

# Safety Data Sheet

according to Regulation (EC) No 1907/2006

## EMKA Radiator Flush

Revision date: 15.06.2023

Product code: 8940001

Page 1 of 8

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

#### 1.1. Product identifier EMKA Radiator Flush

UFI: EDMY-08UY-400M-VK1Y

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

Use of the substance/mixture

#### 1.3. Details of the supplier of the safety data sheet

Company name: EMKA Schmiertechnik GmbH  
Street: Schmalbachstraße 19  
Location: D-74626 Bretzfeld-Schwabbach  
Country: Germany  
Telephone: +49 7946 944700  
E-Mail: info@emka-oil.de  
Web: www.emka-oil.de

#### 1.4. Emergency number: +49 551 19240

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Regulation (EC) No 1272/2008

Hazard Statements:  
Causes skin irritation.  
Causes serious eye irritation.

#### 2.2. Label elements

##### Regulation (EC) No 1272/2008

Signal word: Warning

Pictograms:



##### Hazard statements

H315 Causes skin irritation.  
H319 Causes serious eye irritation.

##### Precautionary statements

P101 If medical advice is needed, have product container or label at hand.  
P102 Keep out of reach of children.  
P280 Wear protective gloves and eye/face protection.  
P302+P352 IF ON SKIN: Wash with plenty of water.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P332+P313 If skin irritation occurs: Get medical advice/attention.  
P337+P313 If eye irritation persists: Get medical advice/attention.  
P501 Dispose of contents/container to an appropriate recycling or disposal facility.

#### 2.3. Other hazards

No information available.

# Safety Data Sheet

according to Regulation (EC) No 1907/2006

## EMKA Radiator Flush

Revision date: 15.06.2023

Product code: 8940001

Page 2 of 8

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

##### Hazardous components

CAS No	Chemical name	Quantity		
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
111-76-2	2-butoxyethanol; ethylene glycol monobutyl ether			1 - < 10 %
	203-905-0	603-014-00-0		
	Acute Tox. 3, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2; H331 H302 H315 H319			
110-91-8	morpholine			0.1 - < 1 %
	203-815-1	613-028-00-9		
	Flam. Liq. 3, Acute Tox. 4, Acute Tox. 4, Acute Tox. 4, Skin Corr. 1B; H226 H332 H312 H302 H314			

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			
111-76-2	203-905-0	2-butoxyethanol; ethylene glycol monobutyl ether	1 - < 10 %	
	inhalation: ATE 3 mg/l (vapours); oral: ATE 1200 mg/kg			
110-91-8	203-815-1	morpholine	0.1 - < 1 %	
	inhalation: ATE = 11 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: ATE = 1100 mg/kg; oral: ATE = 500 mg/kg			

##### Labelling for contents according to Regulation (EC) No 648/2004

preservation agents (Benzisothiazolinone).

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

##### After inhalation

Provide fresh air.

##### After contact with skin

After contact with skin, wash immediately with polyethylene glycol, followed by plenty of water. Take off immediately all contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.

##### After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

##### After ingestion

Observe risk of aspiration if vomiting occurs. Rinse mouth immediately and drink plenty of water.

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

In case of eye irritation consult an ophthalmologist.

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

Treat symptomatically.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

# Safety Data Sheet

according to Regulation (EC) No 1907/2006

## EMKA Radiator Flush

Revision date: 15.06.2023

Product code: 8940001

Page 3 of 8

### Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings. Suitable extinguishing media: Extinguishing powder, Carbon dioxide,

### 5.2. Special hazards arising from the substance or mixture

Non-flammable. Vapours can form explosive mixtures with air.

### 5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

### Additional information

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. 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

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. 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

#### Other information

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.

### 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

### 7.1. Precautions for safe handling

#### Advice on safe handling

No special measures are necessary.

#### Advice on protection against fire and explosion

No special fire protection measures are necessary.

#### Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme.

Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

### 7.2. Conditions for safe storage, including any incompatibilities

#### Requirements for storage rooms and vessels

Keep container tightly closed.

#### Hints on joint storage

No special measures are necessary.

#### Further information on storage conditions

Do not store at temperatures below : 0°C

### 7.3. Specific end use(s)

# Safety Data Sheet

according to Regulation (EC) No 1907/2006

## EMKA Radiator Flush

Revision date: 15.06.2023

Product code: 8940001

Page 4 of 8

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### Occupational exposure limit values

CAS No	Name of agent	ppm	mg/m <sup>3</sup>	fib/cm <sup>3</sup>	Category	Origin
111-76-2	2-Butoxyethanol	20	98		TWA (8 h)	
		50	246		STEL (15 min)	
110-91-8	Morpholine	10	36		TWA (8 h)	
		20	72		STEL (15 min)	

#### 8.2. Exposure controls



##### Individual protection measures, such as personal protective equipment

###### Eye/face protection

Suitable eye protection: goggles.

###### Hand protection

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.

###### Skin protection

Wear suitable protective clothing.

###### Respiratory protection

In case of inadequate ventilation wear respiratory protection.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	colourless
Odour:	characteristic
Melting point/freezing point:	<0 °C
Boiling point or initial boiling point and boiling range:	100 °C
Flash point:	>93 °C
Auto-ignition temperature:	>200 °C
pH-Value (at 20 °C):	7-8
Viscosity / kinematic: (at 40 °C)	1,2 mm <sup>2</sup> /s
Water solubility:	easily soluble
Solubility in other solvents	not determined
Dissolution rate:	not determined
Partition coefficient n-octanol/water:	not determined
Density:	1,01 g/cm <sup>3</sup>

# Safety Data Sheet

according to Regulation (EC) No 1907/2006

## EMKA Radiator Flush

Revision date: 15.06.2023

Product code: 8940001

Page 5 of 8

### 9.2. Other information

#### Information with regard to physical hazard classes

Oxidizing properties

Not oxidising.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

### 10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

### 10.3. Possibility of hazardous reactions

No known hazardous reactions.

### 10.4. Conditions to avoid

none

### 10.5. Incompatible materials

No information available.

### 10.6. Hazardous decomposition products

No known hazardous decomposition products.

## SECTION 11: Toxicological information

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

#### Acute toxicity

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

#### ATEmix calculated

ATE (oral) 25572,7 mg/kg; ATE (inhalation vapour) 63,93 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
111-76-2	2-butoxyethanol; ethylene glycol monobutyl ether				
	oral	ATE 1200 mg/kg			
	inhalation vapour	ATE 3 mg/l			
110-91-8	morpholine				
	oral	ATE 500 mg/kg			
	dermal	ATE 1100 mg/kg			
	inhalation vapour	ATE 11 mg/l			
	inhalation dust/mist	ATE 1,5 mg/l			

#### 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.

# Safety Data Sheet

according to Regulation (EC) No 1907/2006

## EMKA Radiator Flush

Revision date: 15.06.2023

Product code: 8940001

Page 6 of 8

### STOT-repeated exposure

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

### Aspiration hazard

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

### Additional information on tests

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

## SECTION 12: Ecological information

### 12.1. Toxicity

The product is not: Ecotoxic.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
111-76-2	2-butoxyethanol; ethylene glycol monobutyl ether					
	Acute fish toxicity	LC50 mg/l	1490	96 h	Lepomis macrochirus	

### 12.2. Persistence and degradability

Biodegradable.

### 12.3. Bioaccumulative potential

No indication of bioaccumulation potential.

### Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
111-76-2	2-butoxyethanol; ethylene glycol monobutyl ether	0,81 (25°C)

### 12.4. Mobility in soil

The product has not been tested.

### 12.5. Results of PBT and vPvB assessment

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

The product has not been tested.

### 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

Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Disposal recommendations

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

#### List of Wastes Code - residues/unused products

070704 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fine chemicals and chemical products not otherwise specified; other organic solvents, washing liquids and mother liquors; hazardous waste

#### Contaminated packaging

Wash with plenty of water. Completely emptied packages can be recycled.

## SECTION 14: Transport information

# Safety Data Sheet

according to Regulation (EC) No 1907/2006

## EMKA Radiator Flush

Revision date: 15.06.2023

Product code: 8940001

Page 7 of 8

### Land transport (ADR/RID)

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

### Inland waterways transport (ADN)

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

### Marine transport (IMDG)

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

### Air transport (ICAO-TI/IATA-DGR)

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

### 14.5. Environmental hazards

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 75

#### Additional information

To follow: 850/2004/EC, 79/117/EEC, 689/2008/EC

#### 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): 1 - slightly hazardous to water

### 15.2. Chemical safety assessment

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

## SECTION 16: Other information

### Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

# Safety Data Sheet

according to Regulation (EC) No 1907/2006

## EMKA Radiator Flush

Revision date: 15.06.2023

Product code: 8940001

Page 8 of 8

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

### Relevant H and EUH statements (number and full text)

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.

### Further 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.

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