SAFETY DATA SHEET
MicroCare CCA Specialty Defluxing Solvent

1. Identification

Product Identifier
Product name MicroCare CCA Specialty Defluxing Solvent
Product number MCC-CCAL, MCC-CCAGG, MCC-CCAHG, MCC-CCAP, MCC-CCAD, MCC-CCAGL, MCC-CCAG, MCC-CCAHGG
Synonyms; trade names MCC-CCAL (2.5lb - Liter); MCC-CCAG (10 lb -1 Gallon Pail); MCC-CCAHG (10 lb -1 Glass Gallon); MCC-CCAP (50 lb - 5 Gallon Pail); MCC-CCAD (500 lb- 55 Gallon Drum)

Recommended use of the chemical and restrictions on use
Application Cleaning agent.

Details of the supplier of the safety data sheet
Supplier MicroCare Corporation
Manufacturer MICROCARE CORPORATION
595 John Downey Drive
New Britain, CT 06051
United States of America
CAGE: OATV9
Tel: +1 800 638 0125, +1 860-827-0626
Fax: +1 860-893-1930
techsupport@microcare.com

Emergency telephone number
Emergency telephone CHEMTREC 1-800-424-9300 (within the U.S.)
+1 703-741-5970 (from anywhere in the world)

2. Hazard(s) identification

Classification of the substance or mixture
Physical hazards Not Classified
Health hazards Not Classified

Human health See Section 11 for additional information on health hazards. May be slightly irritating to eyes. Splashes in the eyes may cause redness and irritation. Prolonged or repeated contact with skin may cause irritation, redness and dermatitis.

Physicochemical Vapors are heavier than air and may travel along the floor and accumulate in the bottom of containers.

Label elements
Hazard statements NC Not Classified
Supplemental label information Safety data sheet available on request. For use in industrial installations only.
MicroCare CCA Specialty Defluxing Solvent

Other hazards
This substance is not classified as PBT or vPvB according to current EU criteria.

3. Composition/information on ingredients

Mixtures

trans-1,2-DICHLOROETHYLENE
CAS number: 156-60-5
30-60%

Classification
Flam. Liq. 2 - H225
Acute Tox. 4 - H332
Not relevant.

1,1,1,2,2,3,4,5,5,5-decafluoropentane
CAS number: 138495-42-8
30-60%

Classification
Not relevant.

1,1,1,3,3-PENTAFLUOROBUTANE
CAS number: 406-58-6
10-30%

Classification
Flam. Liq. 2 - H225

The full text for all hazard statements is displayed in Section 16.

Composition comments
TSCA: The ingredients of this product are on the TSCA Inventory. The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of CFR 1900.1200

Composition

4. First-aid measures

Description of first aid measures

General information
Never give anything by mouth to an unconscious person. Do not induce vomiting. Place unconscious person on the side in the recovery position and ensure breathing can take place. If breathing stops, provide artificial respiration. Keep out of the reach of children.

Inhalation
Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen.

Ingestion
Do not induce vomiting. Rinse mouth thoroughly with water. Give plenty of water to drink. Consult a physician for specific advice.

Skin Contact
Remove contaminated clothing and rinse skin thoroughly with water. Get medical attention if irritation persists after washing.

Eye contact
Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Consult a physician for specific advice.

Most important symptoms and effects, both acute and delayed
**MicroCare CCA Specialty Defluxing Solvent**

**General information**
The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

**Indication of immediate medical attention and special treatment needed**

**Notes for the doctor** No specific recommendations. If in doubt, get medical attention promptly.

### 5. Fire-fighting measures

**Extinguishing media**

**Suitable extinguishing media**
The product is not flammable. Use fire-extinguishing media suitable for the surrounding fire.

**Special hazards arising from the substance or mixture**

**Specific hazards**
Keep away from heat, sparks and open flame. Thermal decomposition or combustion products may include the following substances: Toxic and corrosive gases or vapors. Closed containers can burst violently when heated, due to excess pressure build-up.

**Hazardous combustion products**
Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors. Oxides of carbon.

**Advice for firefighters**
Containers close to fire should be removed or cooled with water.

**Protective actions during firefighting**

**Special protective equipment for firefighters**
Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

### 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions**
Warn everybody of potential hazards and evacuate if necessary. Provide adequate ventilation. Avoid inhalation of vapors. Use approved respirator if air contamination is above an acceptable level.

**Environmental precautions**

**Environmental precautions**
Contain spillage with sand, earth or other suitable non-combustible material. Avoid release to the environment.

**Methods and material for containment and cleaning up**

**Methods for cleaning up**
Absorb spillage with non-combustible, absorbent material. Do not discharge into drains or watercourses or onto the ground. Contain and absorb spillage with sand, earth or other non-combustible material. Collect spillage with a shovel and broom, or similar and reuse, if possible. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

**Reference to other sections** See Section 11 for additional information on health hazards.

### 7. Handling and storage

**Precautions for safe handling**

**Usage precautions**
Provide adequate ventilation. Avoid inhalation of vapors/spray and contact with skin and eyes.

**Conditions for safe storage, including any incompatibilities**

**Storage precautions**
Store in tightly-closed, original container in a dry, cool and well-ventilated place. Keep out of the reach of children.

**Specific end use(s)**
The identified uses for this product are detailed in Section 1.
MicroCare CCA Specialty Defluxing Solvent

Reference to other sections. Store away from incompatible materials (see Section 10).

8. Exposure controls/Personal protection

Control parameters

Occupational exposure limits

trans-1,2-DICHLOROETHYLENE

Long-term exposure limit (8-hour TWA): ACGIH 200 ppm 793 mg/m³

1,1,1,2,2,3,4,5,5,5-decafluoropentane

No information available that would effect occupational exposure limit values.

1,1,1,3,3-PENTAFLUOROBUTANE

Long-term exposure limit (8-hour TWA): SUP 1000 ppm

ACGIH = American Conference of Governmental Industrial Hygienists.

Additional Occupational Exposure Limits

Ingredient comments

ACGIH = US Standard. WEL = Workplace Exposure Limits

Exposure controls

Protective equipment

Appropriate engineering controls

No specific ventilation requirements. This product must not be handled in a confined space without adequate ventilation.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses. Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles or face shield.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible.

Other skin and body protection

Wear suitable protective clothing as protection against splashing or contamination. Wear apron or protective clothing in case of contact.

Hygiene measures

No specific hygiene procedures recommended but good personal hygiene practices should always be observed when working with chemical products. When using do not eat, drink or smoke.

Respiratory protection

Vapors are heavier than air and may travel along the floor and accumulate in the bottom of containers. In confined or poorly-ventilated spaces, a supplied-air respirator must be worn.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Clear liquid.

Color

Water-white.

Odor

Slight. Ether.

Odor threshold

No information available.
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**pH**
No information available.

**Melting point**
No information available.

**Initial boiling point and range**
37°C/99°F @ unspecified

**Flash point**
The product is not flammable.

**Evaporation rate**
No information available.

**Evaporation factor**
No information available.

**Flammability (solid, gas)**
No information available.

**Upper/lower flammability or explosive limits**
Upper flammable/explosive limit: 9.0 %(V) Lower flammable/explosive limit: 7.5 %(V)

**Other flammability**
No information available.

**Vapor pressure**
65.1 kPa @ unspecified°C

**Vapor density**
>1

**Relative density**
1.35

**Bulk density**
No information available.

**Solubility(ies)**
Slightly soluble in water.

**Partition coefficient**
No information available.

**Auto-ignition temperature**
No information available.

**Decomposition Temperature**
No information available.

**Viscosity**
No information available.

**Explosive properties**
No information available.

**Explosive under the influence of a flame**
Not considered to be explosive.

**Refractive index**
No information available.

**Particle size**
No information available.

**Molecular weight**
No information available.

**Vocality**
100%

**Saturation concentration**
No information available.

**Critical temperature**
No information available.

**Volatile organic compound**
This product contains a maximum VOC content of <40 %.

**Flammability**
The product is not flammable.

### 10. Stability and reactivity

**Reactivity**
There are no known reactivity hazards associated with this product.

**Stability**
Stable at normal ambient temperatures and when used as recommended.

**Possibility of hazardous reactions**
Will not polymerize.
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**Conditions to avoid**
Keep away from heat, sparks and open flame. Thermal decomposition or combustion products may include the following substances: Toxic and corrosive gases or vapors.

**Materials to avoid**
Alkali metals. Alkaline earth metals. Powdered metal.

**Hazardous decomposition products**
Heating may generate the following products: Toxic and corrosive gases or vapors. Halogenated hydrocarbons. Hydrogen fluoride (HF). Carbon dioxide (CO2). Carbon monoxide (CO).

### 11. Toxicological information

**Information on toxicological effects**

**Other health effects**
There is no evidence that the product can cause cancer.

**Acute toxicity - inhalation**

| ATE Inhalation (vapours mg/l) | 28.21 |

**Inhalation**
Vapors may irritate throat/respiratory system. A single exposure may cause the following adverse effects: Coughing. Difficulty in breathing. Headache. Dizziness.

**Ingestion**
Harmful if swallowed. Irritating. Symptoms following overexposure may include the following: Nausea, vomiting. Stomach pain.

**Skin Contact**
Liquid may irritate skin.

**Eye contact**
Irritating to eyes.

**Route of exposure**
Skin and/or eye contact. Ingestion. Inhalation.

**Target Organs**
Eyes. Respiratory system, lungs. Skin.

**Medical Symptoms**
Product has a defatting effect on skin. May cause allergic contact eczema. In case of overexposure, organic solvents may depress the central nervous system causing dizziness and intoxication, and at very high concentrations unconsciousness and death.

**Toxicological information on ingredients.**

**trans-1,2-DICHLOROETHYLENE**

| Other health effects | There is no evidence that the product can cause cancer. |

**Acute toxicity - inhalation**

| ATE inhalation (vapours mg/l) | 11.0 |

**1,1,1,2,2,3,4,5,5-decafluoropentane**

**Acute toxicity - oral**

| Acute toxicity oral (LD₅₀ mg/kg) | 5,000.0 |

| Species | Rat |

| ATE oral (mg/kg) | 5,000.0 |

**Acute toxicity - dermal**

| Acute toxicity dermal (LD₅₀ mg/kg) | 5,000.0 |
MicroCare CCA Specialty Defluxing Solvent

Species: Rat

ATE dermal (mg/kg): 5,000.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l): 114.0

Species: Rat

ATE inhalation (vapours mg/l): 114.0

Skin corrosion/irritation

Animal data: Not irritating. Rabbit

Human skin model test: Data lacking.

Extreme pH: Not applicable. Not corrosive to skin.

Serious eye damage/irritation

Serious eye damage/irritation: Not irritating. Rabbit

Respiratory sensitization

Respiratory sensitization: Data lacking.

Skin sensitization

Skin sensitization: Not sensitizing. - Guinea pig: Not sensitizing.

Germ cell mutagenicity

Genotoxicity - in vitro: This substance has no evidence of mutagenic properties.

Genotoxicity - in vivo: This substance has no evidence of mutagenic properties.

Carcinogenicity

Carcinogenicity: Does not contain any substances known to be carcinogenic.

IARC carcinogenicity: Not listed.

NTP carcinogenicity: Not listed.

OSHA Carcinogenicity: Not listed.

Reproductive toxicity

Reproductive toxicity - fertility: No evidence of reproductive toxicity in animal studies.

Skin Contact

Skin irritation should not occur when used as recommended. May cause defatting of the skin but is not an irritant.

Eye contact: May cause eye irritation.

Acute and chronic health hazards

There is no evidence that the product can cause cancer.

Acute toxicity - oral

1,1,1,3,3-PENATAFLUOROBUTANE
MicroCare CCA Specialty Defluxing Solvent

Acute toxicity oral (LD₅₀ mg/kg) 2,000.0
Species Rat
ATE oral (mg/kg) 2,000.0

Acute toxicity - inhalation
Acute toxicity inhalation (LC₅₀ vapours mg/l) 100,000.0
Species Rat
ATE inhalation (vapours mg/l) 100,000.0

Specific target organ toxicity - single exposure
STOT - single exposure LOAEL 75100 ppm, Inhalation,
Specific target organ toxicity - repeated exposure
STOT - repeated exposure NOAEC 6 mg/l, Inhalation, Rat
Target organs Liver Kidneys

12. Ecological information
Ecotoxicity There are no data on the ecotoxicity of this product.

Ecological information on ingredients.

trans-1,2-DICHLOROETHYLENE
Ecotoxicity Low acute toxicity to aquatic organisms.

1,1,1,2,2,3,4,5,5,5-decafluoropentane
Ecotoxicity It is unlikely that the substance will dissolve in water in amounts big enough to have a toxic effect on fish and daphnies.

Toxicity No data available.

Ecological information on ingredients.

trans-1,2-DICHLOROETHYLENE
Acute aquatic toxicity
Acute toxicity - fish LC₅₀, 96 hours: 1350 mg/l, Fish
Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 220 mg/l, Daphnia magna

1,1,1,2,2,3,4,5,5,5-decafluoropentane
Acute aquatic toxicity
Acute toxicity - fish LC₅₀, 96 hours: 13.9 mg/l, Oncorhynchus mykiss (Rainbow trout)
Acute toxicity - aquatic invertebrates LC₅₀, 48 hours: 11.7 mg/l, Daphnia magna
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Acute toxicity - aquatic plants
EC₅₀, 72 hours: >120 mg/l, Algae

Persistence and degradability
There are no data on the degradability of this product.

Bioaccumulative potential
Bio-Accumulative Potential: No data available on bioaccumulation.
Partition coefficient: No information available.

Ecological information on ingredients.

trans-1,2-DICHLOROETHYLENE
Bio-Accumulative Potential: Bioaccumulation is unlikely to be significant because of the low water-solubility of this product.

1,1,1,2,2,3,4,5,5-decafluoropentane
Bio-Accumulative Potential: Bioaccumulation is unlikely to be significant because of the low water-solubility of this product.
Partition coefficient: Pow: 2.7

Mobility in soil
Mobility: The product contains volatile substances which may spread in the atmosphere.

Ecological information on ingredients.

trans-1,2-DICHLOROETHYLENE
Mobility: The product has poor water-solubility.

Other adverse effects
The product contains a substance or substances that will contribute to global warming (greenhouse effect). The product contains volatile organic compounds (VOCs) which have a photochemical ozone creation potential.

13. Disposal considerations

Waste treatment methods
General information: Waste should be treated as controlled waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

Disposal methods: Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

Waste class: No information available.

14. Transport information

General: The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, DOT).

UN Number
UN No. (International): Not applicable.
UN No. (DOT): Not applicable.
MicroCare CCA Specialty Defluxing Solvent

**UN proper shipping name**
Proper shipping name (International) Not applicable.
Proper shipping name (DOT) Not applicable.

**Transport hazard class(es)**

Transport Labels (International) No transport warning sign required.

DOT transport labels
No transport warning sign required.

**Packing group**
Packing group (International) Not applicable.
DOT packing group Not applicable.

**Environmental hazards**
Environmentally Hazardous Substance No.

**Special precautions for user**
DOT reportable quantity Not applicable.
DOT TIH Zone Not applicable.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

**15. Regulatory information**

**US Federal Regulations**
SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities
Not listed.

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)

*trans-1,2-DICHLOROETHYLENE*
Final CERCLA RQ: 1000(454) pounds (Kilograms)

SARA Extremely Hazardous Substances EPCRA Reportable Quantities
Not listed.

SARA 313 Emission Reporting
Not listed.

CAA Accidental Release Prevention
Not listed.

SARA (311/312) Hazard Categories
Acute

OSHA Highly Hazardous Chemicals
Not listed.

**US State Regulations**
MicroCare CCA Specialty Defluxing Solvent

California Proposition 65 Carcinogens and Reproductive Toxins
This product does not contain any chemicals found on the California Proposition 65 Carcinogens and Reproductive Toxins.

California Air Toxics "Hot Spots" (A-I)
Not listed.

California Air Toxics "Hot Spots" (A-II)
Not listed.

California Directors List of Hazardous Substances
trans-1,2-DICHLOROETHYLENE
Present.

Massachusetts "Right To Know" List
trans-1,2-DICHLOROETHYLENE
Present.

Rhode Island "Right To Know" List
Not listed.

Minnesota "Right To Know" List
Not listed.

New Jersey "Right To Know" List
Not listed.

Pennsylvania "Right To Know" List
trans-1,2-DICHLOROETHYLENE
Present.

Inventories
Canada - DSL/NDSL
Yes

US - TSCA
Present.
1,1,1,3,3-PENTAFLUOROBUTANE
Present.
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1,1,1,2,2,3,4,5,5,5-decafluoropentane
Present.

1,1,1,2,2,3,4,5,5,5-DECAFLUOROPENTANE (CAS# 138495-42-8) is controlled by TSCA Section 5, Significant New Use Rule (SNUR; 40 CFR 721.5645) The approved uses are: precision and general cleaning, carrier fluid, displacement drying, printed circuit board cleaning, particulate removal and film cleaning, process medium, heat transfer fluid (dielectric and non-dielectric), and test fluid. Processors and users of this substance must also comply with the applicable general SNUR requirements set forth in 40 CFR 721 subpart A, including export notification requirements if applicable (40 CFR 721.20), and the applicable record keeping requirements set forth at 40 CFR 721.125.

1,1,1,2,2,3,4,5,5,5-Decafluoropentane 138495-42-8
The United States Environmental Protection Agency (USEPA) has established a Significant New Use Rule (SNUR) for one of the components in this product. This material contains one or more substances which requires export notification under TSCA Section 12(b) and 40 CFR Part 707 Subpart D:

trans-1,2-DICHLOROETHYLENE
Present.

16. Other information

Revision comments
NOTE: Lines within the margin indicate significant changes from the previous revision.

Revision date 12/17/2018
Revision 32
Supersedes date 4/27/2018
SDS No. BULK - CCA
SDS status Approved.
Hazard statements in full
H225 Highly flammable liquid and vapor.
H332 Harmful if inhaled.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.