



SAFETY DATA SHEET

MicroCare CCA Specialty Defluxing Solvent

According to Appendix D, OSHA Hazard Communication Standard 29 CFR §1910.1200

1. Identification

Product identifier

Product name	MicroCare CCA Specialty Defluxing Solvent
Product number	MCC-CCAL, MCC-CCAGG, MCC-CCAAG, MCC-CCAP, MCC-CCAD, MCC-CCAGL, MCC-CCAG, MCC-CCAAGG
Synonyms; trade names	MCC-CCAL (2.5lb - Liter); MCC-CCAG (10 lb -1 Gallon Pail); MCC-CCAAG (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.
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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: +1 860-827-8105 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)
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2. Hazard(s) identification

Classification of the substance or mixture

Physical hazards	Not Classified
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Health hazards	Not Classified
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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.
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Physicochemical	Vapors are heavier than air and may travel along the floor and accumulate in the bottom of containers.
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Label elements

Hazard statements	NC Not Classified
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Supplemental label information	Safety data sheet available on request. For use in industrial installations only.
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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	30-60%
CAS number: 156-60-5	

Classification

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

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

Classification

Not relevant.

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

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 TSCA: The ingredients of this product are on the TSCA Inventory.

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

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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

Protective actions during firefighting Containers close to fire should be removed or cooled with water.

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 uses(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.

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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.
Volatility	100%
Saturation concentration	No information available.
Critical temperature	No information available.
Volatile organic compound	No information available.
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 (CO ₂). 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

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

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Species	Rat
ATE dermal (mg/kg)	5,000.0
<u>Acute toxicity - inhalation</u>	
Acute toxicity inhalation (LC₅₀ vapours mg/l)	114.0
Species	Rat
ATE inhalation (vapours mg/l)	114.0
<u>Skin corrosion/irritation</u>	
Animal data	Not irritating. Rabbit
Human skin model test	Data lacking.
Extreme pH	Not applicable. Not corrosive to skin.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Not irritating. Rabbit
<u>Respiratory sensitization</u>	
Respiratory sensitization	Data lacking.
<u>Skin sensitization</u>	
Skin sensitization	Not sensitizing. - Guinea pig: Not sensitizing.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	This substance has no evidence of mutagenic properties.
Genotoxicity - in vivo	This substance has no evidence of mutagenic properties.
<u>Carcinogenicity</u>	
Carcinogenicity	Does not contain any substances known to be carcinogenic.
IARC carcinogenicity	Not listed.
NTP carcinogenicity	Not listed.
OSHA Carcinogenicity	Not listed.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	No evidence of reproductive toxicity in animal studies.
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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.

1,1,1,3,3-PENTAFLUOROBUTANE

Acute toxicity - oral

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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

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.

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

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

UN proper shipping name

Proper shipping name (TDG) Liquid Cleaning Compound

Proper shipping name (IMDG) Liquid Cleaning Compound

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Proper shipping name (ICAO) Liquid Cleaning Compound

Proper shipping name (DOT) Liquid Cleaning Compound

Transport hazard class(es)

Not applicable. No information required.

Transport labels

No transport warning sign required.

Packing group

No information required. Not applicable.

Environmental hazards

Environmentally Hazardous Substance

No.

Transport in bulk according to No information required.

**Annex II of MARPOL 73/78
and the IBC Code**

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

California Proposition 65 Carcinogens and Reproductive Toxins

Not listed.

California Air Toxics "Hot Spots" (A-I)

Not listed.

California Air Toxics "Hot Spots" (A-II)

Not listed.

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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.

1,1,1,2,2,3,4,5,5,5-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.

1,1,1,3,3-PENTAFLUOROBUTANE

Present.

16. Other information

Revision comments

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

MicroCare CCA Specialty Defluxing Solvent

Revision date	4/27/2018
Revision	31
Supersedes date	9/8/2017
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.