

Safety Data Sheet

according to Regulation (EC) No 1907/2006

MEYLE Antifreeze AN/SF 12 Plus

Revision: 19.11.2024

Product code: 014_016_9200-1-2-3-4

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

1.1. Product identifier

MEYLE Antifreeze AN/SF 12 Plus

UFI: 0QYR-5KSH-X00V-Y3Y3

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

Use of the substance/mixture

Radiator antifreeze

1.3. Details of the supplier of the safety data sheet

Company name:	Meyle AG	
Street:	Merkurring 111	
Place:	D-22143 Hamburg	
Telephone:	+49 40 67 506 510	Telefax: +49 40 67 506 506
E-mail:	contact@meyle.com	
Contact person:	Kai Andresen	
E-mail:	Kai.Andresen@meyle.com	
Internet:	www.meyle.com	

1.4. Emergency telephone

number: Giftnotruf Göttingen
+49 551 19 24 0 (24h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

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

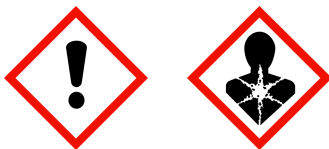
Regulation (EC) No 1272/2008

Hazard components for labelling

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

Signal word: Warning

Pictograms:



Hazard statements

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

Precautionary statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.

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P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing 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 contents/container to of the disposal according to local regulations.

2.3. Other hazards

following inhalation: Vapour and mist concentrations above the allowable levels or unusually high concentrations may cause irritation to the nose and throat as well as headache, nausea and drowsiness. After skin contact: Brief contact with the product may cause slight skin irritation. Prolonged contact (e.g. through soaked clothing) may result in serious skin irritation with symptoms such as redness and swelling. Following eye contact: Conjunctival redness. after ingestion: Oral ingestion of small amounts causes kidney damage. Caution if victim vomits: Risk of aspiration!

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

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
107-21-1	ethanediol; ethylene glycol			60 - < 100 %
	203-473-3	603-027-00-1	01-2119456816-28	
	Acute Tox. 4, STOT RE 2; H302 H373			
93918-10-6	Potassium 3,5,5-trimethylhexanoate			1 - < 2.5 %
	299-890-3			
	Acute Tox. 4, Skin Corr. 1, Eye Dam. 1; H302 H314 H318			
29385-43-1	methyl-1H-benzene triazole			0.1 - < 0.3 %
	249-596-6		01-2119979081-35	
	Repr. 2, Acute Tox. 4, Aquatic Chronic 2; H361d H302 H411			

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	60 - < 100 %
		dermal: LD50 = 10600 mg/kg; oral: ATE = 500 mg/kg	
93918-10-6	299-890-3	Potassium 3,5,5-trimethylhexanoate	1 - < 2.5 %
		oral: LD50 = >= 2000 mg/kg	
29385-43-1	249-596-6	methyl-1H-benzene triazole	0.1 - < 0.3 %
		oral: LD50 = 720 mg/kg	

Further Information

Specific chemical identities and/or actual percentages concentration have been withheld as trade secrets.

SECTION 4: First aid measures**4.1. Description of first aid measures****After inhalation**

Provide fresh air. Medical treatment necessary.

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After contact with skin

Wash with plenty of water. Immediately remove any contaminated clothing, shoes or stockings. Medical treatment necessary.

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

If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention.

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

No information available.

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

Treat symptomatically.

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

Non-flammable.

5.3. Advice for firefighters

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

Additional information

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**

Avoid contact with skin, eyes and clothes. Do not breathe mist/vapours/spray.

For non-emergency personnel

Provide adequate ventilation. Use personal protection equipment. Remove persons to safety.

For emergency responders

Wear personal protection equipment (refer to section 8).

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. Cover drains. Prevent spread over a wide area (e.g. by containment or oil barriers).

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.

Other information

Clean contaminated articles and floor according to the environmental legislation.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

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SECTION 7: Handling and storage

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

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

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, drink, smoke, sniff.

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.

7.3. Specific end use(s)

Radiator antifreeze

SECTION 8: Exposure controls/personal protection

8.1. Control parameters**Occupational exposure limits**

CAS No	Substance	ppm	mg/m ³	fib/cm ³	Category	Origin
107-21-1	1,2-Dihydroxyethane, vapour	20	52		TWA (8 h)	
		40	104		STEL (15 min)	
107-21-1	Ethane-1,2-diol, vapour	20	52		TWA (8 h)	
		40	104		STEL (15 min)	
107-21-1	Ethylene glycol, vapour	20	52		TWA (8 h)	
		40	104		STEL (15 min)	

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DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
107-21-1	ethanediol; ethylene glycol			
Worker DNEL, long-term		inhalation	local	35 mg/m³
Worker DNEL, long-term		dermal	systemic	106 mg/kg bw/day
Consumer DNEL, long-term		inhalation	local	7 mg/m³
Consumer DNEL, long-term		dermal	systemic	53 mg/kg bw/day
29385-43-1	methyl-1H-benzene triazole			
Worker DNEL, long-term		inhalation	systemic	21,2 mg/m³
Worker DNEL, long-term		dermal	systemic	0,3 mg/kg bw/day
Consumer DNEL, long-term		dermal	systemic	0,01 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,01 mg/kg bw/day

PNEC values

CAS No	Substance		Value
Environmental compartment			
107-21-1	ethanediol; ethylene glycol		
Freshwater			10 mg/l
Freshwater (intermittent releases)			10 mg/l
Marine water			1 mg/l
Freshwater sediment			37 mg/kg
Marine sediment			3,7 mg/kg
Micro-organisms in sewage treatment plants (STP)			199,5 mg/l
Soil			1,53 mg/kg
29385-43-1	methyl-1H-benzene triazole		
Freshwater			0,008 mg/l
Freshwater (intermittent releases)			0,086 mg/l
Marine water			0,02 mg/l
Freshwater sediment			0,117 mg/kg
Marine sediment			0,292 mg/kg
Micro-organisms in sewage treatment plants (STP)			39,4 mg/l
Soil			0,0187 mg/kg

8.2. Exposure controls



Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Individual protection measures, such as personal protective equipment

Eye/face protection

Suitable eye protection: goggles.

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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

Use of protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

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:	magenta	
Odour:	characteristic	
		Test method
Melting point/freezing point:	not determined	
Boiling point or initial boiling point and boiling range:	not determined	
Flammability:	Not readily combustible.	
Lower explosion limits:	not determined	
Upper explosion limits:	not determined	
Flash point:	>110 °C	DIN 51758
Auto-ignition temperature:	not determined	
Decomposition temperature:	not determined	
pH-Value:	7,8 - 8,5 (50%)	
Viscosity / kinematic: (at 40 °C)	> 14 mm²/s	
Water solubility:	completely miscible	
Solubility in other solvents		
not determined		
Partition coefficient n-octanol/water:	not determined	
Vapour pressure: (at 20 °C)	<0,1 hPa	
Density (at 20 °C):	~ 1,12 g/cm³	DIN 51757
Relative vapour density:	not determined	
Particle characteristics:	not relevant	

9.2. Other information

Other safety characteristics

Pour point: ~ -38 (50 Vol-% in H₂O) °C

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

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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**

Harmful if swallowed.

ATEmix calculated

ATE (oral) 526,2 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
107-21-1	ethanediol; ethylene glycol				
	oral	ATE 500 mg/kg			
	dermal	LD50 10600 mg/kg	Rabbit	GESTIS	
93918-10-6	Potassium 3,5,5-trimethylhexanoate				
	oral	LD50 >= 2000 mg/kg	Rat	Study report (1986)	OECD Guideline 401
29385-43-1	methyl-1H-benzene triazole				
	oral	LD50 720 mg/kg	Rat	ECHA	OECD Guideline 401

Irritation and corrosivity

Skin corrosion/irritation: Causes skin irritation.

Serious eye damage/eye irritation: Causes serious eye irritation.

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

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

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

Reproductive toxicity: 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)

Frequently or prolonged contact with skin may cause dermal irritation.

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].

11.2. Information on other hazards

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Other information

No information available.

SECTION 12: Ecological information

12.1. Toxicity

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

The product is not: Ecotoxic.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
93918-10-6	Potassium 3,5,5-trimethylhexanoate					
	Acute algae toxicity	ErC50 mg/l	189,87	72 h	Raphidocelis subcapitata	Study report (2016) OECD Guideline 201
	Acute crustacea toxicity	EC50 mg/l	>100	48 h	Daphnia magna (Big water flea)	ECHA OECD Guideline 202
29385-43-1	methyl-1H-benzene triazole					
	Acute fish toxicity	LC50	55 mg/l	96 h	Cyprinodon variegatus	ECHA
	Acute algae toxicity	ErC50	75 mg/l	72 h	Pseudokirchneriella subcapitata	ECHA OECD Guideline 201
	Acute crustacea toxicity	EC50 mg/l	15,8	48 h	Daphnia galeata	ECHA OECD Guideline 202
	Crustacea toxicity	NOEC mg/l	<0,4	21 d	Daphnia magna	ECHA

12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
93918-10-6	Potassium 3,5,5-trimethylhexanoate			
	OECD 301B	87,9	28	
	Readily biodegradable (according to OECD criteria).			

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
107-21-1	ethanediol; ethylene glycol	-1,36
93918-10-6	Potassium 3,5,5-trimethylhexanoate	-0,47
29385-43-1	methyl-1H-benzene triazole	1,079

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.

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.

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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

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

Hazardous waste according to Directive 2008/98/EC (waste framework directive). Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

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

Inland waterways transport (ADN)

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

Marine transport (IMDG)

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

Air transport (ICAO-TI/IATA-DGR)

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

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

No dangerous good in sense of this transport regulation.

14.7. Maritime transport in bulk according to IMO instruments

No dangerous good in sense of this transport regulation.

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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, Entry 75

Information according to Directive
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):

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**Changes**

This data sheet contains changes from the previous version in section(s): 2,3,9,11.

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Abbreviations and acronyms

Acute Tox. 4: Acute toxicity, hazard category 4
Skin Irrit. 2: Skin irritation, hazard category 2
Skin Corr. 1: Skin corrosion, hazard category 1
Eye Dam. 1: Serious eye damage, hazard category 1
Eye Irrit. 2: Eye irritation, hazard category 2
Repr. 2: Reproductive toxicity, hazard category 2
STOT RE 2: Specific target organ toxicity - repeated exposure, hazard category 2
Aquatic Chronic 2: Hazardous to the aquatic environment, long-term hazard category: Chronic 2
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
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%
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
DNEL: Derived No Effect Level
DMEL: Derived Minimal Effect Level
PNEC: Predicted No Effect Concentration
ATE: Acute toxicity estimate
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
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)
EmS: Emergency Schedules
MFAG: Medical First Aid Guide
ICAO: International Civil Aviation Organization
MARPOL: International Convention for the Prevention of Marine Pollution from Ships
IBC: Intermediate Bulk Container
SVHC: Substance of Very High Concern
For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]

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)

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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.
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.

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 relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)