



SAFETY DATA SHEET

Opteon™ SF79 specialty fluid

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

1. Identification

Product identifier

Product name Opteon™ SF79 specialty fluid

Product number MCC-SF79GL, MCC-SF79GG, MCC-SF79G, MCC-SF79L, MCC-SF79P, MCC-SF79D

Synonyms; trade names Opteon™ Sion specialty fluid M2S-SIONGL, M2S-SIONGG, M2S-SIONG, M2S-SIONL, M2S-SIONP, M2S-SIOND, MicroCare Repackaged

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

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

Physical hazards Not Classified

Health hazards Acute Tox. 4 - H332 Eye Irrit. 2B - H320 STOT SE 3 - H336

Environmental hazards Aquatic Chronic 3 - H412

Human health Irritating to eyes.

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

Label elements

Opteon™ SF79 specialty fluid

Pictogram



Signal word

Warning

Hazard statements

H332 Harmful if inhaled.
 H320 Causes eye irritation.
 H336 May cause drowsiness or dizziness.
 H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P261 Avoid breathing vapor/ spray.
 P264 Wash contaminated skin thoroughly after handling.
 P271 Use only outdoors or in a well-ventilated area.
 P273 Avoid release to the environment.
 P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P312 Call a poison center/ doctor if you feel unwell.
 P337+P313 If eye irritation persists: Get medical advice/ attention.
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.
 P501 Dispose of contents/ container in accordance with national regulations.

Supplemental label information

Safety data sheet available on request. For use in industrial installations only.

Contains

trans-1,2-DICHLOROETHYLENE

Other hazards

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

3. Composition/information on ingredients

Mixtures

trans-1,2-DICHLOROETHYLENE	60-100%
CAS number: 156-60-5	
Classification Flam. Liq. 2 - H225 Acute Tox. 4 - H332 Aquatic Chronic 3 - H412	
Proprietary Fluorocarbon	Confidential
CAS number: Proprietary	
Classification Aquatic Chronic 4 - H413	
Proprietary A	<1%
CAS number: 138495-42-8	
Classification Aquatic Chronic 3 - H412	

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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

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 in high concentrations are anesthetic. Symptoms following overexposure may include the following: Headache. Fatigue. Dizziness. Central nervous system depression.

Ingestion May cause stomach pain or vomiting. May cause nausea, headache, dizziness and intoxication.

Skin contact Product has a defatting effect on skin. May cause allergic contact eczema.

Eye contact May cause temporary eye irritation.

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

Special hazards arising from the substance or mixture

Hazardous combustion products Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors. Oxides of carbon. Oxides of nitrogen. Hydrogen fluoride (HF). Halogenated hydrocarbons.

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.

Reference to other sections For personal protection, see Section 8. See Section 11 for additional information on health hazards.

7. Handling and storage

Specific end uses(s)

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

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

Proprietary A

No information available that would effect occupational exposure limit values.

ACGIH = American Conference of Governmental Industrial Hygienists.

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Additional Occupational Exposure Limits

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Clear liquid.
Color	Colorless.
Odor	Slight.
Odor threshold	No information available.
pH	Neutral
Initial boiling point and range	47°C/117°F @ unspecified
Flash point	The product is not flammable. Tag Closed Cup (ASTM D 56) Does not flash
Evaporation rate	8 (butyl acetate = 1)
Evaporation factor	No information available.
Upper/lower flammability or explosive limits	Not applicable. Upper flammable/explosive limit: 15.25 %(V) Lower flammable/explosive limit: 7.25 %(V)
Other flammability	The product is not flammable.
Vapor pressure	44.7 kPa @ unspecified°C
Vapor density	1.81
Relative density	1.29 @ 25°C/77°F
Bulk density	Not applicable.
Solubility(ies)	No information available.
Auto-ignition temperature	No information available.
Decomposition Temperature	No information available.
Viscosity	0.42 mPa s @ unspecified°C Kinematic viscosity ≤ 20.5 mm ² /s.
Explosive properties	No information available.
Oxidizing properties	There are no chemical groups present in the product that are associated with oxidizing properties.
Volatility	100%
Volatile organic compound	No information available.
Flammability	The product is not flammable.

10. Stability and reactivity

Reactivity	Not classified as a reactivity hazard.
Possibility of hazardous reactions	Vapors may form flammable mixture with air. In use may form flammable/explosive vapor-air mixture.
Conditions to avoid	None known.

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Materials to avoid None known.

Hazardous decomposition products No known hazardous decomposition products.

11. Toxicological information

Information on toxicological effects

Acute toxicity - inhalation

ATE inhalation (vapours mg/l) 11.58

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

Proprietary Fluorocarbon

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

Species Rat

ATE dermal (mg/kg) 5,000.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 222.15

Species Rat

ATE inhalation (vapours mg/l) 222.15

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

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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.
<u>Skin Contact</u>	
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.

Proprietary A

<u>Acute toxicity - oral</u>	
Acute toxicity oral (LD₅₀ mg/kg)	5,000.0
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>	

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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.
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.

12. Ecological information

Ecological information on ingredients.

trans-1,2-DICHLOROETHYLENE

Ecotoxicity Low acute toxicity to aquatic organisms.

Proprietary A

Ecotoxicity It is unlikely that the substance will dissolve in water in amounts big enough to have a toxic effect on fish and daphnies.

Ecological information on ingredients.

trans-1,2-DICHLOROETHYLENE

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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

Proprietary Fluorocarbon

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: >0.096 mg/l, Oryzias latipes (Red killifish)

Acute toxicity - aquatic invertebrates LC₅₀, 48 hours: >0.157 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 72 hours: >0.000477 mg/l, Pseudokirchneriella subcapitata

Proprietary A

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

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

Persistence and degradability

Ecological information on ingredients.

Proprietary Fluorocarbon

Biodegradation Inherently biodegradable.

Bioaccumulative potential

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.

Proprietary Fluorocarbon

Bio-Accumulative Potential BCF: 1990, Cyprinus carpio (Common carp)

Partition coefficient Pow: 4.9

Proprietary A

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

Ecological information on ingredients.

Opteon™ SF79 specialty fluid**trans-1,2-DICHLOROETHYLENE****Mobility**

The product has poor water-solubility.

13. Disposal considerations**14. Transport information****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.

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.

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.

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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

All the ingredients are listed.

US - TSCA 12(b) Export Notification

Proprietary Fluorocarbon

16. Other information

Revision date	1/4/2019
Revision	23
Supersedes date	12/4/2018
SDS No.	BULK - SF79
Hazard statements in full	H225 Highly flammable liquid and vapor. H320 Causes eye irritation. H332 Harmful if inhaled. H336 May cause drowsiness or dizziness. H412 Harmful to aquatic life with long lasting effects. H413 May cause long lasting harmful effects to aquatic life.

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.