SAFETY DATA SHEET
XF020 - DURAGLIDE DRY LUBRICANT (2% PTFE SOLIDS) - BULK

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier
Product name: XF020 - DURAGLIDE DRY LUBRICANT (2% PTFE SOLIDS) - BULK

1.2. Relevant identified uses of the substance or mixture and uses advised against
Identified uses: Lubricant.

1.3. Details of the supplier of the safety data sheet
Supplier: MICROCARE EUROPE BVBA
VEKEESTRAAT 29 B11
INDUSTRIEZONE 'T SAS
1910 KAMPENHOUT, Belgium
Phone: +32.2.251.95.05
Fax: +32.2.400.96.39

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

1.4. Emergency telephone number
Emergency telephone: CHEMTREC UK (London) +(44)-870-8200418 +1 703-741-5970 (from anywhere in the world)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Classification (EC 1272/2008)
Physical hazards: Not Classified
Health hazards: Not Classified
Environmental hazards: Aquatic Chronic 3 - H412

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

Environmental: The product contains a substance which is harmful to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.
Physicochemical
Vapours are heavier than air and may travel along the floor and accumulate in the bottom of containers. Gas or vapour displaces oxygen available for breathing (asphyxiant).

2.2. Label elements

Hazard statements
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements
P273 Avoid release to the environment.
P501 Dispose of contents/container in accordance with national regulations.

Supplemental label information
EUH210 Safety data sheet available on request.
RCH001a For use in industrial installations only.

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

SECTION 3: Composition/information on ingredients

3.2. Mixtures

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,1,1,2,2,3,4,5,5,5-decafluoropentane</td>
<td>60-100%</td>
</tr>
<tr>
<td>CAS number: 138495-42-8</td>
<td></td>
</tr>
<tr>
<td>EC number: 420-640-8</td>
<td></td>
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<tr>
<td>REACH registration number: 01-211944695-28-0000</td>
<td></td>
</tr>
</tbody>
</table>

Classification
Aquatic Chronic 3 - H412

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poly-tfe, omega-hydro-alpha-(methylcyclohexyl)</td>
<td>1-5%</td>
</tr>
<tr>
<td>CAS number: 65530-85-0</td>
<td></td>
</tr>
</tbody>
</table>

Classification
Not Classified

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

Composition comments
The data shown are in accordance with the latest EC Directives.

Composition

SECTION 4: First aid measures

4.1. Description of first aid measures

General information
Never give anything by mouth to an unconscious person. Do not induce vomiting. Place unconscious person on the side in the recovery position and ensure breathing can take place. If breathing stops, provide artificial respiration.

Inhalation
Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention.

Ingestion
Never give anything by mouth to an unconscious person. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Place unconscious person on their side in the recovery position and ensure breathing can take place. Get medical attention immediately.

Skin contact
Wash skin thoroughly with soap and water. 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 and get medical attention.
XF020 - DURAGLIDE DRY LUBRICANT (2% PTFE SOLIDS) - BULK

4.2. 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 Vapours in high concentrations are anaesthetic. 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.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor No specific recommendations. If in doubt, get medical attention promptly.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media The product is not flammable. Use fire-extinguishing media suitable for the surrounding fire.

Unsuitable extinguishing media Water spray. Never use water by itself on spillage; this will spread the spill and cause further contamination.

5.2. Special hazards arising from the substance or mixture

Specific hazards Keep away from heat, sparks and open flame. Thermal decomposition or combustion products may include the following substances: Toxic and corrosive gases or vapours. Closed containers can burst violently when heated, due to excess pressure build-up.


5.3. Advice for firefighters

Protective actions during firefighting Containers close to fire should be removed or cooled with water.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Warn everybody of potential hazards and evacuate if necessary. Provide adequate ventilation. Avoid inhalation of vapours. Use approved respirator if air contamination is above an acceptable level. In case of spills, beware of slippery floors and surfaces.

6.2. Environmental precautions

Environmental precautions Contain spillage with sand, earth or other suitable non-combustible material. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Methods for cleaning up
Absorb spillage with non-combustible, absorbent material. Do not discharge into drains or watercourses or onto the ground. Contain and absorb spillage with sand, earth or other non-combustible material. Collect spillage with a shovel and broom, or similar and reuse, if possible. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. It is recommended that gloves are made of the following material: Neoprene.

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

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Usage precautions
Provide adequate ventilation. Avoid inhalation of vapours/spray and contact with skin and eyes. Keep out of the reach of children.

7.2. Conditions for safe storage, including any incompatibilities
Storage precautions
Store in tightly-closed, original container in a dry, cool and well-ventilated place.

Storage class
Unspecified storage. The product is not flammable.

7.3. Specific end use(s)
Specific end use(s)
The identified uses for this product are detailed in Section 1.2.
Reference to other sections
Store away from incompatible materials (see Section 10).

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters
Occupational exposure limits
1,1,1,2,2,3,4,5,5,5-decafluoropentane
No information available that would effect occupational exposure limit values.

Additional Occupational Exposure Limits

8.2. Exposure controls
Protective equipment

Appropriate engineering controls
No specific ventilation requirements. This product must not be handled in a confined space without adequate 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. Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles or face shield.

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).
**XF020 - DURAGLIDE DRY LUBRICANT (2% PTFE SOLIDS) - BULK**

Other skin and body protection

Wear suitable protective clothing as protection against splashing or contamination. Wear apron or protective clothing in case of contact.

Hygiene measures

Avoid inhalation of spray mist and contact with skin and eyes. When using do not eat, drink or smoke. Wash skin thoroughly after handling.

Respiratory protection

Vapours are heavier than air and may travel along the floor and accumulate in the bottom of containers. In confined or poorly-ventilated spaces, a supplied-air respirator must be worn. Wear self-contained breathing apparatus with full facepiece.

Thermal hazards

Keep away from heat, sparks and open flame. Thermal decomposition or combustion products may include the following substances: Toxic and corrosive gases or vapours.

### SECTION 9: Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Opaque liquid. Liquid. Waxy solid.</td>
</tr>
<tr>
<td>Colour</td>
<td>White/off-white.</td>
</tr>
<tr>
<td>Odour</td>
<td>Slight. Ether.</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No information available.</td>
</tr>
<tr>
<td>pH</td>
<td>No information available.</td>
</tr>
<tr>
<td>Melting point</td>
<td>No information available.</td>
</tr>
<tr>
<td>Initial boiling point and range</td>
<td>55°C/131°F @ 101.3 kPa</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not relevant. Technically not feasible.</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No information available.</td>
</tr>
<tr>
<td>Evaporation factor</td>
<td>No information available.</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Other flammability</td>
<td>The product is not flammable.</td>
</tr>
<tr>
<td>Vapour density</td>
<td>4</td>
</tr>
<tr>
<td>Relative density</td>
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<tr>
<td>Bulk density</td>
<td>No information available.</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>Insoluble in water.</td>
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<tr>
<td>Partition coefficient</td>
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<tr>
<td>Auto-ignition temperature</td>
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<tr>
<td>Decomposition Temperature</td>
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<tr>
<td>Viscosity</td>
<td>No information available.</td>
</tr>
<tr>
<td>Explosive properties</td>
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</table>

9.2. Other information

<table>
<thead>
<tr>
<th>Property</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refractive index</td>
<td>No information available.</td>
</tr>
<tr>
<td>Particle size</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Molecular weight</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>
XF020 - DURAGLIDE DRY LUBRICANT (2% PTFE SOLIDS) - BULK

Volatile
98%

Saturation concentration
No information available.

Critical temperature
No information available.

Volatile organic compound
No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity
Reactivity
There are no known reactivity hazards associated with this product.

10.2. Chemical stability
Stability
Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions
Possibility of hazardous reactions
Not applicable.

10.4. Conditions to avoid
Conditions to avoid
Keep away from heat, sparks and open flame. Thermal decomposition or combustion products may include the following substances: Toxic and corrosive gases or vapours.

10.5. Incompatible materials
Materials to avoid
Alkali metals. Alkaline earth metals. Powdered metal.

10.6. Hazardous decomposition products
Hazardous decomposition products
Heating may generate the following products: Toxic and corrosive gases or vapours. Halogenated hydrocarbons. Hydrogen fluoride (HF). Carbon dioxide (CO2). Carbon monoxide (CO).

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Inhalation
Vapours may irritate throat/respiratory system. A single exposure may cause the following adverse effects: Coughing. Difficulty in breathing.

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.

Medical symptoms
Gas or vapour in high concentrations may irritate the respiratory system. Symptoms following overexposure may include the following: Headache. Fatigue. Nausea, vomiting.

Toxicological information on ingredients:

1,1,1,2,2,3,4,5,5-decafluoropentane

<table>
<thead>
<tr>
<th>Acute toxicity - oral</th>
<th>1,1,1,2,2,3,4,5,5-decafluoropentane</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity oral (LD₅₀ mg/kg)</td>
<td>5,000.0</td>
</tr>
<tr>
<td>Species</td>
<td>Rat</td>
</tr>
<tr>
<td>ATE oral (mg/kg)</td>
<td>5,000.0</td>
</tr>
</tbody>
</table>
**XF020 - DURAGLIDE DRY LUBRICANT (2% PTFE SOLIDS) - BULK**

**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) 114.0
Species Rat
ATE inhalation (vapours mg/l) 114.0

**Skin corrosion/irritation**
Animal data Not irritating. Rabbit
Human skin model test Data lacking.

**Serious eye damage/irritation**
Serious eye damage/irritation Not irritating. Rabbit

**Respiratory sensitisation**
Respiratory sensitisation Data lacking.

**Skin sensitisation**
Skin sensitisation Not sensitising. - Guinea pig: Not sensitising.

**Germ cell mutagenicity**
Genotoxicity - in vitro This substance has no evidence of mutagenic properties.
Genotoxicity - in vivo This substance has no evidence of mutagenic properties.

**Carcinogenicity**
Carcinogenicity Does not contain any substances known to be carcinogenic.
IARC carcinogenicity Not listed.

**Reproductive toxicity**
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.

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**SECTION 12: Ecological Information**
Ecotoxicity

The product contains a substance which is toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

Ecological information on ingredients.

1,1,1,2,2,3,4,5,5,5-decafluoropentane

Ecotoxicity

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

12.1. Toxicity

Ecological information on ingredients.

1,1,1,2,2,3,4,5,5,5-decafluoropentane

Acute toxicity - fish

LC₅₀, 96 hours: 13.9 mg/l, Onchorhynchus 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, Fish

12.2. Persistence and degradability

Persistence and degradability

There are no data on the degradability of this product.

12.3. Bioaccumulative potential

Bioaccumulative potential

No data available on bioaccumulation.

Partition coefficient

No information available.

Ecological information on ingredients.

1,1,1,2,2,3,4,5,5,5-decafluoropentane

Bioaccumulative potential

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

Partition coefficient

Pow: 2.7

12.4. Mobility in soil

Mobility

No data available.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment

This product does not contain any substances classified as PBT or vPvB. No data available.

12.6. Other adverse effects

Other adverse effects

The product contains a substance or substances that will contribute to global warming (greenhouse effect).

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information

Waste should be treated as controlled waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

Disposal methods

Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Reuse or recycle products wherever possible.
XF020 - DURAGLIDE DRY LUBRICANT (2% PTFE SOLIDS) - BULK

SECTION 14: Transport information

General
Not regulated. The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

14.2. UN proper shipping name
No information required.

14.3. Transport hazard class(es)
No information required.

Transport labels
No transport warning sign required.

14.4. Packing group
No information required.

14.5. Environmental hazards
Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user
Not applicable.

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

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
EU legislation

15.2. Chemical safety assessment
No chemical safety assessment has been carried out.

SECTION 16: Other information

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

Revision date
04/08/2017

Revision
13

Supersedes date
26/04/2017

SDS number
BULK - XF020

SDS status
Approved.

Hazard statements in full
H412 Harmful to aquatic life with long lasting effects.

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.