

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

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

1.1. Product identifier

Trade name/designation:

MCF15

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

Kühlmittel

Relevant identified uses:

Sector of uses [SU]

SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites

1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

MIG-O-MAT Mikrofügetechnik GmbH

Werksstraße 20 57299 Burbach

Telephone: +49 (0) 2736 4154 0 **Telefax:** +49 (0) 2736 4154 99 **E-mail:** info@mig-o-mat.com **Website:** www.mig-o-mat.com

E-mail (competent person): reach@tuev-sued.de

TÜV SÜD Industrie Service GmbH - Environmental Service REACH - Westendstraße 199 - 80686 Munich -

Germany +49 (0) 89 5791 3031

1.4. Emergency telephone number

Antipoison Center Munich , 24h: +49 (0) 89 19240

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Hazard classes and hazard categories		Classification pro- cedure
Acute toxicity (oral) (Acute Tox. 4)		Minimum classifica- tion.
	,	Minimum classifica- tion.

2.2. Label elements

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

Hazard pictograms:



GHS08 Health hazard

Signal word: Warning

Hazard components for labelling:

ethane-1,2-diol

hazard statements for health hazards		
H302	Harmful if swallowed.	
H373.8	May cause damage to kidneys through prolonged or repeated exposure if swallowed.	

Supplemental Hazard information (EU): -

Precautionary statements Prevention		
P264.1	Wash hands thoroughly after handling.	

MCF15

Revision date: 20-Jul-2015 Version: 2 Print date: 20-Jul-2015

MIG-O-MAT

Precautionary statements Response		
P301 + P310.1	IF SWALLOWED: Immediately call a POISON CENTER.	
P314	Get medical advice/attention if you feel unwell.	

2.3. Other hazards

Adverse physicochemical effects:

No information available.

Adverse human health effects and symptoms:

No information available.

Adverse environmental effects:

No information available.

Other adverse effects:

No information available.

SECTION 3: Composition / information on ingredients

3.2. Mixtures

Hazardous ingredients / Hazardous impurities / Stabilisers:

Product identifiers	Substance name Classification according to Regulation (EC) No. 1272/2008 [CLP]	Concen- tration
CAS No.: 7732-18-5 EC No.: 231-791-2	water	> 60 - < 75 Wt %
CAS No.: 107-21-1 EC No.: 203-473-3	ethane-1,2-diol Acute Tox. 4, STOT RE 2 Warning H302-H373.8	> 25 - < 40 Wt %

Full text of H- and EUH-phrases: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:

Remove affected person from the danger area and lay down.

Following inhalation:

Provide fresh air.

In case of skin contact:

After contact with skin, wash immediately with plenty of water and soap.

After eye contact:

Rinse immediately carefully and thoroughly with eye-bath or water.

In case of eye irritation consult an ophthalmologist.

After ingestion:

Do NOT induce vomiting.

Rinse mouth immediately and drink plenty of water.

If swallowed, seek medical advice immediately and show this container or label.

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

No known symptoms to date.

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

No special measures are required.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Carbon dioxide (CO2)

Full water jet

alcohol resistant foam

ABC-powder

Unsuitable extinguishing media:

Strong water jet

5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated: Carbon dioxide (CO2)

MCF15

Revision date: 20-Jul-2015 Version: 2 Print date: 20-Jul-2015

MIG-O-MAT

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

5.4. Additional information

Co-ordinate fire-fighting measures to the fire surroundings.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Personal precautions:

Remove persons to safety.

Keep unprotected people away and stay on the upwind side. Remove all sources of ignition.

For emergency responders

Wear personal protection equipment.

6.1.2. For emergency responders

No data available

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

For cleaning up:

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

Ventilate affected area.

6.4. Reference to other sections

No data available

6.5. Additional information

See protective measures under point 7 and 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protective measures

Advices on safe handling:

Use only in well-ventilated areas.

Keep out of the reach of children.

Fire prevent measures:

Usual measures for fire prevention.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels:

Keep/Store only in original container.

Hints on storage assembly:

Materials to avoid Oxidising agent

Do not store together with: Food and fodder

Storage class: 10 - Combustible liquids that cannot be assigned to any of the above storage classes

Further information on storage conditions:

No special measures are required.

7.3. Specific end use(s)

Recommendation:

refer to chapter 1.



SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. Occupational exposure limit values

Limit value type (country of origin)	Substance name	 long-term occupational exposure limit value short-term occupational exposure limit value Instantaneous value Monitoring and observation processes remark
TRGS 900 (DE)	ethane-1,2-diol CAS No.: 107-21-1	① 10 ppm (26 mg/m³) ② 20 ppm (52 mg/m³)
IOELV (EU)	ethane-1,2-diol CAS No.: 107-21-1	① 20 ppm (52 mg/m³) ② 40 ppm (104 mg/m³)

8.1.2. biological limit values

No data available

8.1.3. DNEL-/PNEC-values

Substance name	① DNEL type ② Exposure route
ethane-1,2-diol CAS No.: 107-21-1	DNEL worker DNEL long-term inhalative (systemic)

Substance name	PNEC Value	① PNEC type
ethane-1,2-diol CAS No.: 107-21-1	10 mg/l	① PNEC aquatic, freshwater

8.2. Exposure controls

8.2.1. Appropriate engineering controls

All work processes must always be designed so that the following is as low as possible:

Eye contact Skin contact .

Inhalation

If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means.

8.2.2. Personal protection equipment

Eye/face protection:

Eye protection: not required.

In case of increased risk, additionally

Tightly sealed safety glasses.

Skin protection:

Protect skin by using skin protective cream. Hand protection: By short-term hand contact

Hand protection: not required.

In case of prolonged or frequently repeated skin contact:

Wear protective gloves.

Suitable material: NBR (Nitrile rubber)
Thickness of the glove material: 0,4 mm

Breakthrough time (maximum wearing time): Permeation: Level >= 6

Respiratory protection:

Respiratory protection A

Respiratory protection necessary at: aerosol or mist formation

Other protection measures:

Protective clothing: Only wear fitting, comfortable and clean protective clothing.

General health and safety measures: Take off immediately all contaminated clothing.

Wash hands before breaks and after work. Avoid contact with skin, eyes and clothes.

MIG·O·MAT

Page 5/8

8.2.3. Environmental exposure controls

No data available

8.3. Additional information

No data available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state: liquid Colour: colourless

Odour: characteristic Odour threshold: not determined

Safety relevant basis data

parameter		at °C	Method	remark
рН	6 - 8	25 °C		
Melting point/freezing point	-15 °C			
Freezing point	not determined			
Initial boiling point and boiling range	85 - 100 °C			
Decomposition temperature (°C):	not determined			
Flash point	> 100 °C		estimated	
Evaporation rate	not determined			
Ignition temperature in °C	not determined			von '> 450 °' bis ''
Upper/lower flammability or explosive limits	not applicable		not applicable	
Vapour pressure	not determined		not determined	
Vapour density	not determined			
Density	not determined			
Bulk density	not determined			
Water solubility (g/L)	not determined			
Partition coefficient: n-octanol/ water	-1.36		Active agent	
Dynamic viscosity	5 - 15 mPa*s	20 °C	estimated	
Kinematic viscosity	not determined	40 °C		

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is stable under storage at normal ambient temperatures.

10.2. Chemical stability

The mixture is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

Heat

10.5. Incompatible materials

Oxidising agent, strong

Alkali (lye)

10.6. Hazardous decomposition products

Thermal decomposition can lead to the escape of irritating gases and vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

CAS No.	Substance name	Toxicological information
107-21-1	ethane-1,2-diol	LD₅₀ oral: =7,712 mg/kg (Rat)

Acute oral toxicity:

Calculation method.

© TÜV SÜD Industrie Service GmbH	en / DE

MIG-O-MAT

Acute dermal toxicity:

no classification

Acute inhalation toxicity:

no classification

Skin corrosion/irritation:

Not an irritant.

Eve damage/irritation:

Not an irritant.

Respiratory or skin sensitisation:

not sensitising.

Germ cell mutagenicity:

No experimental indications of in vivo mutagenicity exist.

Carcinogenicity:

Longterm experiments do not indicate carcinogenic effects.

Reproductive toxicity:

No evidence for reproductive toxicity in experimental animals.

STOT-single exposure:

no classification

STOT-repeated exposure:

May cause damage to kidneys through prolonged or repeated exposure if swallowed.

Aspiration hazard:

no classification

SECTION 12: Ecological information

12.1. Toxicity

CAS No.	Substance name	Toxicological information
107-21-1	ethane-1,2-diol	LC₅₀: =72,860 mg/l 4 d

Aquatic toxicity:

no classification

Terrestrial toxicity:

not applicable

Effects in sewage plants:

Technically correct releases of minimal concentrations to adapted biological sewage treatment facility, will not disturb the biodegradability of activated sludge.

12.2. Persistence and degradability

CAS No.	Substance name	Biodegradation	remark
107-21-1	ethane-1,2-diol	Yes, rapidly	

Additional information:

Further ecological information: Readily biodegradable (according to OECD criteria). Biodegradation > 90%

12.3. Bioaccumulative potential

CAS No.	Substance name	Log K _{OC}	Bioconcentration factor (BCF)
107-21-1	ethane-1,2-diol	-1.36	

Partition coefficient: n-octanol/water:

-1.36; Method: Active agent

Accumulation / Evaluation:

No indication of bioaccumulation potential.

12.4. Mobility in soil

No adsoption in soil or sediment.

12.5. Results of PBT and vPvB assessment

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

12.6. Other adverse effects

Chemical oyxgen demand (COD): 1245 mg O2/mg Data apply to the technically active substance.

MIG-O-MAT

Page 7/8

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Consult the appropriate local waste disposal expert about waste disposal.

13.1.1. Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

Waste code product:

07 07 04 * Other organic solvents, washing liquids and mother liquors

*: Evidence for disposal must be provided.

Waste code packaging:

07 07 04 * other organic solvents, washing liquids and mother liquors

*: Evidence for disposal must be provided.

Waste treatment options

Appropriate disposal / Package:

Contaminated packages must be completely emptied and can be re-used following proper cleaning.

13.2. Additional information

No data available

SECTION 14: Transport information

No dangerous good in sense of these transport regulations.

14.1. UN-No.

not relevant

14.2. UN proper shipping name

not relevant

14.3. Transport hazard class(es)

not relevant

14.4. Packing group

not relevant

14.5. Environmental hazards

not relevant

14.6. Special precautions for user

not relevant

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

SECTION 15: Regulatory information

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

15.1.1. EU legislation

No data available

15.1.2. National regulations

[DE] National regulations

Restrictions of occupation

5 MuSchRiV.

22 JArbSchG.

4 MuSchRiV.

Water hazard class (WGK)

WGK:

1 - schwach wassergefährdend

15.2. Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

MCF15

Revision date: 20-Jul-2015 Version: 2 Print date: 20-Jul-2015

MIG·O·MAT

15.3. Additional information

No data available

SECTION 16: Other information

16.1. Indication of changes

- 2.1. Classification of the substance or mixture
- 2.2. Label elements
- 3.2. Mixtures

16.2. Abbreviations and acronyms

No data available

16.3. Key literature references and sources for data

Dossier:

EC Number:203-473-3 EC Name: ethane-1,2-diol Last modified:08 Jun 2015

16.4. Classification for mixtures and used evaluation method according to regulation (EC) 1272/2008 [CLP]

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

Hazard classes and hazard categories		Classification pro- cedure
Acute toxicity (oral) (Acute Tox. 4)		Minimum classifica- tion.
STOT-repeated exposure (STOT RE 2)	,	Minimum classifica- tion.

16.5. Relevant R-, H- and EUH-phrases (Number and full text)

Hazard statements			
H302	Harmful if swallowed.		
H373	May cause damage to organs through prolonged or repeated exposure.		

16.6. Training advice

No data available

16.7. Additional information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

-

This Safety Data Sheet was drawn up by TÜV SÜD Industrie Service GmbH (see below), based on data from the supplier, who is named in section 1 and who is responsible for this document.

TÜV SÜD Industrie Service GmbH Department Environmental Service

Westendstraße 199 80686 Munich - Germany