

# Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date: 26.11.2008

Revision: 26.11.2008

## 1 Identification of substance:

· **Product details:**

- **Trade name:** **Big Blast EU Circuit Cleaner, MCC-DST107**  
**Micro Freeze EU Circuit Cooler, MCC-FRZ107**

- **Application of the substance / the preparation** Freezer

· **Supplier/Manufacturer:**

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

For Europe:

MicroCare Europe bvba  
Erasmuslaan 10  
B-1804 Cargovil (Zemst)  
Belgium  
Phone: 0032 2 251 95 05

- **Email competent person:** angelika.torges@kft.de

· **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 Hazards identification

- **Hazard description:** not applicable

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

According to current European laws and regulations the product is not dangerous or toxic material (based on the available data).

Vapours may reduce oxygen available for breathing.

Vapours are heavier than air.

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

Keep out of the reach of children

· **Classification system:**

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

## 3 Composition/information on ingredients

· **Chemical characterization:**

· **CAS No. Description:**

1645-83-6 Trans-1,3,3,3-tetrafluoropro-1-ene

· **Identification number(s):**

- **ELINCS Number:** 471-480-0

## 4 First aid measures

- **General information:** If symptoms persist or in case of doubt seek medical advice.

· **After inhalation:**

Supply fresh air or oxygen; call for doctor.

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- In case of unconsciousness, place patients on their side in a stable position for transportation.
- **After skin contact:**  
Rinse with warm water.  
If skin irritation continues, consult a doctor.  
In cases of frost bites, rinse with plenty of water. Do not remove clothing.  
Call a doctor immediately.
  - **After eye contact:**  
Protect unharmed eye.  
Rinse opened eye for several minutes under running water.  
First check the victim for contact lenses and remove if present.  
Rinse the eyes with open eyelids for 10 - 15 minutes with water.  
Seek medical treatment.
  - **After swallowing:** void
  - **Information for doctor:**
  - **The following symptoms may occur:**  
Frost bites  
After inhalation:  
Irritation of mucuous membranes  
Headache  
Daze  
Cardiac arrhythmia  
Unconsciousness
  - **Treatment:** Symptomatic treatment

### 5 Fire fighting measures

- **Suitable extinguishing agents:**  
Extinguishing powder  
Alcohol resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
Water  
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  
Formation of toxic gases is possible during heating or in case of fire.
- **Protective equipment:**  
Wear self-contained respiratory protective device.  
Wear fully protective suit.
- **Additional information:**  
Heating leads to pressure increase entailing danger of bursting and explosion. Immediately cool neighbouring packages and containers with sprayed water and, if possible, remove them out of the danger zone  
Collect contaminated fire fighting water separately. It must not enter the sewage system.  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

### 6 Accidental release measures

- **Person-related safety precautions:**  
Wear protective clothing.  
Ensure adequate ventilation  
Do not smoke - keep ignition sources 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:**  
Allow to evaporate.

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Ensure adequate ventilation.

### 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 contact with eyes and skin.

Keep away from heat and direct sunlight.

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

The product is not flammable

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 cool and dry in a well ventilated area.

Observe official regulations on storing packagings with pressurized containers.

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

Store away from foodstuffs.

Store away from feed.

- **Further information about storage conditions:**

Protect from heat (steam pipes, radiators etc.) open flames, other ignition sources and direct sunlight.

- **Storage class 2B** pressurized gas containers

### 8 Exposure controls and personal protection

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

- **Components with limit values that require monitoring at the workplace:** Not required.

- **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.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Do not inhale gases / fumes / aerosols.

Do not eat or drink while working.

- **Breathing equipment:** Not necessary if room is well-ventilated.

- **Protection of hands:**

Insulation gloves

Check protective gloves prior to each use for their proper condition.

- **Material of gloves:**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

- **Penetration time of glove material:**

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

- **Eye protection:** Safety glasses

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- **Body protection:** Protective work clothing.

### 9 Physical and chemical properties:

#### · General Information

- |                |                          |
|----------------|--------------------------|
| <b>Form:</b>   | Compressed liquefied gas |
| <b>Colour:</b> | Colourless               |
| <b>Odour:</b>  | Weak, characteristic     |
- **Change in condition:**
    - Melting point/Melting range:** not determined
    - Boiling point/Boiling range:** -19°C
  - **Flash point:** Not applicable, as aerosol
  - **Self ignition temperature:** Product is not self-igniting.
  - **Danger of explosion:** Product does not present an explosion hazard.
  - **Vapour pressure at 20°C:** 4220 hPa
  - **Density:** Not determined
  - **Vapour density at 25°C:** 3.6
  - **Solubility in / Miscibility with Water at 20°C:** 0.373 g/l
  - **Segregation coefficient (n-octanol/water):** 2.01 log POW calculated

### 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used and stored according to specifications.  
Conditions to be avoided: see chapter 7
- **Materials to be avoided:** Strong oxidants
- **Dangerous products of decomposition:**  
In the case of fire or at high temperatures the formation of the following decomposition products is possible.  
Danger of toxic fluorine based pyrolysis products  
Hydrogen fluoride  
Fluorocarbons  
Fluorides

### 11 Toxicological information

- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**  
**1645-83-6 Trans-1,3,3,3-tetrafluoropro-1-ene**  
 Inhalative LC<sub>50</sub> > 965 mg/l (rat)  
 LC<sub>50</sub>/4h > 100000 ppm (mouse)  
 > 207000 ppm (rat)
- **Primary irritant effect:**
- **on the skin:** not determined
- **on the eye:** not determined
- **Sensitization:** No sensitizing effects known.
- **Other information (about experimental toxicology):**  
Ames-test: negative

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No experimental indications on genotoxicity in vivo found.

- **Additional toxicological information:** The aerosol is a refrigerant. May cause frostbites.

### 12 Ecological information

- **Information about elimination (persistence and degradability):**

- **Other information:** It is not readily biodegradable.

- **Behaviour in environmental systems:**

- **Mobility and bioaccumulation potential:**

Due to the distribution coefficient n-octanol/water an accumulation in organisms is not expected.

- **Ecotoxicological effects:**

- **Aquatic toxicity:**

**1645-83-6 Trans-1,3,3,3-tetrafluoropro-1-ene**

EC<sub>50</sub>/48h > 160 mg/l (daphnia magna)

NOEC/72 h > 170 mg/l (algae)  
(growth inhibition)

NOEC/96h > 117 mg/l (cyprinus carpio)

- **General notes:**

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

According to appendix 4 of VwVwS dated 27.7.2005 (German regulation)

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

### 13 Disposal considerations

- **Product:**

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

- **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:** 1950 AEROSOLS

- **Limited quantities (LQ)** LQ2

- **Transport category** 3

- **Tunnel restriction code** E

- **Remarks:** Limited Quantity: 1 l inner packing, 30 l packing unit

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· **Maritime transport IMDG:**



- **IMDG Class:** 2
- **UN Number:** 1950
- **Label:** Aerosol
- **Packaging group:** -
- **EMS Number:** F-D,S-U
- **Proper shipping name:** AEROSOLS

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



- **ICAO/IATA Class:** 2.2
- **UN/ID Number:** 1950
- **Label:** 2.2
- **Packaging group:** -
- **Proper shipping name:** AEROSOLS, non-flammable
- **Remarks:** Packing Instructions:  
 For Limited Quantities: Y204(Max Net Qty/Pkg: 30 kg G)  
 Passenger and Cargo Aircraft: 204 (Max Net Qty/Pkg: 75 kg)  
 Cargo Aircraft only: 204 (Max Net Qty/Pkg: 150 kg)

### 15 Regulations

- **Markings according to EC guidelines:** Observe the general safety regulations when handling chemicals
- **Special labelling of certain preparations:**  
 Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.  
 Keep out of the reach of children
- **National regulations**
- **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.

- **Department issuing MSDS:**  
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