

Safety Data Sheet

according to UK REACH Regulation

JMC Kühlmittel JM 12++

Revision date: 17.01.2024

Page 1 of 9

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

JMC Kühlmittel JM 12++

UFI: 4FGG-V889-6G01-PJ39

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

Antifreeze agent

1.3. Details of the supplier of the safety data sheet**Manufacturer**

Company name: Johannes J. Matthies GmbH & Co. KG
Street: Hammerbrookstr. 97
Place: D-20097 Hamburg
Telephone: + 49 (0) 40 2 37 21-0
e-mail: info@matthies.de
Internet: www.matthies.de

Supplier

Company name: Larsson UK Ltd.
Street: 7 Alpha Court, Phoenix Parkway
Place: GB-NN17 5DP Corby
Telephone: + 44 1536 265633
e-mail: info@larsson.uk.com
Internet: www.larsson.uk.com

1.4. Emergency telephone number:

+ 44 1536 265633

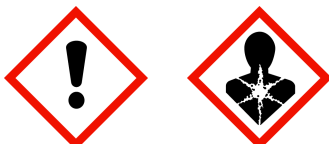
SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****GB CLP Regulation**

Acute Tox. 4; H302
Skin Irrit. 2; H315
Eye Irrit. 2; H319
STOT RE 2; H373

Full text of hazard statements: see SECTION 16.

2.2. Label elements**GB CLP Regulation****Hazard components for labelling**

ethanediol, ethylene glycol
Potassium 3,5,5-trimethylhexanoate

Signal word: Warning**Pictograms:**

Safety Data Sheet

according to UK REACH Regulation

JMC Kühlmittel JM 12++

Revision date: 17.01.2024

Page 2 of 9

Hazard statements

H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H373	May cause damage to kidneys through prolonged or repeated exposure if swallowed.

Precautionary statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read carefully and follow all instructions.
P260	Do not breathe mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P280	Wear eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P501	Dispose of waste according to applicable legislation.

2.3. Other hazards

Results of PBT and vPvB assessment: not applicable

SECTION 3: Composition/information on ingredients**3.2. Mixtures****Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
107-21-1	ethanediol, ethylene glycol			> 90 - < 100 %
	203-473-3	603-027-00-1		
	Acute Tox. 4, STOT RE 2; H302 H373			
93918-10-6	Potassium 3,5,5-trimethylhexanoate			> 1 - < 3 %
	299-890-3			
	Acute Tox. 4, Skin Corr. 1, Eye Dam. 1; H302 H314 H318			

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
107-21-1	203-473-3	ethanediol, ethylene glycol	> 90 - < 100 %
	dermal: LD50 = > 3500 mg/kg; oral: ATE = 500 mg/kg		
93918-10-6	299-890-3	Potassium 3,5,5-trimethylhexanoate	> 1 - < 3 %
	oral: ATE = 500 mg/kg		

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

If unconscious but breathing normally, place in recovery position and seek medical advice.
 Remove contaminated, saturated clothing immediately.
 Remove person to fresh air and keep comfortable for breathing.

After inhalation

Provide fresh air. When in doubt or if symptoms are observed, get medical advice.

Safety Data Sheet

according to UK REACH Regulation

JMC Kühlmittel JM 12++

Revision date: 17.01.2024

Page 3 of 9

After contact with skin

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

After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

After ingestion

Rinse mouth immediately and drink plenty of water.

Call a physician immediately.

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

Symptoms may develop several hours following exposure; medical observation therefore necessary for at least 48 hours.

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

Observe risk of aspiration if vomiting occurs.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

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

5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated: Gases/vapours, toxic. Carbon monoxide. Carbon dioxide.

5.3. Advice for firefighters

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

Full protection suit

Additional information

Use water spray jet to protect personnel and to cool endangered containers. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures****General advice**

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Provide adequate ventilation.

For non-emergency personnel

Use personal protection equipment.

For emergency responders

Use personal protection equipment.

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 containment**

Stop leak if safe to do so.

For cleaning up

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

Treat the recovered material as prescribed in the section on waste disposal.

Provide adequate ventilation.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage

Safety Data Sheet

according to UK REACH Regulation

JMC Kühlmittel JM 12++

Revision date: 17.01.2024

Page 4 of 9

7.1. Precautions for safe handling**Advice on safe handling**

Keep container tightly closed.
 Store in a cool dry place.
 Provide adequate ventilation. Avoid: generation/formation of aerosols.

Advice on protection against fire and explosion

In case of insufficient ventilation, wear suitable respiratory equipment.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep/Store only in original container.

Hints on joint storage

Do not store together with: Food and feedingstuffs

Further information on storage conditions

none

7.3. Specific end use(s)

Antifreeze agent

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
107-21-1	Ethane-1,2-diol, vapour	20	52		TWA (8 h)	WEL
		40	104		STEL (15 min)	WEL

8.2. Exposure controls**Appropriate engineering controls**

See section 7. No additional measures necessary.

Protective and hygiene measures

Keep away from food, drink and animal feedingstuffs.
 Wash hands before breaks and after work.
 Avoid contact with eyes and skin. Thorough skin-cleansing after handling the product. When using do not eat, drink or smoke. Take off contaminated clothing.

Eye/face protection

Wear eye/face protection.

Hand protection

Wear suitable gloves.
 Suitable material: NBR (Nitrile rubber), PVA (Polyvinyl alcohol), CR (polychloroprene, chloroprene rubber), Butyl caoutchouc (butyl rubber)

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Safety Data Sheet

according to UK REACH Regulation

JMC Kühlmittel JM 12++

Revision date: 17.01.2024

Page 5 of 9

Skin protection

Wear suitable protective clothing.

Respiratory protection

short-term: Filtering device (full mask or mouthpiece) with filter: A/P2

In case of major fire and large quantities: : Self-contained respirator (breathing apparatus)

Environmental exposure controls

Avoid release to the environment.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state:	Liquid
Colour:	pink/violett
Odour:	characteristic
Odour threshold:	not determined
pH-Value (at 20 °C):	7,5 - 9

Changes in the physical state

Melting point/freezing point: (-37 °C @ 50 %) -12 °C

Boiling point or initial boiling point and boiling range: > 170 °C

Flash point: 111 °C

Lower explosion limits: 3,2 vol. %

Upper explosion limits: 53 vol. %

Auto-ignition temperature: > 400 °C

Decomposition temperature: not determined

Vapour pressure: 0,08 hPa
(at 20 °C)Density (at 20 °C): 1,12 g/cm³

Water solubility: completely miscible

Solubility in other solvents

not determined

Partition coefficient n-octanol/water: not determined

Viscosity / kinematic: not determined

Relative vapour density: not determined

9.2. Other information

No information available.

SECTION 10: Stability and reactivity**10.1. Reactivity**

No information available.

10.2. Chemical stability

No hazardous reaction when handled and stored according to provisions.

Keep away from heat.

10.3. Possibility of hazardous reactions

Reaction with: Acids, Alkali (Iye), Oxidizing agent.

10.4. Conditions to avoid

No information available.

Safety Data Sheet

according to UK REACH Regulation

JMC Kühlmittel JM 12++

Revision date: 17.01.2024

Page 6 of 9

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information**11.1. Information on hazard classes as defined in GB CLP Regulation****Acute toxicity**

Harmful if swallowed.

ATEmix calculated

ATE (oral) 515,1 mg/kg

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
107-21-1	ethanediol, ethylene glycol				
	oral	ATE 500 mg/kg			
	dermal	LD50 > 3500 mg/kg	Rabbit	Manufacturer	
93918-10-6	Potassium 3,5,5-trimethylhexanoate				
	oral	ATE 500 mg/kg			

Irritation and corrosivity

Causes skin irritation.

Causes serious eye irritation.

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

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

STOT-single exposure

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

STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure. (ethanediol, ethylene glycol)

Organs affected: kidneys

Aspiration hazard

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

11.2. Information on other hazards**Endocrine disrupting properties**

none

SECTION 12: Ecological information**12.1. Toxicity**

The product is not: Ecotoxic.

12.2. Persistence and degradability

Biodegradable.

12.3. Bioaccumulative potential

Based on the n-octanol/water partition coefficient accumulation in organisms is not expected.

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

Safety Data Sheet

according to UK REACH Regulation

JMC Kühlmittel JM 12++

Revision date: 17.01.2024

Page 7 of 9

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No information available.

Further information

Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Collect the waste separately. Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

List of Wastes Code - residues/unused products

160114 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08); antifreeze fluids containing hazardous substances; hazardous waste

List of Wastes Code - used product

160114 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08); antifreeze fluids containing hazardous substances; hazardous waste

Contaminated packaging

Dispose of waste according to applicable legislation.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

14.1. UN number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

14.1. UN number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

Safety Data Sheet

according to UK REACH Regulation

JMC Kühlmittel JM 12++

Revision date: 17.01.2024

Page 8 of 9

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

No information available.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 3

2010/75/EU (VOC): 0 %

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (D): 2 - obviously hazardous to water

Additional information

Observe in addition any national regulations!

15.2. Chemical safety assessment

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

SECTION 16: Other information**Abbreviations and acronyms**

CLP: Classification, labelling and Packaging

REACH: Registration, Evaluation and Authorization of Chemicals

GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals

UN: United Nations

CAS: Chemical Abstracts Service

M-Factor: Multiplication Factor

DNEL: Derived No Effect Level

DMEL: Derived Minimal Effect Level

PNEC: Predicted No Effect Concentration

ATE: Acute toxicity estimate

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

LL50: Lethal loading, 50%

EL50: Effect loading, 50%

EC50: Effective Concentration 50%

ErC50: Effective Concentration 50%, growth rate

NOEC: No Observed Effect Concentration

BCF: Bio-concentration factor

PBT: persistent, bioaccumulative, toxic

vPvB: very persistent, very bioaccumulative

ADR: Accord européen sur le transport des marchandises dangereuses par Route

(European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Regulations concerning the international carriage of dangerous goods by rail

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
(Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)

IMDG: International Maritime Code for Dangerous Goods

EmS: Emergency Schedules

Safety Data Sheet

according to UK REACH Regulation

JMC Kühlmittel JM 12++

Revision date: 17.01.2024

Page 9 of 9

MFAG: Medical First Aid Guide
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
TI: Technical Instructions
DGR: Dangerous Goods Regulations
MARPOL: International Convention for the Prevention of Marine Pollution from Ships
IBC: Intermediate Bulk Container
VOC: Volatile Organic Compounds
EG or EC: European Community
IE: Industrial Emissions
SVHC: Substance of Very High Concern

Classification for mixtures and used evaluation method according to GB CLP Regulation

Classification	Classification procedure
Acute Tox. 4; H302	Calculation method
Skin Irrit. 2; H315	Calculation method
Eye Irrit. 2; H319	Calculation method
STOT RE 2; H373	Calculation method

Relevant H and EUH statements (number and full text)

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H373	May cause damage to kidneys through prolonged or repeated exposure if swallowed.
H373	May cause damage to organs through prolonged or repeated exposure.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)