



SAFETY DATA SHEET

PFR POLAR FLUX REMOVER, AEROSOL

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

1. Identification

Product identifier

Product name PFR POLAR FLUX REMOVER, AEROSOL
Product number MCC-PFR10A, MCC-PFR107, MCC-PFR10Y

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: +1 860-827-8105
 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 Skin Irrit. 2 - H315 Eye Irrit. 2A - H319 Repr. 2 - H361f STOT SE 3 - H336 STOT RE 2 - H373
 Asp. Tox. 1 - H304

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 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



PFR POLAR FLUX REMOVER, AEROSOL

Signal word	Danger
Hazard statements	<p>H222 Extremely flammable aerosol.</p> <p>H304 May be fatal if swallowed and enters airways.</p> <p>H315 Causes skin irritation.</p> <p>H319 Causes serious eye irritation.</p> <p>H336 May cause drowsiness or dizziness.</p> <p>H361f Suspected of damaging fertility.</p> <p>H373 May cause damage to organs through prolonged or repeated exposure.</p>
Precautionary statements	<p>P210 Keep away from heat, sparks, open flames and hot surfaces. No smoking.</p> <p>P211 Do not spray on an open flame or other ignition source.</p> <p>P251 Pressurized container: Do not pierce or burn, even after use</p> <p>P261 Avoid breathing spray.</p> <p>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.</p> <p>P302+P352 If on skin: Wash with plenty of water.</p> <p>P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P314 Get medical advice/ attention if you feel unwell.</p> <p>P332+P313 If skin irritation occurs: Get medical advice/ attention.</p> <p>P337+P313 If eye irritation persists: Get medical advice/ attention.</p> <p>P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.</p> <p>P501 Dispose of contents/ container in accordance with national regulations.</p>
Supplemental label information	Safety data sheet available on request. For use in industrial installations only.
Contains	ACETONE, HEXANE-norm

Other hazards

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

3. Composition/information on ingredients

Mixtures

ACETONE CAS number: 67-64-1	30-60%
Classification Flam. Liq. 2 - H225 Eye Irrit. 2A - H319 STOT SE 3 - H336	
TRANS-1,3,3,3-TETRAFLUOROPROP-1-ENE CAS number: 29118-24-9	10-30%
Classification Press. Gas, Liquefied - H280	

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HEXANE-norm	10-30%
CAS number: 110-54-3	
Classification	
Flam. Liq. 2 - H225	
Skin Irrit. 2 - H315	
Repr. 2 - H361f	
STOT SE 3 - H336	
STOT RE 2 - H373	
Asp. Tox. 1 - H304	
Not relevant.	
METHANOL	<1%
CAS number: 67-56-1	
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 TSCA: The ingredients of this product are on the TSCA Inventory. 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	Promptly remove any clothing that becomes wet or contaminated. Move affected person to fresh air at once. Get medical attention if any discomfort continues.
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.

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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	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. 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

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.
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Environmental precautions

Environmental precautions	Do not discharge into drains or watercourses or onto the ground.
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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.
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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. Keep out of the reach of children.
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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

ACETONE

Long-term exposure limit (8-hour TWA): ACGIH 250 ppm 594 mg/m³

Short-term exposure limit (15-minute): ACGIH 500 ppm 1187 mg/m³

A4

Long-term exposure limit (8-hour TWA): OSHA 1000 ppm 2400 mg/m³

HEXANE-norm

Long-term exposure limit (8-hour TWA): OSHA 500 ppm 1800 mg/m³

Long-term exposure limit (8-hour TWA): ACGIH 50 ppm 176 mg/m³

Sk

METHANOL

Long-term exposure limit (8-hour TWA): ACGIH 200 ppm 262 mg/m³

Short-term exposure limit (15-minute): ACGIH 250 ppm 328 mg/m³

Sk

Long-term exposure limit (8-hour TWA): OSHA 200 ppm 260 mg/m³

ACGIH = American Conference of Governmental Industrial Hygienists.

OSHA = Occupational Safety and Health Administration.

A4 = Not Classifiable as a Human Carcinogen.

Sk = Danger of cutaneous absorption.

Additional Occupational Exposure Limits

Ingredient comments WEL = Workplace Exposure Limits

METHANOL (CAS: 67-56-1)

Biological limit values 15 mg/l

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.

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).

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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.
Color	Clear liquid. Colorless.
Odor	Acetone.
Odor threshold	No information available.
pH	No information available.
Melting point	No information available.
Initial boiling point and range	55°C/131°F @ 101.3 kPa
Flash point	Not determined.
Evaporation rate	No information available.
Evaporation factor	No information available.
Upper/lower flammability or explosive limits	Not determined.
Other flammability	No information available.
Vapor pressure	Not determined.
Vapor density	Not determined.
Relative density	0.75
Bulk density	No information available.
Solubility(ies)	Not determined.
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.
Comments	Aerosol.
Refractive index	No information available.
Particle size	No information available.
Molecular weight	Not applicable.
Volatility	100%

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Saturation concentration	No information available.
Critical temperature	No information available.
Volatile organic compound	This product contains a maximum VOC content of 190 g/l.
Flammability	Flammable aerosol.

10. Stability and reactivity

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	Fire creates: Vapors/gases/fumes of: Carbon monoxide (CO). Carbon dioxide (CO ₂). Hydrogen fluoride (HF).

11. Toxicological information

Information on toxicological effects

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

Acute toxicity - oral

ATE oral (mg/kg) 14,814.81

Acute toxicity - dermal

ATE dermal (mg/kg) 44,444.44

Acute toxicity - inhalation

ATE inhalation (vapours mg/l) 444.44

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

Skin Contact Product has a defatting effect on skin. May cause skin irritation/eczema.

Eye contact Irritating to eyes.

Toxicological information on ingredients.

ACETONE

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 50,100.0

ATE inhalation (vapours mg/l) 50,100.0

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

Acute toxicity - inhalation

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

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Species	Rat
ATE inhalation (vapours mg/l)	207,000.0

METHANOL

<u>Acute toxicity - oral</u>	
ATE oral (mg/kg)	100.0
<u>Acute toxicity - dermal</u>	
ATE dermal (mg/kg)	300.0
<u>Acute toxicity - inhalation</u>	
Acute toxicity inhalation (LC₅₀ vapours mg/l)	87.5
ATE inhalation (vapours mg/l)	87.5

12. Ecological Information**Ecological information on ingredients.****TRANS-1,3,3,3-TETRAFLUOROPROP-1-ENE****Acute aquatic toxicity**

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

METHANOL**Acute aquatic toxicity**

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

Persistence and degradability**Ecological information on ingredients.****ACETONE****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

Partition coefficient No information available.

Ecological information on ingredients.**ACETONE**

PFR POLAR FLUX REMOVER, AEROSOL**Bio-Accumulative Potential** No information available.**Partition coefficient** log Pow: -0.24**METHANOL****Partition coefficient** : -0.77**Mobility in soil****Mobility** Not considered to be a significant hazard due to the small quantities used.**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**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**
No.**Special precautions for user****EmS** F-D, S-U

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Transport in bulk according to Not applicable.
Annex II of MARPOL 73/78
and the IBC Code

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)

METHANOL

Final CERCLA RQ: 5000(2270) pounds (Kilograms)

ACETONE

Final CERCLA RQ: 5000(2270) pounds (Kilograms)

HEXANE-norm

Final CERCLA RQ: 5000(2270) pounds (Kilograms)

SARA Extremely Hazardous Substances EPCRA Reportable Quantities

Not listed.

SARA 313 Emission Reporting

METHANOL

1.0 %

HEXANE-norm

1.0 %

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

Known to the State of California to cause developmental and reproductive toxicity.

METHANOL

HEXANE-norm

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

METHANOL

Present.

HEXANE-norm

Present.

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

Not listed.

California Directors List of Hazardous Substances

METHANOL

Present.

ACETONE

Present.

Massachusetts "Right To Know" List

METHANOL

Present.

ACETONE

Present.

HEXANE-norm

Present.

Rhode Island "Right To Know" List

METHANOL

Present.

ACETONE

Present.

HEXANE-norm

Present.

Minnesota "Right To Know" List

METHANOL

Present.

ACETONE

Present.

HEXANE-norm

Present.

New Jersey "Right To Know" List

METHANOL

Present.

ACETONE

Present.

HEXANE-norm

Present.

Pennsylvania "Right To Know" List

METHANOL

Present.

ACETONE

Present.

PFR POLAR FLUX REMOVER, AEROSOL*HEXANE-norm*

Present.

Inventories**Canada - DSL/NDSL**

DSL

US - TSCA

Yes

16. Other information

Revision comments	NOTE: Lines within the margin indicate significant changes from the previous revision.
Revision date	5/1/2018
Revision	45
Supersedes date	5/1/2018
SDS No.	AEROSOL - PFR
Hazard statements in full	<p>H222 Extremely flammable aerosol.</p> <p>H225 Highly flammable liquid and vapor.</p> <p>H280 Contains gas under pressure; may explode if heated.</p> <p>H301 Toxic if swallowed.</p> <p>H304 May be fatal if swallowed and enters airways.</p> <p>H311 Toxic in contact with skin.</p> <p>H315 Causes skin irritation.</p> <p>H319 Causes serious eye irritation.</p> <p>H331 Toxic if inhaled.</p> <p>H336 May cause drowsiness or dizziness.</p> <p>H361f Suspected of damaging fertility.</p> <p>H370 Causes damage to organs .</p> <p>H373 May cause damage to organs through prolonged or repeated exposure.</p>

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.