cm³
- **Solubility in / Miscibility with Water:** Not miscible or difficult to mix
- **pH-value at 20°C:** 6.9

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**
To avoid thermal decomposition do not overheat.
No decomposition if used and stored according to specifications.
- **Materials to be avoided:**
Alkali metals
Alcaline-earth metals
Metal powder
Strong bases
- **Dangerous reactions:** Reacts with bases.
- **Dangerous products of decomposition:**
In the case of fire or at high temperatures the formation of the following decomposition products is possible.
Carbonyl fluoride
Hydrofluoric acid

11 Toxicological information

- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**
138495-42-8 1,1,1,2,3,4,4,5,5-decafluoropentane
 Oral LD50 > 5000 mg/kg (rat)
 Dermal LD50 > 5000 mg/kg (rabbit)
 Inhalative LC50/4 h 11100 mg/L (rat)

67-64-1 acetone
 Oral LD50 5800 mg/kg (rat)
 Dermal LD50 20000 mg/kg (rabbit)
- **Primary irritant effect:**
- **on the skin:**
Continuing or repeated contact with the skin may cause skin disease.
Irritation of the mucous membrane
- **on the eye:** Light irritation possible
- **Sensitization:** No sensitizing effects known.
- **Other information (about experimental toxicology):**
No carcinogenic effects known.
No mutagenic effects known.
- **Additional toxicological information:**
Product vapours displace air and can cause asphyxiation especially in confined spaces.
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Harmful

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12 Ecological information

- **Ecotoxicological effects:**
- **Aquatic toxicity:**

138495-42-8 1,1,1,2,3,4,4,5,5,5-decafluoropentane

LC50/48h 11.7 mg/L (daphnia magna)

LC50/96h 27.2 mg/L (fathead minnow)

13.9 mg/L (rainbow trout)

406-58-6 1,1,1,3,3-Pentafluorobutane

LC50/96h >200 mg/L (zb)

- **General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.

According to appendix 4 of VwVwS dated 17.05.1999 (German regulation)

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Danger to drinking water is possible if large quantities leak into the ground or into water course.

13 Disposal considerations

- **Product:**
- **Recommendation:**
Disposal according to instructions of local authorities.



Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- **European waste catalogue:**

14 06 02 other halogenated solvents and solvent mixtures

- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

*14 Transport information

- **Land transport ADR/RID (cross-border)**

· **ADR/RID class:** 2 5A Gases.· **Danger code (Kemler):** 20· **UN-Number:** 1950· **Packaging group:** -· **Label:** 2.2· **Description of goods:** Aerosols· **Remarks:** Non-aerosol material is not subject to the provisions of the ADR and RID.

- **Maritime transport IMDG:**

· **IMDG Class:** 2· **UN Number:** 1950· **Label:** 2· **Packaging group:** -· **EMS Number:** F-D,S-U· **Marine pollutant:** No· **Proper shipping name:** AEROSOLS· **Remarks:** Non-aerosol material is is not subject to the provisions of this Code.

- **Air transport ICAO-TI and IATA-DGR:**

· **ICAO/IATA Class:** 2· **UN/ID Number:** 1950

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- **Label:** 2
- **Packaging group:** -
- **Proper shipping name:** AEROSOLS
- **Remarks:** Non-aerosol material is not subject to these Regulations.

*15 Regulations

- **Markings according to EC guidelines:**
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

- **Code letter and hazard designation of product:**



Xn Harmful

- **Hazard-determining components of labelling:**
1,1,1,2,3,4,4,5,5,5-decafluoropentane
- **Risk phrases:**
52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
65 Harmful: may cause lung damage if swallowed.
- **Safety phrases:**
9 Keep container in a well-ventilated place.
16 Keep away from sources of ignition - No smoking.
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
36 Wear suitable protective clothing.
51 Use only in well-ventilated areas.
61 Avoid release to the environment. Refer to special instructions/safety data sheets.
62 If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.
- **Special labelling of certain preparations:**
R 65 and S 62 do not apply to the aerosol.
The hazard symbol (Xn) and the hazard-determining component are therefore not necessary for the aerosol.
Only valid for the aerosol:
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.
Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition - No smoking.
Keep out of the reach of children
- **National regulations**
- **Information about limitation of use:** Restrictions on juvenile employment must be observed.
- **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

16 Other information:

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Reasons for amendments:**
TLV
General revision
- **Relevant R-phrases:**
11 Highly flammable.
36 Irritating to eyes.
52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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- 65 Harmful: may cause lung damage if swallowed.
- 66 Repeated exposure may cause skin dryness or cracking.
- 67 Vapours may cause drowsiness and dizziness.

· **Department issuing MSDS:**

KFT-Chemieservice Marienstr. 3 D-64347 Griesheim
Postfach 1451 D-64345 Griesheim
Tel.: +49-6155-823241 Fax: +49-6155-823246

· **Contact:** Angelika Torges

· *** Data compared to the previous version altered.**

Changes have been made to chapters marked with a *, as compared to the previous version.

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