



SAFETY DATA SHEET

MicroCare CMS Specialty Flux Remover

According to Regulation (EC) No 1907/2006, Annex II, as amended by Regulation (EU) No 453/2010

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name MicroCare CMS Specialty Flux Remover
Product number MCC-CMSL, MCC-CMSG, MCC-CMSGG, MCC-CMSP, MCC-CMSD, MCC-CMSGL

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Cleaning agent.

1.3. Details of the supplier of the safety data sheet

Supplier MICROCARE EUROPE BVBA
 VEKESTRAAT 29 B11
 INDUSTRIEZONE 'T SAS
 1910 KAMPENHOUT, Belgium
 Phone +32.2.251.95.05
 Fax +32.2.400.96.39

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

1.4. Emergency telephone number

Emergency telephone CHEMTREC UK (London) +(44)-870-8200418 +1 703-741-5970 (from anywhere in the world)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified
Health hazards STOT SE 2 - H371
Environmental hazards Aquatic Chronic 3 - H412

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

2.2. Label elements

MicroCare CMS Specialty Flux Remover

Pictogram



Signal word	Warning
Hazard statements	H371 May cause damage to organs . H412 Harmful to aquatic life with long lasting effects.
Precautionary statements	P261 Avoid breathing vapour/ spray. P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P302+P352 IF ON SKIN: Wash with plenty of water. P314 Get medical advice/ attention if you feel unwell. P501 Dispose of contents/ container in accordance with national regulations.
Supplemental label information	EUH210 Safety data sheet available on request. RCH001a For use in industrial installations only.
Contains	METHANOL
Supplementary precautionary statements	P260 Do not breathe vapour/ spray. P264 Wash contaminated skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P308+P311 IF exposed or concerned: Call a POISON CENTER or doctor. P405 Store locked up.

2.3. Other hazards

This product contains a substance classified as PBT.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

trans-DICHLOROETHYLENE	30-60%
CAS number: 156-60-5	EC number: 205-860-2
	REACH registration number: 05-2114285321-54-0000
Classification	
Flam. Liq. 2 - H225	
Acute Tox. 4 - H332	
Aquatic Chronic 3 - H412	
1,1,1,2,2,3,4,5,5,5-decafluoropentane	30-60%
CAS number: 138495-42-8	EC number: 420-640-8
	REACH registration number: 01-2119446695-28-0000
Classification	
Aquatic Chronic 3 - H412	

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1,1,1,3,3-PENTAFLUOROBUTANE	10-30%
CAS number: 406-58-6	EC number: 430-250-1
Classification Flam. Liq. 2 - H225	
METHANOL	1-5%
CAS number: 67-56-1	EC number: 200-659-6
	REACH registration number: 05-2114285316-45-0000
Classification Flam. Liq. 2 - H225 Acute Tox. 3 - H301 Acute Tox. 3 - H311 Acute Tox. 3 - H331 STOT SE 1 - H370	

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

Composition comments The data shown are in accordance with the latest EC Directives.

Composition

SECTION 4: First aid measures

4.1. 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.

4.2. Most important symptoms and effects, both acute and delayed

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
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4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor	No specific recommendations. If in doubt, get medical attention promptly.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

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

5.2. Special hazards arising from the substance or mixture

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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 vapours. 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 vapours. Oxides of carbon.
5.3. 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.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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

Environmental precautions	Contain spillage with sand, earth or other suitable non-combustible material. Avoid release to the environment.
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6.3. 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.
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6.4. Reference to other sections

Reference to other sections	See Section 11 for additional information on health hazards.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions	Provide adequate ventilation. Avoid inhalation of vapours/spray and contact with skin and eyes.
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7.2. 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.
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7.3. Specific end use(s)

Specific end use(s)	The identified uses for this product are detailed in Section 1.2.
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Reference to other sections.	Store away from incompatible materials (see Section 10).
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SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

trans-DICHLOROETHYLENE

Long-term exposure limit (8-hour TWA): ACGIH
Short-term exposure limit (15-minute): ACGIH 200 ppm

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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): 1000 ppm

METHANOL

Long-term exposure limit (8-hour TWA): WEL 200 ppm 266 mg/m³

Short-term exposure limit (15-minute): WEL 250 ppm 333 mg/m³

Sk

ACGIH = American Conference of Governmental Industrial Hygienists.

WEL = Workplace Exposure Limit

Sk = Can be absorbed through the skin.

Additional Occupational Exposure Limits

Ingredient comments ACGIH = US Standard. WEL = Workplace Exposure Limits

8.2. 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

Vapours 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.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Clear liquid.
Colour	Water-white.
Odour	Slight. Ether.
Odour threshold	No information available.
pH	No information available.

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Melting point	No information available.
Initial boiling point and range	36°C/96.8°F @ unspecified
Flash point	The product is not flammable. Tag Closed Cup (ASTM D 56)
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: 14.00 %(V) Lower flammable/explosive limit: 6.25 %(V)
Other flammability	No information available.
Vapour pressure	66.3 kPa @ 20°C
Vapour density	4.3
Relative density	1.304 @ 20°C
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.

9.2. Other information

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.
UDF Phrase 1	The product is not flammable.

SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

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Possibility of hazardous reactions Will not polymerise.

10.4. Conditions to avoid

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 vapours.

10.5. Incompatible materials

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

10.6. Hazardous decomposition products

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

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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

Acute toxicity - oral

ATE oral (mg/kg) 2,857.14

Acute toxicity - dermal

ATE dermal (mg/kg) 8,571.43

Acute toxicity - inhalation

ATE inhalation (vapours mg/l) 20.43

Inhalation Vapours 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 entry 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-DICHLOROETHYLENE

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

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

Acute toxicity - oral

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

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Species	Rat
ATE oral (mg/kg)	5,000.0
<u>Acute toxicity - dermal</u>	
Acute toxicity dermal (LD₅₀ mg/kg)	5,000.0
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 sensitisation</u>	
Respiratory sensitisation	Data lacking.
<u>Skin sensitisation</u>	
Skin sensitisation	Not sensitising. - Guinea pig: Not sensitising.
<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.
<u>Reproductive toxicity</u>	
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.

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Acute and chronic health hazards There is no evidence that the product can cause cancer.

1,1,1,3,3-PENTAFLUOROBUTANE

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 100,000.0

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

METHANOL

Acute toxicity - oral

ATE oral (mg/kg) 100.0

Acute toxicity - dermal

ATE dermal (mg/kg) 300.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 64,000.0

ATE inhalation (vapours mg/l) 64,000.0

SECTION 12: Ecological Information

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

Ecological information on ingredients.

trans-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.

12.1. Toxicity

Toxicity No data available.

Ecological information on ingredients.

trans-DICHLOROETHYLENE

Acute toxicity - fish LC₅₀, 96 hours: 1350 mg/l, Algae

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Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 220 mg/l, Daphnia magna

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

Acute toxicity - fish LC₅₀, 96 hours: 13.9 mg/l, Onchorhynchus mykiss (Rainbow trout)

Acute toxicity - aquatic invertebrates LC₅₀, 48 hours: 11.7 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 72 hours: >120 mg/l, Fish

METHANOL

Acute toxicity - fish LC₅₀, 96 hours: >100 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: >10000 mg/l, Daphnia magna

12.2. Persistence and degradability

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

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient No information available.

Ecological information on ingredients.

trans-DICHLOROETHYLENE

Bioaccumulative 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

Bioaccumulative potential Bioaccumulation is unlikely to be significant because of the low water-solubility of this product.

Partition coefficient Pow: 2.7

METHANOL

Partition coefficient : -0.77

12.4. Mobility in soil

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

Ecological information on ingredients.

trans-DICHLOROETHYLENE

Mobility The product has poor water-solubility.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

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12.6. 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.

SECTION 13: Disposal considerations

13.1. 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

Aucune information disponible

SECTION 14: Transport information

General

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

14.1. UN number

14.2. UN proper shipping name

Proper shipping name (ADR/RID) Liquid Cleaning Compound

Proper shipping name (IMDG) Liquid Cleaning Compound

Proper shipping name (ICAO) Liquid Cleaning Compound

Proper shipping name (ADN) Liquid Cleaning Compound

14.3. Transport hazard class(es)

Not applicable. No information required.

Transport labels

No transport warning sign required.

14.4. Packing group

No information required. Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

Gas or vapour displaces oxygen available for breathing (asphyxiant).

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to No information required.

Annex II of MARPOL 73/78

and the IBC Code

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

MicroCare CMS Specialty Flux Remover

EU legislation Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Revision comments	NOTE: Lines within the margin indicate significant changes from the previous revision.
Revision date	17/01/2018
Revision	44
Supersedes date	17/01/2018
SDS number	BULK - CMS
SDS status	Approved.
Hazard statements in full	H225 Highly flammable liquid and vapour. H301 Toxic if swallowed. H311 Toxic in contact with skin. H331 Toxic if inhaled. H332 Harmful if inhaled. H370 Causes damage to organs . H371 May cause damage to organs . H412 Harmful to aquatic life with long lasting effects.

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.