

according to Regulation (EC) No 1907/2006 (REACH) and Regulation (EU) 2020/878

Eni Antifreeze Spezial DE Material number 655

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

1.1 Product identifier

Trade name: Eni Antifreeze Spezial DE

UFI: 5JDU-M57Y-R007-Y79S

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

General use:	Radiator antifreeze.
	For commercial user only.

1.3 Details of the supplier of the safety data sheet

Company name:	Eni Schmiertechnik GmbH
Street/POB-No.:	Paradiesstraße 14
Postal Code, city:	97080 Würzburg
	Germany
WWW:	www.enischmiertechnik.de
E-mail:	info.wuerzburg@eni.com
Telephone:	+49 (0)931-90098-0
Telefax:	+49 (0)931-98442
Department responsible for information:	
	Application Engineering & Product Management (AEPM)
	Telephone: +49 (0)931-90098-0
	E-mail: technik.wuerzburg@eni.com

1.4 Emergency telephone number

GIZ-Nord, Göttingen Telephone: +49 (0)551-19240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to EC regulation 1272/2008 (CLP)

Acute Tox. 4; H302 Harmful if swallowed.Repr. 1B; H360D May damage the unborn child.STOT RE 2; H373 May cause damage to organs through prolonged or repeated exposure.

2.2 Label elements

 Labelling (CLP)
 Image: Classical statements:

 Signal word:
 Danger

 Hazard statements:
 H302 H360D H373
 Harmful if swallowed. May damage the unborn child. May cause damage to organs through prolonged or repeated exposure.



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Precautionary statements:	P201 P260 P264 P280	Obtain special instructions before use. Do not breathe mist/vapours/spray. Wash hands and face thoroughly after handling. Wear protective gloves/protective clothing/eye protection.
	P308+P313	IF exposed or concerned: Get medical advice/attention.
	P501	Dispose of contents/container to hazardous or special waste collection point.
Special labelling Text for labelling:	Contains: Ethylene glycol, Sodium 2-ethylhexanoate. Restricted to professional users.	
2.3 Other hazards	6	

Special danger of slipping by leaking/spilling product.

Endocrine disrupting properties, Results of PBT and vPvB assessment:

This product does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% (w/w) or higher. The product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances: not applicable

3.2 Mixtures

Hazardous ingredients:

Identifiers	Designation Classification	Content
REACH 01-2119456816-28-xxxx EC No. 203-473-3 CAS 107-21-1	Ethylene glycol Acute Tox. 4; H302. STOT RE 2; H373.	80 - 98 %
EC No. 243-283-8 CAS 19766-89-3	Sodium 2-ethylhexanoate Repr. 1B; H360D.	< 5 %
REACH 01-2119979081-35-xxxx EC No. 249-596-6 CAS 29385-43-1	Methyl-1H-benzotriazole Acute Tox. 4; H302. Repr. 2; H361d. Aquatic Chronic 2; H411. Acute toxicity estimate (ATE): Oral: 720 mg/kg bw.	< 1 %

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

SECTION 4: First aid measures

4.1 Description of first aid measures

General information:	First aider: Pay attention to self-protection! If medical advice is needed, have product container or label at hand. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
In case of inhalation:	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Seek medical attention.
Following skin contact:	Thoroughly wash skin with soap and water. Take off contaminated clothing and wash it before reuse. In case of skin reactions, consult a physician.



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After eye contact: Immedi

Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. Subsequently consult an

After swallowing

ophthalmologist. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an

unconscious person. In case of vomiting, lay at least head on side. Seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

May cause damage to organs through prolonged or repeated exposure. Harmful if swallowed. Spasms, drowsiness, nausea, vomiting, abdominal pain, oedema (swelling).

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically. Symptoms may occur with delay.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media: Alcohol resistant foam, extinguishing powder, carbon dioxide.

Extinguishing media which must not be used for safety reasons:

Full water jet

5.2 Special hazards arising from the substance or mixture

Combustible. May form dangerous gases and vapours in case of fire. Furthermore, there may develop: Smoke, compounds of low molecular weight, carbon monoxide and carbon dioxide.

5.3 Advice for firefighters

Special protective equipment for firefighters:

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

Additional information: Move undamaged containers from immediate hazard area if it can be done safely. Do not breathe fumes. Use fine water spray to cool endangered containers.

Do not allow water used to extinguish fire to enter drains, ground or waterways. Fire residuals and contaminated extinguishing water must be disposed of in accordance with the regulations of the local authorities.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid exposure. Do not breathe mist/vapours/spray. Avoid contact with the substance. If possible, eliminate leakage. Provide adequate ventilation. Wear appropriate protective equipment. Keep unprotected people away. Take off contaminated clothing and wash it before reuse.

6.2 Environmental precautions

Do not allow to penetrate into soil, waterbodies or drains. If necessary notify appropriate authorities.

6.3 Methods and material for containment and cleaning up

Large amounts of spillages: Plug leak if safely possible. Soak up with absorbent materials such as sand, siliceus earth, acid- or universal binder. Store in special closed containers and dispose of according to ordinance. Thoroughly clean the contaminated area with water. Small amounts of spillages: Wipe up with absorbent material (eg. cloth, fleece). Final cleaning. Spilled product must never be returned to the original container for recycling. Special danger of slipping by leaking/spilling product.

Additional information:

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Refer additionally to section 8 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advices on safe handling: Obtain special instructions before use. Provide adequate ventilation, and local exhaust as needed. Do not breathe mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Wear appropriate protective equipment. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Take off contaminated clothing and wash it before reuse. Have eye wash bottle or eye rinse ready at work place.

Precautions against fire and explosion:

Take care of general rules for industrial preventive fire protection.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storeroom	is and containers:
	Keep container tightly closed and in a well-ventilated place.
	Keep container dry. Keep only in the original container.
	Protect from heat and direct sunlight.
	Store containers in upright position.
Hints on joint storage:	Do not store together with: Strong acids, strong oxidizing agents, nitrates, peroxides, chlorates. Keep away from food, drink and animal feedingstuffs.
Storage class:	6.1C = Combustible substances of acute toxicity, category 3 / hazardous substances that are toxic or produce chronic effects

7.3 Specific end use(s)

Refrigerant/anti-freezing agent

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values:

CAS No.	Designation	Туре	Limit value
107-21-1	Ethylene glycol	Europe: IOELV: STEL	104 mg/m³; 40 ppm (may be absorbed through the skin)
		Europe: IOELV: TWA	52 mg/m³; 20 ppm (may be absorbed through the skin)
		Germany: TRGS 900 Kurzzeit	52 mg/m³; 20 ppm (Aerosol and vapour, may be absorbed through the skin)
		Germany: TRGS 900 Langzeit	26 mg/m³; 10 ppm (Aerosol and vapour, may be absorbed through the skin)



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DNEL/DMEL:	Information about Ethylene glycol: DNEL workers, inhalative, local, long-term: 35 mg/m ³ DNEL workers, dermal, systemic, long-term: 106 mg/kg bw/d DNEL consumers, inhalative, local, long-term: 7 mg/m ³ DNEL consumers, dermal, systemic, long-term: 53 mg/kg bw/d Information about Methyl-1H-benzotriazole: DNEL workers, inhalative, systemic, long-term: 21,2 mg/m ³ DNEL workers, dermal, systemic, long-term: 0,3 mg/kg bw/d DNEL consumers, inhalative, systemic, long-term: 350 µg/m ³ DNEL consumers, dermal, systemic, long-term: 0,01 mg/kg bw/d DNEL consumers, oral, systemic, long-term: 0,01 mg/kg bw/d
PNEC:	Information about Ethylene glycol: PNEC water (freshwater): 10 mg/L PNEC water (marine water): 1 mg/L PNEC sediment (freshwater): 37 mg/kg dw PNEC sediment (marine water): 3,7 mg/kg dw PNEC soil: 1,53 mg/kg dw PNEC sewage treatment plant STP: 199,5 mg/L
	Information about Methyl-1H-benzotriazole: PNEC water (freshwater): 0,008 mg/L PNEC water (marine water): 20 µg/L PNEC sediment (freshwater): 0,117 mg/kg dw PNEC sediment (marine water): 0,292 mg/kg dw PNEC soil: 18,7 µg/kg dw PNEC sewage treatment plant STP: 39,4 mg/L

8.2 Exposure controls

Provide adequate ventilation, and local exhaust as needed.

Personal protection equipment

Occupational exposure controls

Respiratory protection:	Respiratory protection must be worn whenever the WEL levels have been exceeded. Use filter type A (= against vapours of organic substances) according to BS EN 14387. The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product.
Hand protection:	Protective gloves according to DIN EN 374. Glove material: Fluororubber (Viton), nitrile rubber, butyl caoutchouc (butyl rubber), neoprene Layer thickness: >= 0,38 mm Breakthrough time: 480 min Observe glove manufacturer's instructions concerning penetrability and breakthrough time.
Eye protection:	Tightly sealed goggles according to DIN EN ISO 16321-1:2022.
Body protection:	Wear suitable protective clothing.
General protection and hygier	^{ne measures:} Obtain special instructions before use. Do not breathe mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Take off contaminated clothing and wash it before reuse. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Have eye wash bottle or eye rinse ready at work place.

Environmental exposure controls

Refer to "6.2 Environmental precautions".



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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state at 20 °C and 101.3 kPa	liquid
Colour:	light red, clear
Odour:	Weak
Odour threshold:	No data available
Melting point/freezing point:	-18 °C (freezing point)
Initial boiling point and boiling range:	175 °C
Flammability:	Combustible
Upper/lower flammability or explosive limits:	No data available
Flash point/flash point range:	approx. 122 °C (Pensky-Martens, c.c.)
Decomposition temperature:	No data available
pH:	at 20 °C: 8,65
Viscosity, kinematic:	No data available
Water solubility:	Miscible
Partition coefficient: n-octanol/water:	-1,36 log K(o/w) (Ethylene glycol) Based on the n-octanol/water partition coefficient accumulation in organisms is not expected.
Vapour pressure:	No data available
Density:	at 20 °C: 1,113 kg/L
Vapour density:	No data available
Particle characteristics:	Not applicable
9.2 Other information	
Explosive properties:	No data available
Oxidizing characteristics:	No data available
Auto-ignition temperature:	398 °C (Ethylene glycol)
Evaporation rate:	No data available
Additional information:	No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Refer to subsection "Possilbility of hazardous reactions".

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4 Conditions to avoid

Keep away from heat sources, sparks and open flames. Protect from direct sunlight.

10.5 Incompatible materials

Strong acids, strong oxidizing agents, nitrates, peroxides, chlorates.

10.6 Hazardous decomposition products

At elevated temperature: Ketone, aldehydes.Thermal decomposition:No data available

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SECTION 11: Toxicological information

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

Toxicological effects:

The statements are derived from the properties of the single components. No toxicological data is available for the product as such.

Acute toxicity (oral): Acute Tox. 4; H302 = Harmful if swallowed.

ATEmix calculated: 1.720 mg/kg

Acute toxicity (dermal): Based on available data, the classification criteria are not met.

Acute toxicity (inhalative): Based on available data, the classification criteria are not met.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Serious eye damage/irritation: Based on available data, the classification criteria are not met.

Sensitisation to the respiratory tract: Lack of data.

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

Germ cell mutagenicity/Genotoxicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Lack of data.

Reproductive toxicity: Repr. 1B; H360D = May damage the unborn child.

Effects on or via lactation: Lack of data.

Specific target organ toxicity (single exposure): Based on available data, the classification criteria are not met.

Specific target organ toxicity (repeated exposure): STOT RE 2; H373 = May cause damage to organs through prolonged or repeated exposure. Possible: Damage of kidneys.

Fossible. Damage of kidneys

Aspiration hazard: Lack of data.

11.2 Information on other hazards

Endocrine disrupting properties: None

Information about Ethylene glycol:
LD50 Rat, oral: 7.712 mg/kg
ATE, oral: 500 mg/kg
LD50 Mouse, dermal: > 3.500 mg/kg
LC50 Rat, inhalative (aerosol): > 2,5 mg/L/6h
Information about Sodium 2-ethylhexanoate: LD50 Rat, oral: 2.043 mg/kg (OECD 401) LD50 Rat, dermal: > 2.000 mg/kg
Information about Methyl-1H-benzotriazole: LD50 Rat, oral: 720 mg/kg (OECD 401) LD50 Rabbit, dermal: > 2.000 mg/kg (OECD 402)

Symptoms

Other information:

In case of inhalation: In high concentrations: Irritation to respiratory tract, cough.

In case of ingestion: Information about Ethylene glycol:

Nausea, vomiting, abdominal pain, loss of sight, liver and kidney damage, irritation. Fetal developement hazard, neurotoxic effects, spasms, pulmonary oedema, cardiac arrhythmias, pneumonia. Lethal dosis for humans is approx. 100 mL.

After contact with skin:

Prolonged or repeated contact with the product affects the skin's natural oils and induces drying up. Irritation.

After eye contact: Direct contact with eyes may cause temporary irritation.



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SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:	Information about Ethylene glycol:
	Fish toxicity:
	LC50 Pimephales promelas (fathead minnow): 57.000 mg/L/96h
	Daphnia toxicity:
	EC50 Daphnia magna (Big water flea): > 100 mg/L/48h (OECD 202)
	Information about Methyl-1H-benzotriazole:
	Fish toxicity:
	LC50 Danio rerio (zebrafish): 180 mg/L/96h (OECD 203)
	Daphnia toxicity:
	LC50 (Acartia tonsa): 55 mg/L/48h (OECD 202)
	EC10 Daphnia galeata: 0,4 mg/L/21d (OECD 211)
	Algae toxicity:
	EC50 Pseudokirchneriella subcapitata (green algae): 75 mg/L/72h (OECD 201)
Water Hazard Class:	1 = slightly hazardous to water (Self-classification (mixture).)

12.2 Persistence and degradability

Further details:	Information about Ethylene glycol: Biodegradation: > 90%/10d (OECD 301A). Readily biodegradable.
Effects in sewage plants:	Information about Ethylene glycol: Bacterial toxicity: EC20 Activated sludge: > 1.995 mg/L/30 min

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water:

-1,36 log K(o/w) (Ethylene glycol) Based on the n-octanol/water partition coefficient accumulation in organisms is not expected.

12.4 Mobility in soil

Low (estimated).

12.5 Results of PBT and vPvB assessment

The product does not contain any substances classified as PBT or vPvB.

12.6 Endocrine disrupting properties

None

12.7 Other adverse effects

General information: Do not allow to penetrate into soil, waterbodies or drains.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Waste key number:	 16 01 14* = Antifreeze fluids containing hazardous substances * = Evidence for disposal must be provided.
Recommendation:	Dispose of waste according to applicable legislation.
Package	
Recommendation:	Dispose of waste according to applicable legislation. Handle contaminated packages in the same way as the substance itself. Non-contaminated packages may be recycled.

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SECTION 14: Transport information

14.1 UN number or ID number

ADR/RID, ADN, IMDG, IATA-DGR: not applicable

14.2 UN proper shipping name

ADR/RID, ADN, IMDG, IATA-DGR: Not restricted

14.3 Transport hazard class(es)

ADR/RID, ADN, IMDG, IATA-DGR:

not applicable

14.4 Packing group

ADR/RID, ADN, IMDG, IATA-DGR:

not applicable

14.5 Environmental hazards

Dangerous for the environment: Substance/mixture is not environmentally hazardous according to the criteria of the UN model regulations. no

Marine pollutant - IMDG:

14.6 Special precautions for user

No dangerous good in sense of these transport regulations.

14.7 Maritime transport in bulk according to IMO instruments

No data available

SECTION 15: Regulatory information

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

National regulations - Germany

Storage class:	6.1C = Combustible substances of acute toxicity, category 3 / hazardous substances that are toxic or produce chronic effects	
Water Hazard Class:	1 = slightly hazardous to water (Self-classification (mixture).)	
Technical guidance air:	5.2.5, 5.2.7	
Information on working limitations:		
·	Observe employment restrictions for young people.	
	Observe employment restrictions for expectant or nursing mothers.	
Further regulations, limitations and legal requirements:		
	The product is controlled by the German Chemicals Prohibition Ordinance (ChemVerbotsV).	
National regulations - EC member states		

Further regulations, limitations and legal requirements:

Use restriction according to REACH annex XVII, no.: 3, 30, 75

15.2 Chemical Safety Assessment

For this mixture a chemical safety assessment is not required.



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	SECTION 16: Other information		
Wording of the H-phrases und	der paragraph 2 and 3:		
- ·	H302 = Harmful if swallowed.		
	H360D = May damage the unborn child.		
	H361d = Suspected of damaging the unborn child.		
	H373 = May cause damage to organs through prolonged or repeated exposure.		
	H411 = Toxic to aquatic life with long lasting effects.		
Reason of change:	Changes in section 2: Classification, labelling		
	Changes in section 3: Composition / Information on ingredients		
	Changes in section 9: Physical and chemical properties		
	Changes in section 15: Regulatory information		
	General revision		
Date of first version:	30.12.2020		
Department issuing data shee	et see section 1: Department responsible for information		
Abbreviations and acronyms:			
	ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways		
	ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road Aquatic Chronic: Hazardous to the aquatic environment - chronic		
	AS/NZS: Australian Standards/New Zealand Standards		
	ATE: Acute toxicity estimate		
	ATEmix: Acute Toxicity Estimate of mixture		
	Bw: Body weight CAS: Chemical Abstracts Service		
	CFR: Code of Federal Regulations		
	CLP: Classification, Labelling and Packaging		
	DMEL: Derived minimal effect level		
	DNEL: Derived no-effect level EC: European Community		
	EC50: Effective Concentration 50%		
	EN: European Standard		
	EQ: Excepted quantities		
	EU: European Union IATA: International Air Transport Association		
	ATA-DGR: International Air Transport Association – Dangerous Goods Regulations		
	IBC Code: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk		
	IMDG Code: International Maritime Dangerous Goods Code		
	LC50: Median lethal concentration LD50: Lethal dose 50%		
	MARPOL: Maritime Pollution: The International Convention for the Prevention of Pollution from Ships		
	OECD: Organisation for Economic Co-operation and Development		
	OEL: Occupational Exposure Limit Value		
	OSHA: Occupational Safety and Health Administration PBT: Persistent, bioaccumulative and toxic		
	PNEC: Predicted no-effect concentration		
	REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals		
	Repr: Reproductive toxicity		
	RID: Regulations Concerning the International Carriage of Dangerous Goods by Rail STOT RE: Specific target organ toxicity - repeated exposure		
	TV: Threshold Limit Value		
	TRGS: Technical Rules for Hazardous Substances		
	vPVB: Very persistent and very bioaccumulative		
	WEL: Workplace Exposure Limit		

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.

