



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Revision Number 1
Revision date 11/03/2024

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

1.1. Product identifier

Product Name TERGO™ XCF3
Product Code(s) MCC-TXCF3GL, MCC-TXCF3G, MCC-TXCF3P, MCC-TXCF3D
Safety data sheet number BULK-TXCF3
Unique Formula Identifier (UFI) JR40-Y0HW-C002-66Q4
Pure substance/mixture Mixture

Contains trans-1,2-DICHLOROETHYLENE; (Z)-1-chloro-2,3,3-trifluoropropene

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

Recommended use Cleaning agent
Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Manufacturer

MicroCare UK Ltd
Unit 4, Whitehall Court
Leeds
LS12 5SN
United Kingdom
Tel: +44 (0) 113 3609019
Email: MCCEurope@MicroCare.com
For further information, please contact

Contact Point el: +44 (0) 113 3609019

E-mail address mcceurope@microcare.com

1.4. Emergency telephone number

Emergency Telephone INFOTRAC +44 330 027 0156 (UK)
1-352-323-3500 (from anywhere in the world)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to
Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity - Oral	Category 4 - (H302)
Acute toxicity - Inhalation (Dusts/Mists)	Category 4 - (H332)
Specific target organ toxicity — single exposure	Category 3 - (H335, H336)

Chronic aquatic toxicity	Category 3 - (H412)
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2.2. Label elements

Contains trans-1,2-DICHLOROETHYLENE; (Z)-1-chloro-2,3,3-trifluoropropene



Signal word

Warning

Hazard statements

- H302 - Harmful if swallowed
- H332 - Harmful if inhaled
- H412 - Harmful to aquatic life with long lasting effects
- H336 - May cause drowsiness or dizziness
- EUH210 - Safety data sheet available on request

Precautionary Statements - EU (§28, 1272/2008)

- P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
- P264 - Wash face, hands and any exposed skin thoroughly after handling.
- P273 - Avoid release to the environment.
- P312 - Call a POISON CENTER or doctor if you feel unwell.
- P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
- P501 - Dispose of contents/ container to an approved waste disposal plant.

Unknown acute toxicity

- 100 % of the mixture consists of ingredient(s) of unknown acute toxicity.
- 15 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.
- 30 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

Unknown aquatic toxicity Contains 0 % of components with unknown hazards to the aquatic environment.

Additional information

This product requires tactile warnings if supplied to the general public.

2.3. Other hazards

Other hazards No information available.
PBT & vPvB None known. This product does not contain any known or suspected endocrine disruptors.

Endocrine Disruptor Information This product does not contain any known or suspected endocrine disruptors.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Chemical name	Weight-%	REACH registration number	EC No (EU Index No)	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
trans-1,2-DICHLOROETHYLENE 156-60-5	50 - <100%	01-2120093504-55-00 03	(602-026-00-3) 205-860-2	Acute Tox. 4 (H332) Aquatic Chronic 3 (H412) Flam. Liq. 2 (H225)	-	-	-

(Z)-1-chloro-2,3,3-tri fluoropropene 1263679-68-0	25 - <50%	01-2120811806-55-00 00	824-458-3	Aquatic Chronic 3 (H412) STOT SE 3 (H336)	-	-	-
(E)-1-chloro-2,3,3-tri fluoropropene 1263679-71-5	2.5 - <5%	01-2120811806-55-00 00	-	Aquatic Chronic 3 (H412) STOT SE 3 (H336)	-	-	-

Full text of H- and EUH-phrases: see section 16Acute Toxicity Estimate

If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATEmix) for classifying a mixture based on its components

Chemical name	Oral LD50 mg/kg	Dermal LD50 mg/kg	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapour - mg/L	Inhalation LC50 - 4 hour - gas - ppm
trans-1,2-DICHLOROET HYLENE 156-60-5	1235	5000	No data available	95.5523	No data available

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (Regulation (EC) No. 1907/2006 (REACH), Article 59)

SECTION 4: First aid measures**4.1. Description of first aid measures****General advice**

Show this safety data sheet to the doctor in attendance.

Inhalation

Remove to fresh air. IF exposed or concerned: Get medical advice/attention. If symptoms persist, call a doctor. If breathing has stopped, give artificial respiration. Get medical attention immediately.

Eye contact

Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a doctor.

Skin contact

Wash skin with soap and water. In the case of skin irritation or allergic reactions see a doctor.

Ingestion

Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get medical attention.

Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid breathing vapours or mists. Use personal protective equipment as required. See section 8 for more information.

4.2. Most important symptoms and effects, both acute and delayed**Symptoms**

Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting. Coughing and/ or wheezing. Difficulty in breathing.

Effects of Exposure

None.

4.3. Indication of any immediate medical attention and special treatment needed**Note to doctors**

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical No information available.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid breathing vapours or mists.

Other information Refer to protective measures listed in Sections 7 and 8.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Take up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation. Avoid breathing vapours or mists. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product.

General hygiene considerations Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

Storage class (TRGS 510) LGK 10.

7.3. Specific end use(s)

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

Chemical name	Supplier OEL
(Z)-1-chloro-2,3,3-trifluoropropene 1263679-68-0	TWA: 250 ppm

Chemical name	European Union	Austria	Belgium	Bulgaria	Croatia
trans-1,2-DICHLOROET HYLENE 156-60-5	-	TWA: 200 ppm TWA: 790 mg/m ³ STEL 800 ppm STEL 3160 mg/m ³	TWA: 200 ppm TWA: 805 mg/m ³	-	TWA: 200 ppm TWA: 806 mg/m ³ STEL: 250 ppm STEL: 1010 mg/m ³
Chemical name	Cyprus	Czech Republic	Denmark	Estonia	Finland
trans-1,2-DICHLOROET HYLENE 156-60-5	-	TWA: 800 mg/m ³ Ceiling: 1600 mg/m ³	TWA: 200 ppm TWA: 790 mg/m ³ STEL: 400 ppm STEL: 1580 mg/m ³	-	TWA: 200 ppm TWA: 800 mg/m ³ STEL: 250 ppm STEL: 1000 mg/m ³
Chemical name	France	Germany TRGS	Germany DFG	Greece	Hungary
trans-1,2-DICHLOROET HYLENE 156-60-5	-	TWA: 200 ppm TWA: 800 mg/m ³	TWA: 200 ppm TWA: 800 mg/m ³ Peak: 400 ppm Peak: 1600 mg/m ³	TWA: 200 ppm TWA: 790 mg/m ³ STEL: 250 ppm STEL: 1000 mg/m ³	TWA: 200 ppm TWA: 800 mg/m ³ STEL: 400 ppm STEL: 1580 mg/m ³
Chemical name	Ireland	Italy MDLPS	Italy AIDII	Latvia	Lithuania
trans-1,2-DICHLOROET HYLENE 156-60-5	TWA: 200 ppm TWA: 790 mg/m ³ STEL: 600 ppm STEL: 2370 mg/m ³	-	TWA: 200 ppm TWA: 793 mg/m ³	-	-
Chemical name	Luxembourg	Malta	Netherlands	Norway	Poland
trans-1,2-DICHLOROET HYLENE 156-60-5	-	-	-	TWA: 100 ppm TWA: 395 mg/m ³ STEL: 150 ppm STEL: 493.75 mg/m ³	TWA: 700 mg/m ³
Chemical name	Portugal	Romania	Slovakia	Slovenia	Spain
trans-1,2-DICHLOROET HYLENE 156-60-5	TWA: 200 ppm	TWA: 50 ppm TWA: 200 mg/m ³ STEL: 76 ppm STEL: 300 mg/m ³	TWA: 200 ppm TWA: 800 mg/m ³ Ceiling: 1010 mg/m ³	TWA: 200 ppm TWA: 800 mg/m ³ STEL: 400 ppm STEL: 1600 mg/m ³	TWA: 200 ppm TWA: 807 mg/m ³
Chemical name	Sweden		Switzerland	United Kingdom	
trans-1,2-DICHLOROETHYLEN E 156-60-5	-		TWA: 200 ppm TWA: 790 mg/m ³ STEL: 400 ppm STEL: 1580 mg/m ³	TWA: 200 ppm TWA: 806 mg/m ³ STEL: 250 ppm STEL: 1010 mg/m ³	

Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Derived No Effect Level (DNEL) - Workers

Chemical name	Oral	Dermal	Inhalation
trans-1,2-DICHLOROETHYLENE 156-60-5	-	-	797 mg/m ³ [4] [6]

Notes

[4] Systemic health effects.
[6] Long term.

Derived No Effect Level (DNEL) - General Public

Chemical name	Oral	Dermal	Inhalation
trans-1,2-DICHLOROETHYLENE 156-60-5	57 mg/kg bw/day [4] [6]	-	198 mg/m ³ [4] [6]

Notes

[4] Systemic health effects.
[6] Long term.

Predicted No Effect Concentration (PNEC)

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
trans-1,2-DICHLOROETHYLENE 156-60-5	36.4 µg/L	363.6 µg/L	3.6 µg/L	-	-

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
trans-1,2-DICHLOROETHYLENE 156-60-5	548.3 µg/kg sediment dw	54.8 µg/kg sediment dw	17 mg/L	56.3 µg/kg soil dw	-

8.2. Exposure controls

Engineering controls

No information available.

Personal protective equipment

Eye/face protection

No special protective equipment required.

Skin and body protection

No special protective equipment required.

Respiratory protection

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations

Do not eat, drink or smoke when using this product.

Environmental exposure controls

No information available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Clear liquid
Colour	colourless
Odour	Chlorinated hydrocarbons.
Odour threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	48.5 °C	None known
Flammability	No data available	Not flammable
Flammability Limit in Air		
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Flash point	No data available	Does not flash, Tag closed cup (ASTM D 56)
Autoignition temperature	No data available	
Decomposition temperature		
pH	No data available	
pH (as aqueous solution)	No data available	
Kinematic viscosity	No data available	
Dynamic viscosity	No data available	
Water solubility		
Solubility(ies)	No data available	
Partition coefficient	No data available	
Vapour pressure	No data available	
Relative density	No data available	
Bulk density	No data available	
Liquid Density	1.29	
Relative vapour density	No data available	
Particle characteristics		
Particle Size	No information available	
Particle Size Distribution	No information available	

9.2. Other information

Volatility	100%
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9.2.1. Information with regards to physical hazard classes
Not applicable

9.2.2. Other safety characteristics
No information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	No information available.
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10.2. Chemical stability

Stability	Stable under normal conditions.
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Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid Excessive heat.

10.5. Incompatible materials

Incompatible materials None known based on information supplied.

10.6. Hazardous decomposition products

Hazardous decomposition products None known based on information supplied.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Information on likely routes of exposure

Product Information

Inhalation	May cause irritation of respiratory tract. May cause drowsiness or dizziness. Specific test data for the substance or mixture is not available. Harmful by inhalation. (based on components).
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	Specific test data for the substance or mixture is not available.
Ingestion	Specific test data for the substance or mixture is not available. Harmful if swallowed. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting. Coughing and/ or wheezing.

Acute toxicity Harmful if swallowed. Harmful by inhalation.

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	1,324.40 mg/kg
ATEmix (dermal)	5,000.00 mg/kg
ATEmix (inhalation-gas)	99,999.00 ppm
ATEmix (inhalation-vapour)	95.60 mg/l
ATEmix (inhalation-dust/mist)	1.50 mg/l

Unknown acute toxicity

15 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.
30 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
trans-1,2-DICHLOROETHYLEN E	= 1235 mg/kg (Rat)	> 5000 mg/kg (Rabbit)	= 24100 ppm (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitisation No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity No information available.

STOT - single exposure May cause respiratory irritation. May cause drowsiness or dizziness.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Endocrine disrupting properties No information available.

11.2.2. Other information

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity Harmful to aquatic life with long lasting effects.

Unknown aquatic toxicity Contains 0 % of components with unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
trans-1,2-DICHLOROETHYLENE	-	LC50: =135mg/L (96h, Lepomis macrochirus)	-	-

12.2. Persistence and degradability

Persistence and degradability No information available.

12.3. Bioaccumulative potential

Bioaccumulation

Component Information

Chemical name	Partition coefficient
trans-1,2-DICHLOROETHYLENE	2.06
(Z)-1-chloro-2,3,3-trifluoropropene	1.9

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment The product does not contain any substance(s) classified as PBT or vPvB above the

threshold of declaration.

Chemical name	PBT and vPvB assessment
trans-1,2-DICHLOROETHYLENE	The substance is not PBT / vPvB
(Z)-1-chloro-2,3,3-trifluoropropene	The substance is not PBT / vPvB

12.6. Endocrine disrupting properties

Endocrine disrupting properties No information available.

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

SECTION 14: Transport information

IATA

14.1 UN number or ID number Not applicable
 14.2 UN proper shipping name Not applicable
 14.3 Transport hazard class(es) Not applicable
 14.4 Packing group Not applicable
 14.5 Environmental hazards Not applicable
 14.6 Special precautions for user Not applicable

IMDG

14.1 UN number or ID number Not regulated
 14.2 UN proper shipping name Not applicable
 14.3 Transport hazard class(es) Not applicable
 14.4 Packing group Not applicable
 14.5 Environmental hazards Not applicable
 14.6 Special precautions for user Not applicable
 14.7 Maritime transport in bulk according to IMO instruments Not applicable

ADR

14.1 UN number or ID number Not regulated
 14.2 UN proper shipping name Not applicable
 14.3 Transport hazard class(es) Not applicable
 14.4 Packing group Not applicable
 14.5 Environmental hazards Not applicable
 14.6 Special precautions for user Not applicable

ADN

14.1 UN number or ID number Not regulated
 14.2 UN proper shipping name Not regulated
 14.3 Transport hazard class(es) Not regulated
 14.4 Packing group Not regulated

14.5 Environmental hazard	Not applicable
14.6 Special precautions for user Special Provisions	None

SECTION 15: Regulatory information

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

National regulations

Germany

Water hazard class (WGK) non-hazardous to water (nwg)

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Persistent Organic Pollutants

Not applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable

15.2. Chemical safety assessment

Chemical Safety Report No information available

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3

H225 - Highly flammable liquid and vapour
H332 - Harmful if inhaled
H336 - May cause drowsiness or dizziness
H412 - Harmful to aquatic life with long lasting effects

Legend

SVHC: Substances of Very High Concern for Authorisation:

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	Sk*	Skin designation
+	Sensitisers		

Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)
 European Chemicals Agency (ECHA) (ECHA_API)
 Environmental Protection Agency
 Acute Exposure Guideline Level(s) (AEGL(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 National Institute of Technology and Evaluation (NITE)
 Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 U.S. National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
 Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme
 Organisation for Economic Co-operation and Development Screening Information Data Set
 World Health Organization

Revision date 11/03/2024

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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, unless specified in the text.

End of Safety Data Sheet