



MATERIAL SAFETY DATA SHEET

VOC - VOC FREE FLUX REMOVER -- ULTRACLEAN -- AEROSOL

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

PRODUCT NAME VOC - VOC FREE FLUX REMOVER -- ULTRACLEAN -- AEROSOL
PRODUCT NO. MCC-VOC10A
PRODUCT USE Cleaning agent.
SUPPLIER MICROCARE CORPORATION
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IDENTIFICATION No. UN1950

2 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

FLAMMABLE. Aerosol containers can explode when heated, due to excessive pressure build-up. Cool aerosol containers exposed to heat with water spray and remove container, if no risk is involved. Vapors are heavier than air and may travel along the floor and in the bottom of containers. Keep out of the reach of children.

PHYSICAL AND CHEMICAL HAZARDS

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.

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.

POTENTIAL HEALTH EFFECTS

INHALATION

May cause irritation to the respiratory system. Vapors may cause headache, fatigue, dizziness and nausea. Prolonged inhalation of high concentrations may damage respiratory system.

INGESTION

No harmful effects expected in amounts 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.

CARCINOGENICITY

This substance has no evidence of carcinogenic properties.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC No.	CAS-No.	Weight
DIMETHYL CARBONATE	210-478-4	616-38-6	10-30%
HEXAMETHYLDISILOXANE	203-492-7	107-46-0	30-60%
TRANS-1,3,3,3-TETRAFLUOROPROP-1-ENE	471-480-0	1645-83-6	10-30%

4 FIRST-AID MEASURES

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GENERAL INFORMATION

Promptly remove any clothing that becomes wet. Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

NOTES TO THE PHYSICIAN

Treat Symptomatically. No recommendation given, but first aid may still be required in case of accidental exposure, inhalation or ingestion of this chemical. If in doubt, GET MEDICAL ATTENTION PROMPTLY!

INHALATION

Move the exposed person to fresh air at once. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Keep the affected person warm and at rest. Get prompt medical attention.

INGESTION

DO NOT INDUCE VOMITING! Immediately rinse mouth and drink plenty of water (200-300 ml). Do not give victim anything to drink if he is unconscious. Consult a physician for specific advice.

SKIN CONTACT

Promptly wash contaminated skin with water. Promptly remove clothing if soaked through and wash the skin with water. Contact physician if irritation continues.

EYE CONTACT

Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

5 FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

Use: Powder. Dry chemicals, sand, dolomite etc. Water spray, fog or mist.

SPECIAL FIRE FIGHTING PROCEDURES

Containers close to fire should be removed or cooled with water. Use water to keep fire exposed containers cool and disperse vapors.

UNUSUAL FIRE & EXPLOSION HAZARDS

Aerosol cans may explode in a fire. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

SPECIFIC HAZARDS

Aerosol containers can explode when heated, due to excessive pressure build-up.

PROTECTIVE MEASURES IN FIRE

Self contained breathing apparatus and full protective clothing must be worn in case of fire.

FLAMMABILITY LIMIT - 1.25

LOWER(%)

FLAMMABILITY LIMIT - UPPER(%) 18.6

FLASH POINT (°C) TCC (Tag closed cup). 3.0 C / 37.0 F

6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS

Wear approved, tight fitting safety glasses where splashing is probable.

ENVIRONMENTAL PRECAUTIONS

Do not discharge into drains, water courses or onto the ground.

SPILL CLEAN UP METHODS

Wear necessary protective equipment. If leakage cannot be stopped, evacuate area. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Absorb in vermiculite, dry sand or earth and place into containers.

7 HANDLING AND STORAGE

HANDLING

Keep away from heat, sparks and open flame. Avoid spilling, skin and eye contact. Ventilate well, avoid breathing vapors. Use approved respirator if air contamination is above accepted level. Keep out of the reach of children.

STORAGE

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

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

INGREDIENT COMMENTS

WEL = Workplace Exposure Limits

PROTECTIVE EQUIPMENT

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Provide adequate general and local exhaust ventilation.

RESPIRATORY EQUIPMENT

No specific recommendation made, but respiratory protection must be used if the general level exceeds the Recommended Occupational Exposure Limit

HAND PROTECTION

For prolonged or repeated skin contact use suitable protective gloves. Gloves of nitrile rubber, PVA or Viton are recommended.

EYE PROTECTION

Use eye protection. Wear approved, tight fitting safety glasses where splashing is probable.

OTHER 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 hands 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.

9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Liquid
COLOR	Clear Colourless.
ODOR	Slight odor. Ether.
PHYSICAL DATA COMMENTS	Aerosol.
VOLATILITY DESCRIPTION	Volatile
SOLUBILITY	Not soluble in water.
BOILING POINT (°C)	85 C / 187.0 F
BULK DENSITY	0.850
VAPOR DENSITY (air=1)	> 1.0
VAPOR PRESSURE	44.6 mm Hg 25
VOLATILE BY VOL. (%)	100
FLASH POINT (°C)	3.0 C / 37.0 F TCC (Tag closed cup).
VOLATILE ORGANIC CONTENT	0 g/litre

10 STABILITY AND REACTIVITY**STABILITY**

Stable under normal temperature conditions.

CONDITIONS TO AVOID

Avoid heat, flames and other sources of ignition. Avoid contact with: Strong oxidizing agents. Strong alkalis. Strong mineral acids.

HAZARDOUS POLYMERISATION

Will not polymerise.

MATERIALS TO AVOID

Strong oxidizing substances.

HAZARDOUS DECOMPOSITION PRODUCTS

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors. Vapors/gases/fumes of: Silicon dioxide Formaldehyde

11 TOXICOLOGICAL INFORMATION

	DIMETHYL CARBONATE (CAS: 616-38-6)
TOXIC DOSE 1 - LD 50	12, 900 mg/kg (oral rat)
TOXIC DOSE 2 - LD 50	6, 000 mg/kg (oral-mouse)

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TOXIC CONC. - LC 50

TRANS-1,3,3,3-TETRAFLUOROPROP-1-ENE (CAS: 1645-83-6)

>207000 ppm/-- (ihl-rat)

TOXIC CONC. - LC 50

HEXAMETHYLDISILOXANE (CAS: 107-46-0)

87 mg/l/4h (inh-rat)

12 ECOLOGICAL INFORMATION**ECOTOXICITY**

Not known.

MOBILITY

Considering the limited amount applied during use and the size of the container, the risk of adverse effects is considered small.

BIOACCUMULATION

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

DEGRADABILITY

The degradability of the product has not been stated.

ACUTE FISH TOXICITY

Very toxic to aquatic organisms.

DIMETHYL CARBONATE (CAS: 616-38-6)

DEGRADABILITY

The product is biodegradable.

ACUTE FISH TOXICITY

Not considered toxic to fish.

TRANS-1,3,3,3-TETRAFLUOROPROP-1-ENE (CAS: 1645-83-6)

EC 50, 48 hrs, Daphnia, mg/l

>160

DEGRADABILITY

The product is heavily biodegradable.

HEXAMETHYLDISILOXANE (CAS: 107-46-0)

LC 50, 96 hrs, Fish mg/l

0.46 mg/l

ACUTE FISH TOXICITY

Very toxic to aquatic organisms.

13 DISPOSAL CONSIDERATIONS**WASTE MANAGEMENT**

Recover and reclaim or recycle, if practical.

DISPOSAL METHODS

Empty containers must not be burned because of explosion hazard. Recover and reclaim or recycle, if practical. Dispose of waste and residues in accordance with local authority requirements.

14 TRANSPORT INFORMATION

DOT PROPER SHIPPING NAME

AEROSOLS

DOT PROPER SHIPPING NAME

Limited Quantities

TDG SHIPPING NAME

AEROSOLS

ENVIRONMENTALLY

No.

HAZARDOUS

SUBSTANCE/MARINE

POLLUTANT

IDENTIFICATION No.

UN1950

UN NO. SEA

1950

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IMDG CLASS	2.1
IMDG PAGE NO.	94
IMDG PACK GR.	N/A
EMS	F-E, S-E
MFAG	See Subsection 4.2 of MFAG.
UN NO. AIR	1950
AIR CLASS	2.1
AIR SUB CLASS	N/A
AIR PACK GR.	N/A

15 REGULATORY INFORMATION**INVENTORIES**

COMPONENT	CAN	US	EU	AUS	JAP	KOR	CHN	PHLP
DIMETHYL CARBONATE	DSL	Yes.		Yes.	Yes.	Yes.	Yes.	Yes.

SARA (311/312) HAZARD CATEGORIES

Acute Chronic Fire

REGULATORY STATUS (US)

TSCA: The ingredients of this product are on the TSCA Inventory. This Product is Hazardous under the OSHA Hazard Communication Standard.

REGULATORY REFERENCES

NFPA30 Flammable and Combustible Liquids Code. 29 CFR 1910.1010 Federal Regulations (OSHA Standard).

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM -WHMIS**LABEL(S) FOR SUPPLY**

Compressed Gas.



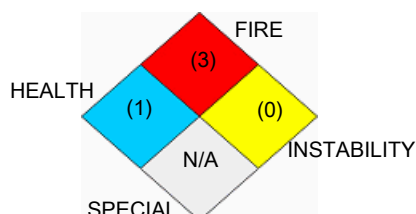
Flammable Aerosol.

Materials Causing Other
Toxic Effects.**CONTROLLED PRODUCT CLASSIFICATION**

Canadian WHMIS Classification A B5 D2A D2B WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (CPR SECTION (33)) This product has been classified according to the hazard criteria of the Controlled Product Regulations, and the MSDS contains all required information.

16 OTHER INFORMATION**HAZARDOUS MATERIAL INFORMATION SYSTEM (HMIS)**

HEALTH		1
FLAMMABILITY		3
PHYSICAL		0
PERSONAL PROTECTION	upervisor	

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

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REVISION COMMENTS

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

REVISION DATE 10/08/2012

VERSION No. 1

MATERIAL SAFETY DATA SHEET STATUS

Approved.

DATE 08-OCTOBER-2012

DISCLAIMER

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.