

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date: 31.03.2008

Revision: 31.03.2008

1 Identification of substance:

- **Product details:**

- **Trade name:** **PowerClean™ II Solvent**

- **Article number:**

Aerosol: MCC-PW210A

Bulk: MCC-FPW201G, MCC-FPW201P, MCC-FPW201D

MCC-DPW201G, MCC-DPW201P, MCC-DPW201D

MCC-NPW201G, MCC-NPW201P, MCC-NPW201D

- **Application of the substance / the preparation** Special cleaner for removing all kinds of fluxes

- **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

MicroCare Europe bvba
Erasmuslaan 10
1804 Zemst
Belgium

- **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:**



Xn Harmful

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

Product vapours displace air and may cause asphyxiation in confined spaces.

R 20 Harmful by inhalation.

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.

65.0 % by mass of the contents are flammable

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.

- **Additional information:** See also item 15: Special label requirements for special mixtures.

3 Composition/information on ingredients

- **Chemical characterization**

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

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· Dangerous components:

CAS: 156-60-5	trans-dichloroethylene	65-85%
EINECS: 205-860-2	Xn, F; R 11-20-52/53	
EU Number: 602-026-00-3		
CAS: 811-97-2	1,1,1,2-tetrafluoroethane	20-25%
EINECS: 212-377-0		
CAS: 138495-42-8	1,1,1,2,3,4,4,5,5,5-decafluoropentane	10-15%
ELINCS: 420-640-8	Xn; R 52/53-65	

· Additional information

Only the aerosol contains tetrafluoroethane (CAS: 811-79-2).
 For the wording of the listed risk phrases refer to section 16.

4 First aid measures

· General information:

Symptoms of poisoning may occur even after several hours; therefore medical observation is suggested for at least 48 hours after the accident.

· 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:

Remove soiled clothes and shoes.

Clean effected skin thoroughly with water and a mild cleansing agent. No residues shall remain on the skin.

· After eye contact:

Rinse the eyes with open eyelids for 10 - 15 minutes with 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 aspiration.

Drink 3-4 glass 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 muscuous membrane.

Redness of the skin

After inhalation of high vapour concentration levels:

Unconsciousness

Cardiac arrhythmia

· Treatment:

Symptomatic treatment

(decontamination, vital functions)

5 Fire fighting measures

· Suitable extinguishing agents:

Carbon dioxide (CO₂)

Water jet spray

Water haze

Fire-extinguishing powder

· For safety reasons unsuitable extinguishing agents: Direct jet water

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

Dangerous decomposition product see chapter 10: stability and reactivity

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- **Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

Do not inhale explosion gases or combustion gases.

- **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

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

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

6 Accidental release measures

- **Person-related safety precautions:**



Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Use respiratory protective device against the effects of fumes/dust/aerosol.

Do not smoke - keep ignition sources away

- **Measures for environmental protection:**

Do not allow product to reach sewage system or any water course.

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to penetrate the ground/soil.

In case of seepage into the ground inform responsible authorities.

- **Measures for cleaning/collecting:**

Absorb with non-combustible material like sand, soil or diatomite.

Ensure adequate ventilation.

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.

Keep respiratory protective device available.

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.

Observe official regulations on storing packagings with pressurized containers.

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- **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.

Protect from heat and direct sunlight.

- **Storage class**

10 Combustible liquids

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:**

811-97-2 1,1,1,2-tetrafluorethane
WEL (Great Britain) Long-term value: 4240 mg/m³, 1000 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.

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

Apply solvent resistant skin cream before beginning work.

- **Breathing equipment:**

In case of unintentional release of substance, exceeding the occupational exposure limit value:



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.

Short term filter device:

Filter AX. (colour coding brown; DIN EN 141)

- **Protection of hands:**

Chemical resistant 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.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

After use of gloves apply skin-cleaning agents and skin cosmetics.

- **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:** Goggles recommended during refilling.

- **Body protection:**

Protective work clothing.

According to hazard:

Boots

Apron

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9 Physical and chemical properties:

· General Information

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

· Change in condition:

Melting point/Melting range: undetermined
Boiling point/Boiling range: 39°C

- **Flash point:** not flammable
- **Self igniting:** Product is not self-igniting.
- **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
- **Vapour pressure at 20°C:** 553 hPa
- **Density:** Not determined
- **Vapour density at 20°C:** 3.7 g/cm³
- **Solubility in / Miscibility with Water:** Insoluble

10 Stability and reactivity

· Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.
To avoid thermal decomposition do not overheat.

· Materials to be avoided:

Alkali metals
Alkaline-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:

156-60-5 trans-dichloroethylene

Oral LD₅₀ 770 mg/kg (rat)

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

Oral LD₅₀ > 5000 mg/kg (rat)

Dermal LD₅₀ > 5000 mg/kg (rabbit)

Inhalative LC₅₀/4 h 11100 mg/l (rat)

· Primary irritant effect:

- **on the skin:** Continuing or repeated contact with the skin may cause skin disease.
- **on the eye:** May cause irritation to the eyes.
- **Sensitization:** No sensitizing effects known.
- **Other information (about experimental toxicology):** No carcinogenic effects known.

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- **Additional toxicological information:**

After swallowing: irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

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

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)

156-60-5 trans-dichloroethylene

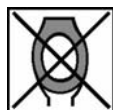
LC₅₀/48h 220 mg/l (daphnia magna)

LC₅₀/96h 1350 mg/l (fish)

- **General notes:**

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water.

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



Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

13 Disposal considerations

- **Product:**

- **Recommendation:**



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

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

· **Remarks:** Limited Quantity: 1 l inner packing, 30 l packing unit
Non-aerosol material is not subject to the provisions of the ADR and RID.

- **Maritime transport IMDG:**

· **IMDG Class:** 2

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- **UN Number:** 1950
 - **Label:** 2.2
 - **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:** 2.2
 - **UN/ID Number:** 1950
 - **Label:** 2
 - **Packaging group:** -
 - **Proper shipping name:** AEROSOLS, non flammable
 - **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:**
trans-dichloroethylene
- **Risk phrases:**
20 Harmful by inhalation.
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:**
16 Keep away from sources of ignition - No smoking.
23 Do not breathe aerosol.
36 Wear suitable protective clothing.
51 Use only in well-ventilated areas.
60 This material and its container must be disposed of as hazardous waste.
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.
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.
65.0 % by mass of the contents are flammable
Keep out of the reach of children
- **National regulations**
- **Information about limitation of use:**
Restrictions on juvenile employment must be observed.
Employment restrictions concerning pregnant and lactating women must be observed.
- **Water hazard class:** Water hazard class 2 (Self-assessment): hazardous for water.

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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.

· Relevant R-phrases:

- 11 Highly flammable.
- 20 Harmful by inhalation.
- 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- 65 Harmful: may cause lung damage if swallowed.

· Department issuing MSDS:

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