# SAFETY DATA SHEET

FOD - STICKLERS OPTIC GRADE DUST and PARTICLE REMOVER


## 1. Identification

<table>
<thead>
<tr>
<th>Product identifier</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product name</strong></td>
<td></td>
</tr>
</tbody>
</table>
FOD - STICKLERS OPTIC GRADE DUST and PARTICLE REMOVER |
| **Product number** | 
MCC-FOD10A |

**Recommended use of the chemical and restrictions on use**

**Application**         Cleaning agent.  
**Uses advised against** No specific uses advised against are identified.

**Details of the supplier of the safety data sheet**

<table>
<thead>
<tr>
<th>Supplier</th>
<th>MICROCARE CORPORATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer</td>
<td>MICROCARE CORPORATION</td>
</tr>
<tr>
<td></td>
<td>595 John Downey Drive</td>
</tr>
<tr>
<td></td>
<td>New Britain, CT 06051</td>
</tr>
<tr>
<td></td>
<td>United States of America</td>
</tr>
<tr>
<td></td>
<td>CAGE: OATV9</td>
</tr>
<tr>
<td></td>
<td>Tel: +1 860-827-0626</td>
</tr>
<tr>
<td></td>
<td>Fax: +1 860-827-8105</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:techsupport@microcare.com">techsupport@microcare.com</a></td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Physical hazards</th>
<th>Press. Gas, Compressed - H280</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health hazards</td>
<td>Not Classified</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>Not Classified</td>
</tr>
</tbody>
</table>

**Human health**

Prolonged or repeated contact with skin may cause irritation, redness and dermatitis. Mild dermatitis, allergic skin rash.

**Physicochemical**

Aerosol containers can explode when heated, due to excessive pressure build-up. Vapors are heavier than air and may travel along the floor and accumulate in the bottom of containers. Gas or vapor displaces oxygen available for breathing (asphyxiating). Not considered to be a significant hazard due to the small quantities used.
FOD - STICKLERS OPTIC GRADE DUST and PARTICLE REMOVER

Pictogram

Signal word Warning

Hazard statements H280 Contains gas under pressure; may explode if heated.

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

<table>
<thead>
<tr>
<th>HFC-134a Tetrafluoroethane</th>
<th>60-100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number: 811-97-2</td>
<td></td>
</tr>
</tbody>
</table>

Classification
Press. Gas, Liquefied - H280

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

Description of first aid measures

General information If in doubt, get medical attention promptly. Show this Safety Data Sheet to the medical personnel.

Inhalation Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Loosen tight clothing such as collar, tie or belt. Get medical attention if symptoms are severe or persist.

Ingestion Rinse mouth thoroughly with water. Get medical advice/attention if you feel unwell. Do not induce vomiting unless under the direction of medical personnel.

Skin Contact Rinse with water.

Eye contact Remove any contact lenses and open eyelids wide apart. Rinse with water. Get medical attention if any discomfort continues.

Protection of first aiders First aid personnel should wear appropriate protective equipment during any rescue.

Most important symptoms and effects, both acute and delayed
FOD - STICKLERS OPTIC GRADE DUST and PARTICLE REMOVER

**General information**
The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

**Inhalation**
Spray/mists may cause respiratory tract irritation.

**Ingestion**
Due to the physical nature of this product, it is unlikely that ingestion will occur.

**Skin contact**
Repeated exposure may cause skin dryness or cracking.

**Eye contact**
May be slightly irritating to eyes. May cause discomfort.

**Indication of immediate medical attention and special treatment needed**

**Notes for the doctor**
Treat symptomatically.

5. **Fire-fighting measures**

**Extinguishing media**

**Suitable extinguishing media**
The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

**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. Bursting aerosol containers may be propelled from a fire at high speed. If aerosol cans are ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant.

**Hazardous combustion products**
Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors.

**Advice for firefighters**

**Protective actions during firefighting**
Avoid breathing fire gases or vapors. Evacuate area. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapors and protect men stopping the leak. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

**Special protective equipment for firefighters**
Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Standard Firefighter's clothing including helmets, protective boots and gloves will provide a basic level of protection for chemical incidents.

6. **Accidental release measures**

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions**
Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk. Do not touch or walk into spilled material. Evacuate area. Risk of explosion.

**Environmental precautions**

**Environmental precautions**
Avoid discharge into drains or watercourses or onto the ground.

**Methods and material for containment and cleaning up**
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Methods for cleaning up

Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Eliminate all ignition sources if safe to do so. No smoking, sparks, flames or other sources of ignition near spillage. Under normal conditions of handling and storage, spillages from aerosol containers are unlikely. If aerosol cans are ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. Small Spillages: Wipe up with an absorbent cloth and dispose of waste safely. Large Spillages: If the product is soluble in water, dilute the spillage with water and mop it up. Alternatively, or if it is not water-soluble, absorb the spillage with an inert, dry material and place it in a suitable waste disposal container. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. For waste disposal, see Section 13.

Reference to other sections

For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

7. Handling and storage

Precautions for safe handling

Usage precautions

Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Avoid exposing aerosol containers to high temperatures or direct sunlight. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Spray will evaporate and cool rapidly and may cause frostbite or cold burns if in contact with skin. Avoid contact with eyes. Avoid inhalation of vapors and spray/mists.

Advice on general occupational hygiene

Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse.

Conditions for safe storage, including any incompatibilities

Storage precautions

Store away from incompatible materials (see Section 10). Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage. Protect from sunlight. Do not store near heat sources or expose to high temperatures. Do not expose to temperatures exceeding 50°C/122°F.

Storage class

Chemical storage.

Specific end use(s)

The identified uses for this product are detailed in Section 1.

Reference to other sections

Store away from incompatible materials (see Section 10).

8. Exposure controls/Personal protection

Control parameters

Occupational exposure limits

HFC-134a Tetrafluoroethane

Long-term exposure limit (8-hour TWA): OES 4240 mg/m³

Additional Occupational Exposure Limits

Exposure controls

Protective equipment
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<table>
<thead>
<tr>
<th>Appropriate engineering controls</th>
<th>Provide adequate ventilation. Observe any occupational exposure limits for the product or ingredients.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye/face protection</td>
<td>Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses.</td>
</tr>
<tr>
<td>Hand protection</td>
<td>No specific hand protection recommended.</td>
</tr>
<tr>
<td>Other skin and body protection</td>
<td>Wear appropriate clothing to prevent repeated or prolonged skin contact.</td>
</tr>
<tr>
<td>Hygiene measures</td>
<td>Wash after use and before eating, smoking and using the toilet. Do not eat, drink or smoke when using this product.</td>
</tr>
<tr>
<td>Respiratory protection</td>
<td>Ensure all respiratory protective equipment is suitable for its intended use and is NIOSH approved. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with OSHA 1910.134. Full face mask respirators with replaceable filter cartridges should comply with OSHA 1910.134. Half mask and quarter mask respirators with replaceable filter cartridges should comply with OSHA 1910.134.</td>
</tr>
<tr>
<td>Environmental exposure controls</td>
<td>Keep container tightly sealed when not in use.</td>
</tr>
</tbody>
</table>

9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Information on basic physical and chemical properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
</tr>
<tr>
<td>Color</td>
</tr>
<tr>
<td>Odor</td>
</tr>
<tr>
<td>Odor threshold</td>
</tr>
<tr>
<td>pH</td>
</tr>
<tr>
<td>Initial boiling point and range</td>
</tr>
<tr>
<td>Flash point</td>
</tr>
<tr>
<td>Evaporation rate</td>
</tr>
<tr>
<td>Evaporation factor</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
</tr>
<tr>
<td>Other flammability</td>
</tr>
<tr>
<td>Vapor pressure</td>
</tr>
<tr>
<td>Vapor density</td>
</tr>
<tr>
<td>Relative density</td>
</tr>
<tr>
<td>Bulk density</td>
</tr>
<tr>
<td>Solubility(ies)</td>
</tr>
<tr>
<td>Partition coefficient</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
</tr>
</tbody>
</table>

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Viscosity
No information available.

Comments
Aerosol.

Refractive index
Not determined.

Particle size
Not applicable.

Molecular weight
No information available.

Vaporization
100%

Saturation concentration
No information available.

Critical temperature
No information available.

Volatile organic compound
Not applicable.

10. Stability and reactivity

Reactivity
See the other subsections of this section for further details.

Stability
Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.

Possibility of hazardous reactions
No potentially hazardous reactions known.

Conditions to avoid
Avoid exposing aerosol containers to high temperatures or direct sunlight. Pressurised container: may burst if heated

Materials to avoid
No specific material or group of materials is likely to react with the product to produce a hazardous situation.

Hazardous decomposition products
Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors.

11. Toxicological information

Information on toxicological effects

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

Acute toxicity - oral
Notes (oral LD₅₀)
Based on available data the classification criteria are not met.

Acute toxicity - dermal
Notes (dermal LD₅₀)
Based on available data the classification criteria are not met.

Acute toxicity - inhalation
Notes (inhalation LC₅₀)
Based on available data the classification criteria are not met.

Skin corrosion/irritation
Animal data
Based on available data the classification criteria are not met.

Serious eye damage/irritation
Based on available data the classification criteria are not met.

Respiratory sensitization
Based on available data the classification criteria are not met.
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**Skin sensitization**
Based on available data the classification criteria are not met.

**Germ cell mutagenicity**
Based on available data the classification criteria are not met.

**Carcinogenicity**
Based on available data the classification criteria are not met.

**IARC carcinogenicity**
None of the ingredients are listed or exempt.

**Reproductive toxicity**
Based on available data the classification criteria are not met.

**Specific target organ toxicity - single exposure**
STOT - single exposure Not classified as a specific target organ toxicant after a single exposure.

**Specific target organ toxicity - repeated exposure**
STOT - repeated exposure Not classified as a specific target organ toxicant after repeated exposure.

**Aspiration hazard**
Based on available data the classification criteria are not met.

**General information**
The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

**Inhalation**
Spray/mists may cause respiratory tract irritation.

**Ingestion**
Due to the physical nature of this product, it is unlikely that ingestion will occur.

**Skin Contact**
Repeated exposure may cause skin dryness or cracking.

**Eye contact**
May be slightly irritating to eyes. May cause discomfort.

**Route of exposure**
Ingestion Inhalation Skin and/or eye contact

**Target Organs**
No specific target organs known.

**Toxicological information on ingredients.**

**HFC-134a Tetrafluoroethane**

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

**Acute toxicity - inhalation**

<table>
<thead>
<tr>
<th>Acute toxicity inhalation (LC₅₀ gases ppmV)</th>
<th>567,000.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Species</td>
<td>Rat</td>
</tr>
</tbody>
</table>

**Inhalation**
Vapors irritate the respiratory system. May cause coughing and difficulties in breathing.
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Ingestion
May cause stomach pain or vomiting. May cause nausea, headache, dizziness and intoxication.

Skin Contact
May cause allergic contact eczema. Contact with liquid form may cause frostbite.

Eye contact
May cause temporary eye irritation.

12. Ecological information

Ecotoxicity
Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

Toxicity
Based on available data the classification criteria are not met.

Ecological information on ingredients.

HFC-134a Tetrafluoroethane

Acute aquatic toxicity
Acute toxicity - fish LC₅₀, 96 hours: 450 mg/l, Fish
Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 980 mg/l, Daphnia magna

Persistence and degradability

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

Bio-accumulative potential

Bio-Accumulative Potential
No data available on bioaccumulation.

Partition coefficient
No information available.

Ecological information on ingredients.

HFC-134a Tetrafluoroethane

Partition coefficient
Pow: 1.06

Mobility in soil

Mobility
The product contains volatile organic compounds (VOCs) which will evaporate easily from all surfaces.

Other adverse effects

Other adverse effects
None known.

13. Disposal considerations

Waste treatment methods

General information
The generation of waste should be minimized or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.
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Disposal methods
Do not empty into drains. Empty containers must not be punctured or incinerated because of the risk of an explosion. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labeled with their contents.

14. Transport information

DOT transport notes
As supplied, this product is consigned under the Limited Quantities provisions.

UN Number
UN No. (IMDG) 1950
UN No. (ICAO) 1950

UN proper shipping name
Proper shipping name (TDG) LIMITED QUANTITY
Proper shipping name (IMDG) UN1950 AEROSOLS, NON-FLAMMABLE, 2.2, LIMITED QUANTITY
Proper shipping name (ICAO) UN1950 AEROSOLS, NON-FLAMMABLE, 2.2, LIMITED QUANTITY

Proper shipping name (DOT) LIMITED QUANTITY

Transport hazard class(es)
IMDG Class 2.2
ICAO class/division 2.2

Packing group
ICAO packing group Not Applicable

Environmental hazards
Environmentally Hazardous Substance No.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable. No information required.

15. Regulatory information

Guidance Workplace Exposure Limits EH40.
Introduction to Local Exhaust Ventilation HS(G)37.

US Federal Regulations
SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities None of the ingredients are listed or exempt.

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA) None of the ingredients are listed or exempt.

SARA Extremely Hazardous Substances EPCRA Reportable Quantities None of the ingredients are listed or exempt.

SARA 313 Emission Reporting None of the ingredients are listed or exempt.
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CAA Accidental Release Prevention
None of the ingredients are listed or exempt.

FDA - Essential Chemical
None of the ingredients are listed or exempt.

FDA - Precursor Chemical
None of the ingredients are listed or exempt.

SARA (311/312) Hazard Categories
None of the ingredients are listed or exempt.

OSHA Highly Hazardous Chemicals
None of the ingredients are listed or exempt.

US State Regulations
California Proposition 65 Carcinogens and Reproductive Toxins
None of the ingredients are listed or exempt.

California Air Toxics "Hot Spots" (A-I)
None of the ingredients are listed or exempt.

California Air Toxics "Hot Spots" (A-II)
None of the ingredients are listed or exempt.

California Directors List of Hazardous Substances
None of the ingredients are listed or exempt.

Massachusetts "Right To Know" List
None of the ingredients are listed or exempt.

Rhode Island "Right To Know" List
None of the ingredients are listed or exempt.

Minnesota "Right To Know" List
All the ingredients are listed or exempt.
HFC-134a Tetrafluoroethane
Present.

New Jersey "Right To Know" List
None of the ingredients are listed or exempt.

Pennsylvania "Right To Know" List
None of the ingredients are listed or exempt.

Inventories
Canada - DSL/NDSL
DSL

US - TSCA
Present.

US - TSCA 12(b) Export Notification
Not listed.

16. Other information
**FOD - STICKLERS OPTIC GRADE DUST and PARTICLE REMOVER**

<table>
<thead>
<tr>
<th>Classification abbreviations and acronyms</th>
<th>Aerosol = Aerosol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training advice</td>
<td>Only trained personnel should use this material.</td>
</tr>
<tr>
<td>Revision comments</td>
<td>NOTE: Lines within the margin indicate significant changes from the previous revision.</td>
</tr>
<tr>
<td>Revision date</td>
<td>1/23/2019</td>
</tr>
<tr>
<td>Revision</td>
<td>42</td>
</tr>
<tr>
<td>Supersedes date</td>
<td>1/23/2019</td>
</tr>
<tr>
<td>SDS No.</td>
<td>AEROSOL - FOD</td>
</tr>
<tr>
<td>SDS status</td>
<td>Approved.</td>
</tr>
<tr>
<td>Hazard statements in full</td>
<td>H280 Contains gas under pressure; may explode if heated.</td>
</tr>
</tbody>
</table>

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.