EMSIS COOLANT

Version 1.2
Revision Date 30.11.2017

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

1.1 Product identifier

Trade name: EMSIS Coolant

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

Use of the Substance/Mixture: Industrial use

1.3 Details of the supplier of the safety data sheet

Company: EMSIS GmbH
Mendelstrasse 17
48149 Münster, Germany

Telephone: +49-251-297962-0

E-mail address of person responsible for the SDS: info@emsis.eu

1.4 Emergency telephone number

+49-251-297962-0 (9:00-17:00)
(UTC+01:00) Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna

2 Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Specific target organ toxicity - repeated exposure, Category 2	H373: May cause damage to organs through longed or repeated exposure.

Classification (67/548/EEC, 1999/45/EC)

Harmful	R48/22: Harmful: danger of serious damage to health by prolonged exposure if swallowed.

2.2 Label elements

Hazard pictograms:

Signal word: Warning

Hazard statements:	H373	May cause damage to organs through prolonged or repeated exposure.
Precautionary statements:	Response:	
	P314	Get medical advice/ attention if you feel unwell.

Hazardous components which must be listed on the label: Ethylene glycol

2.3 Other hazards

None known.

3 Composition/information on ingredients

3.1 Mixtures

Hazardous components

Chemical Name	CAS-No. EC-No. Registration number	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration (%)
Ethylene glycol	107-21-1 203-473-3	Xn; R22-R48/22	Acute Tox.4; H302 STOT RE2; H373	>= 20 - < 25
Sodium 2-ethylhexanoate	19766-89-3 243-283-8	Repr.Cat.3; R62-R63	Repr.2; H361	>= 0,3 - < 1

For explanation of abbreviations see section 16.

4 First aid measures

4.1 Description of first aid measures

General advice	In the case of accident or if you feel unwell, seek medical advice immediately. When symptoms persist or in all cases of doubt seek medical advice.
Protection of first-aiders	First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists.
If inhaled	If inhaled, remove to fresh air. Get medical attention if symptoms occur.
In case of skin contact	Wash with water and soap as a precaution. Get medical attention if symptoms occur.
In case of eye contact	Flush eyes with water as a precaution. Get medical attention if irritation develops and persists.
If swallowed	If swallowed, DO NOT induce vomiting. Get medical attention if symptoms occur. Rinse mouth thoroughly with water.

4.2 Most important symptoms and effects, both acute and delayed

Risks	May cause damage to organs through prolonged or repeated exposure.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment	Treat symptomatically and supportively.

5 Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	Water spray Alcohol-resistant foam Dry chemical Carbon dioxide (CO2)
Unsuitable extinguishing media	None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting	Exposure to combustion products may be a hazard to health.
Hazardous combustion products	Carbon oxides

5.3 Advice for firefighters

Special protective equipment for firefighters	In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.
Specific extinguishing methods	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	Use personal protective equipment. Follow safe handling advice and personal protective equipment recommendations.

6.2 Environmental precautions

Environmental precautions	Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g. by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up	Soak up with inert absorbent material. For large spills, provide dyking or other appropriate

containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

6.4 Reference to other sections

See sections: 7, 8, 11, 12, 13 and 15.

7 Handling and storage

7.1 Precautions for safe handling

Technical measures	See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
Local/Total ventilation	Use only with adequate ventilation.
Advice on safe handling	Avoid inhalation of vapour or mist. Do not swallow. Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Handle in accordance with good industrial hygiene and safety practice. Take care to prevent spills, waste and minimize release to the environment.
Hygiene measures	Ensure that eye flushing systems and safety showers are located close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	Keep in properly labelled containers. Store in accordance with the particular national regulations.
Advice on common storage	Do not store with the following product types: Strong oxidizing agents

7.3 Specific end use(s)

Specific use(s)	No data available

8 Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis

Ethylene glycol	107-21-1	TWA	20 ppm 52 mg/m³	2000/39/EC
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
Sodium 2-ethylhexanoate		STEL	40 ppm 104 mg/m³	2000/39/EC
Further information	Identifies the possibility of significant uptake through the skin, Indicative			

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Ethylene glycol	End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term local effects Value: 35 mg/m3 End Use: Workers Exposure routes: Skin contact Potential health effects: Long-term systemic effects Value: 106 mg/kg bw/day End Use: Consumers Exposure routes: Inhalation Potential health effects: Long-term local effects Value: 7 mg/m3 End Use: Workers Exposure routes: Skin contact Potential health effects: Long-term systemic effects Value: 53 mg/kg bw/day
Sodium 2-ethylhexanoate	End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 14 mg/m3 End Use: Workers Exposure routes: Skin contact Potential health effects: Long-term systemic effects Value: 2 mg/kg bw/day End Use: Consumers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 3,5 mg/m3 End Use: Consumers Exposure routes: Skin contact Potential health effects: Long-term systemic effects Value: 1 mg/kg bw/day End Use: Consumers Exposure routes: Ingestion Potential health effects: Long-term systemic effects Value: 1 mg/kg bw/day

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Ethylene glycol	Fresh water Value: 10 mg/l Marine water Value: 1 mg/l Intermittent use/release

	Value: 10 mg/l Sewage treatment plant Value: 199,5 mg/l Fresh water sediment Value: 37 mg/kg Fresh water sediment Value: 3,7 mg/kg Soil Value: 1,53 mg/kg
Sodium 2-ethylhexanoate	Fresh water Value: 0,36 mg/l Marine water Value: 0,036 mg/l Intermittent use/release Value: 0,493 mg/l Sewage treatment plant Value: 71,7 mg/l Fresh water sediment Value: 0,301 mg/kg Marine sediment Value: 0,0301 mg/kg Soil Value: 0,0579 mg/kg

8.2 Exposure controls

Engineering measures

Ensure adequate ventilation, especially in confined areas.
Minimize workplace exposure concentrations.

Personal protective equipment

Eye protection	Wear the following personal protective equipment: Safety glasses
Hand protection Material	Impervious gloves
Remarks	Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of work-day.
Skin and body protection	Skin should be washed after contact.
Respiratory protection	Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

Filter type	Organic vapour type (A)

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	liquid
Colour	colourless
Odour	characteristic
Odour Threshold	No data available
pH	No data available
Melting point/freezing point	No data available
Initial boiling point and boiling range	No data available
Flash point	No data available
Evaporation rate	No data available
Flammability (solid, gas)	Not applicable
Upper explosion limit	No data available
Lower explosion limit	No data available
Vapour pressure	No data available
Relative vapour density	No data available
Relative density	No data available
Solubility(ies)	
Water solubility	Soluble
Partition coefficient: n-octanol/water	Not applicable
Auto-ignition temperature	No data available
Thermal decomposition	No data available
Viscosity	
Viscosity, dynamic	No data available
Explosive properties	Not explosive
Oxidizing properties	The substance or mixture is not classified as oxidizing.

9.2 Other information

No data available

10 Stability and reactivity

10.1 Reactivity

Not classified as a reactivity hazard.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions	Can react with strong oxidizing agents.

10.4 Conditions to avoid

Conditions to avoid	None known.

10.5 Incompatible materials

Materials to avoid	Oxidizing agents

10.6 Hazardous decomposition products

No hazardous decomposition products are known.

11 Toxicological information

11.1 Information on toxicological effects

Information on likely routes of exposure	Inhalation Skin contact Ingestion Eye contact

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity	Acute toxicity estimate : > 2.000 mg/kg Method: Calculation method

Components:

Ethylene glycol:

Acute oral toxicity	Acute toxicity estimate : 500 mg/kg Method: Expert judgement Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI
Acute inhalation toxicity	LC50 (Rat): > 2,5 mg/l Exposure time: 4 h Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity	LD50 (Mouse): > 3.500 mg/kg

Sodium 2-ethylhexanoate:

Acute oral toxicity	LD50 (Rat): > 2.000 mg/kg

	Remarks: Based on data from similar materials
Acute inhalation toxicity	LC0 (Rat): 0,11 mg/l Exposure time: 8 h Test atmosphere: vapour Remarks: Based on data from similar materials An LC50/inhalation/4h/rat could not be determined because no mortality of rats was observed at the maximum achievable concentration.
Acute dermal toxicity	LD50 (Rat): > 2.000 mg/kg Method: OECD Test Guideline 402 Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation
Not classified based on available information.

Components:

Ethylene glycol:

Species: Rabbit
Result: No skin irritation

Sodium 2-ethylhexanoate:

Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation
Remarks: Based on data from similar materials

Serious eye damage/eye irritation
Not classified based on available information.

Components:

Ethylene glycol:

Species: Rabbit
Result: No eye irritation

Sodium 2-ethylhexanoate:

Species: Rabbit
Method: OECD Test Guideline 405
Result: No eye irritation
Remarks: Based on data from similar materials

Respiratory or skin sensitisation
Skin sensitisation: Not classified based on available information.
Respiratory sensitisation: Not classified based on available information.

Components:

Ethylene glycol:

Test Type: Maximisation Test (GPMT)
Exposure routes: Skin contact
Species: Guinea pig
Result: negative

Sodium 2-ethylhexanoate:

Test Type: Maximisation Test (GPMT)
Exposure routes: Skin contact
Species: Guinea pig
Result: Does not cause skin sensitisation.
Remarks: Based on data from similar materials

Germ cell mutagenicity
Not classified based on available information.

Components:

Ethylene glycol:

Genotoxicity in vitro	Test Type: Bacterial reverse mutation assay (AMES) Method: OECD Test Guideline 471 Result: negative

Sodium 2-ethylhexanoate:

Genotoxicity in vitro	Test Type: Bacterial reverse mutation assay (AMES) Method: OECD Test Guideline 471 Result: negative Remarks: Based on data from similar materials

Carcinogenicity
Not classified based on available information.

Components:

Ethylene glycol:

Species: Mouse
Application Route: Ingestion
Exposure time: 2 Years
Result: negative

Reproductive toxicity
Not classified based on available information.

Components:

Sodium 2-ethylhexanoate:

Effects on foetal development	Test Type: Embryo-foetal development Species: Rat Application Route: Ingestion Result: positive Remarks: Based on data from similar materials

Reproductive toxicity - Assessment	Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.

STOT - single exposure
Not classified based on available information.

STOT - repeated exposure
May cause damage to organs through prolonged or repeated exposure.

Components:

Ethylene glycol:

Exposure routes: Ingestion
Target Organs: Kidney
Assessment: Shown to produce significant health effects in animals at concentrations of >10 to 100 mg/kg bw.

Repeated dose toxicity

Components:

Ethylene glycol:

Species: Rat
NOAEL: 150 mg/kg
Application Route: Ingestion
Exposure time: 2 y

Species: Dog
NOAEL: 2.200 - 4.400 mg/kg
Application Route: Skin contact
Exposure time: 4 w
Method: OECD Test Guideline 410

Sodium 2-ethylhexanoate:

Species: Rat
NOAEL: 300 mg/kg
Application Route: Ingestion
Exposure time: 90 d
Remarks: Based on data from similar materials

Aspiration toxicity
Not classified based on available information.

12 Ecological information

12.1 Toxicity

Components:

Ethylene glycol:

Toxicity to fish	LC50 (Pimephales promelas (fathead minnow)): 72.860 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	EC50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae	EC50 (Pseudokirchneriella subcapitata (green algae)): 6.500 - 13.000 mg/l Exposure time: 96 h
Toxicity to fish (Chronic toxicity)	NOEC: 15.380 mg/l Exposure time: 7 d Species: Pimephales promelas (fathead minnow)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	NOEC: 8.590 mg/l Exposure time: 7 d Species: Ceriodaphnia dubia (water flea)

Sodium 2-ethylhexanoate:

Toxicity to fish	LC50 (Oryzias latipes (Japanese medaka)): > 100 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	EC50 (Daphnia magna (Water flea)): 910 mg/l Exposure time: 48 h
Toxicity to algae	ErC50 (Pseudokirchneriella subcapitata (green algae)): 500 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
	NOEC (Pseudokirchneriella subcapitata (green algae)): 130 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to bacteria	EC10 (Pseudomonas putida): 71,7 mg/l Exposure time: 17 h Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	NOEC: 25 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Method: OECD Test Guideline 211 Remarks: Based on data from similar materials

12.2 Persistence and degradability

Components:

Ethylene glycol:

Biodegradability	Result: Readily biodegradable Biodegradation: 90 - 100 %

	Exposure time: 10 d Method: OECD Test Guideline 301A

Sodium 2-ethylhexanoate:

Biodegradability	Result: Readily biodegradable Biodegradation: 99 % Exposure time: 28 d Method: OECD Test Guideline 301E Remarks: Based on data from similar materials

12.3 Bioaccumulative potential

Components:

Ethylene glycol:

Bioaccumulation	Species: Leuciscus idus (Golden orfe) Bioconcentration factor (BCF): 10
Partition coefficient: n- octanol/water	log Pow: -1,93

Sodium 2-ethylhexanoate:

Partition coefficient: n- octanol/water	log Pow: 1,3

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Not relevant

12.6 Other adverse effects

No data available

13 Disposal considerations

13.1 Waste treatment methods

Product	Dispose of in accordance with local regulations. According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.
Contaminated packaging	Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14 Transport information

14.1 UN number

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Not applicable

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Remarks	Not applicable for product as supplied.

15 Regulatory information

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

15.2 Chemical Safety Assessment

A Chemical Safety Assessment has not been carried out.

16 Other information

Full text of R-Phrases

R22	Harmful if swallowed.
R48/22	Harmful: danger of serious damage to health by prolonged exposure if swallowed.
R62	Possible risk of impaired fertility.
R63	Possible risk of harm to the unborn child.

Full text of H-Statements

H302	Harmful if swallowed.
H361	Suspected of damaging fertility or the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure if swallowed.

Full text of other abbreviations

Acute Tox.	Acute Toxicity
Repr.	Reproductive toxicity
STOT RE	Specific target organ toxicity - repeated exposure
2000/39/EC	Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values
2000/39/EC / TWA	Limit Value - eight hours
2000/39/EC / STEL	Short term exposure limit

Further information

Sources of key data used to compile the Safety Data Sheet	Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/

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