



SAFETY DATA SHEET

VOC - VOC FREE FLUX REMOVER - ULTRACLEAN, AEROSOL

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

1. Identification

Product identifier

Product name VOC - VOC FREE FLUX REMOVER - ULTRACLEAN, AEROSOL

Product number MCC-VOC10A, MCC-VOC10Y

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: +1 860-827-0626
 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)

2. Hazard(s) identification

Classification of the substance or mixture

OSHA Regulatory Status This Product is Hazardous under the OSHA Hazard Communication Standard.

Physical hazards Flam. Aerosol 1 - H222

Health hazards Not Classified

Human health Splashes in the eyes may cause redness and irritation. Keep out of the reach of children. See Section 11 for additional information on health hazards.

Physicochemical H229 Pressurised container: may burst if heated Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.

Label elements

Pictogram



Signal word Danger

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Hazard statements	H222 Extremely flammable aerosol.
Precautionary statements	P210 Keep away from heat, sparks, open flames and hot surfaces. No smoking. P211 Do not spray on an open flame or other ignition source. P251 Pressurized container: Do not pierce or burn, even after use P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. P501 Dispose of contents/ container in accordance with local regulations.
Supplemental label information	Safety data sheet available on request. For use in industrial installations only.

Other hazards

This product does not contain any substances classified as PBT or vPvB.

3. Composition/information on ingredients

Mixtures

DIMETHYL CARBONATE CAS number: 616-38-6	30-60%
Classification Flam. Liq. 2 - H225	
HEXAMETHYLDISILOXANE (Methyl siloxane) CAS number: 107-46-0	10-30%
Classification Flam. Liq. 2 - H225 Not relevant.	
TRANS-1,3,3,3-TETRAFLUOROPROP-1-ENE CAS number: 29118-24-9	10-30%
Classification Press. Gas, Liquefied - H280	

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

Composition comments 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.

Ingredient notes CAS 68476-85-7 Petroleum gases - as the substance contains less than 0.1% w/w 1,3 butadiene, the full harmonised classification regarding Muta. 1B H340 and Carc. 1A H350 does not apply.

Composition

4. First-aid measures

Description of first aid measures

General information Promptly remove any clothing that becomes wet or contaminated. Move affected person to fresh air at once. Get medical attention if any discomfort continues.

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Inhalation	Move affected person to fresh air at once. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Keep affected person warm and at rest. Get medical attention immediately.
Ingestion	Do not induce vomiting. Rinse mouth thoroughly with water. Give plenty of water to drink. Never give anything by mouth to an unconscious person. 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. Get medical attention if any discomfort continues.

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.
Inhalation	Vapors may cause headache, fatigue, dizziness and nausea.
Ingestion	May cause stomach pain or vomiting. Headache.
Skin contact	Prolonged or repeated contact with skin may cause irritation, redness and dermatitis.
Eye contact	Irritating to eyes. Symptoms following overexposure may include the following: Redness. Pain. Irritation and redness, followed by blurred vision.

Indication of immediate medical attention and special treatment needed

Notes for the doctor	Treat symptomatically. No specific recommendations. If in doubt, get medical attention promptly.
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5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	Extinguish with the following media: Powder. Dry chemicals, sand, dolomite etc. Water spray, fog or mist.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

Special hazards arising from the substance or mixture

Specific hazards	Containers can burst violently or explode when heated, due to excessive pressure build-up. Containers can burst violently or explode when heated, due to excessive pressure build-up. Oxides of carbon. Protection against nuisance dust must be used when the airborne concentration exceeds 10 mg/m ³ .
Hazardous combustion products	Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.
Advice for firefighters	
Protective actions during firefighting	Containers close to fire should be removed or cooled with water. Use water to keep fire exposed containers cool and disperse vapors. Bursting aerosol containers may be propelled from a fire at high speed.
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

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Personal precautions 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.

Environmental precautions

Environmental precautions Do not discharge into drains or watercourses or onto the ground.

Methods and material for containment and cleaning up

Methods for cleaning up Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. If leakage cannot be stopped, evacuate area. Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation. Absorb in vermiculite, dry sand or earth and place into containers.

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

7. Handling and storage

Precautions for safe handling

Usage precautions Keep away from heat, sparks and open flame. Avoid spilling. Avoid contact with skin and eyes. Provide adequate ventilation. Avoid inhalation of vapors. Use approved respirator if air contamination is above an acceptable level.

Conditions for safe storage, including any incompatibilities

Storage precautions Aerosol cans: Must not be exposed to direct sunlight or temperatures above 50°C.

Specific end uses(s)

Specific end use(s) Cleaning agent.

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

8. Exposure Controls/personal protection

Control parameters

Occupational exposure limits

DIMETHYL CARBONATE

No information available that would effect occupational exposure limit values.

Additional Occupational Exposure Limits

Ingredient comments WEL = Workplace Exposure Limits

Exposure controls

Protective equipment



Appropriate engineering controls Provide adequate general and local exhaust 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.

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Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. It is recommended that gloves are made of the following material: Nitrile rubber. Polyvinyl alcohol (PVA). Viton rubber (fluoro rubber).
Other skin and body protection	Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapor contact.
Hygiene measures	Do not smoke in work area. Wash at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. When using do not eat, drink or smoke.
Respiratory protection	No specific recommendations. Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance	Liquid. Aerosol.
Color	Clear liquid. Colorless.
Odor	Slight. Ether.
Odor threshold	No information available.
pH	No information available.
Melting point	No information available.
Initial boiling point and range	85°C/187°F @ 101.3 kPa
Flash point	3.0°C/37°F Method: TCC (Tag closed cup).
Evaporation rate	No information available.
Evaporation factor	No information available.
Flammability (solid, gas)	No information available.
Upper/lower flammability or explosive limits	Lower flammable/explosive limit: 1.25 %(V) Upper flammable/explosive limit: 18.6 %(V)
Other flammability	No information available.
Vapor pressure	0.79 kPa @ 20°C
Vapor density	> 1.0
Relative density	No information available.
Bulk density	0.850
Solubility(ies)	Insoluble 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.
Oxidizing properties	There are no chemical groups present in the product that are associated with oxidizing properties.

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Refractive index	No information available.
Particle size	No information available.
Molecular weight	Not applicable.
Volatility	100%
Saturation concentration	No information available.
Critical temperature	No information available.
Flammability	Flammable aerosol.

10. Stability and reactivity

Reactivity	There are no known reactivity hazards associated with this product.
Stability	Stable at normal ambient temperatures.
Possibility of hazardous reactions	Will not polymerize.
Conditions to avoid	Avoid heat, flames and other sources of ignition.
Materials to avoid	Strong oxidizing agents. Strong alkalis. Strong mineral acids.
Hazardous decomposition products	Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors. Vapors/gases/fumes of: Silicon dioxide Formaldehyde

11. Toxicological information

Information on toxicological effects

Other health effects	There is no evidence that the product can cause cancer.
Inhalation	May cause respiratory system irritation. Vapors may cause headache, fatigue, dizziness and nausea. Prolonged inhalation of high concentrations may damage respiratory system.
Ingestion	No harmful effects expected from quantities likely to be ingested by accident.
Skin Contact	Product has a defatting effect on skin. May cause skin irritation/eczema.
Eye contact	Irritating to eyes.

Toxicological information on ingredients.

DIMETHYL CARBONATE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 13,000.0

Species Rat

Acute toxicity - dermal

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

Species Rabbit

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ATE dermal (mg/kg) 5,000.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 140.0

Species Rat

ATE inhalation (vapours mg/l) 140.0

HEXAMETHYLDISILOXANE (Methyl siloxane)

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 106.0

Species Rat

TRANS-1,3,3,3-TETRAFLUOROPROP-1-ENE

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 207,000.0

Species Rat

ATE inhalation (vapours mg/l) 207,000.0

12. Ecological Information

Ecotoxicity Not known.

Toxicity Very toxic to aquatic organisms.

Ecological information on ingredients.

DIMETHYL CARBONATE

Acute toxicity - fish LC₅₀, 96 hours: 1000 mg/l, Leuciscus idus (Golden orfe)

HEXAMETHYLDISILOXANE (Methyl siloxane)

Toxicity Very toxic to aquatic organisms.

Acute toxicity - fish LC₅₀, 96 hours: 0.46 mg/l mg/l, Fish

Acute toxicity - aquatic invertebrates EC₅₀, 72 hours: 0.79 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 96 hours: > 0.93 mg/l, Selenastrum capricornutum

TRANS-1,3,3,3-TETRAFLUOROPROP-1-ENE

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: >160 mg/l, Daphnia magna

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Persistence and degradability

Persistence and degradability The degradability of the product is not known.

Ecological information on ingredients.

DIMETHYL CARBONATE

Persistence and degradability The product is readily biodegradable.

TRANS-1,3,3,3-TETRAFLUOROPROP-1-ENE

Persistence and degradability The product is not readily biodegradable.

Bioaccumulative potential

Bio-Accumulative Potential Bioaccumulation is unlikely to be significant because of the low water-solubility of this product.

Partition coefficient No information available.

Ecological information on ingredients.

DIMETHYL CARBONATE

Partition coefficient log Pow: 0.23

Mobility in soil

Mobility Not considered to be a significant hazard due to the small quantities used.

Other adverse effects

Other adverse effects None known.

13. Disposal considerations

Waste treatment methods

General information Reuse or recycle products wherever possible.

Disposal methods Empty containers must not be punctured or incinerated because of the risk of an explosion. Reuse or recycle products wherever possible. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

14. Transport information

UN Number

UN No. (IMDG) UN1950

UN No. (ICAO) UN1950

UN proper shipping name

Proper shipping name (TDG) LIMITED QUANTITY

Proper shipping name (IMDG) UN1950, AEROSOLS, FLAMMABLE, 2.1, LIMITED QUANTITY

Proper shipping name (ICAO) UN1950, AEROSOLS, FLAMMABLE, 2.1, LIMITED QUANTITY

Proper shipping name (DOT) LIMITED QUANTITY

Transport hazard class(es)

IMDG Class 2.1 LIMITED QUANTITY

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ICAO class/division 2.1 LIMITED QUANTITY

Packing group

TDG Packing Group N/A

IMDG packing group N/A

ICAO packing group N/A

DOT packing group N/A

Environmental hazards

Environmentally Hazardous Substance



Special precautions for user

EmS F-D, S-U

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)
Not listed.

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
Chronic
Fire
Pressure

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.

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

Not listed.

California Directors List of Hazardous Substances

Not listed.

Massachusetts "Right To Know" List

DIMETHYL CARBONATE

Present.

Rhode Island "Right To Know" List

Not listed.

Minnesota "Right To Know" List

Not listed.

New Jersey "Right To Know" List

DIMETHYL CARBONATE

Present.

Pennsylvania "Right To Know" List

DIMETHYL CARBONATE

Present.

Inventories

US - TSCA

All the ingredients are listed.

US - TSCA 12(b) Export Notification

Not listed.

16. Other information

Revision comments	NOTE: Lines within the margin indicate significant changes from the previous revision.
Revision date	4/4/2017
Revision	27
Supersedes date	3/21/2017
SDS No.	AEROSOL - VOC
SDS status	Approved.
Hazard statements in full	H222 Extremely flammable aerosol. H225 Highly flammable liquid and vapor. H280 Contains gas under pressure; may explode if heated.

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.