

AVIA MINERALÖL AG
81675 München

Date printed 24.11.2014, Revision 16.05.2014

Version 02. Supersedes version: 01

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

1.1 Product identifier

AVIA ANTIFREEZE APN

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

1.2.1 Relevant uses

Anti-freezing agents

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company AVIA MINERALÖL AG
Grillparzerstrasse 8
81675 München / GERMANY
Phone +49 (0)89-455045-0
Fax +49 (0)89-455045-10
Homepage www.avia.de
E-mail datenblatt@avia.de

Address enquiries to

Technical information datenblatt@avia.de

Safety Data Sheet sdb@chemiebuero.de

1.4 Emergency telephone number

Advisory body +49 (0)89-19240 (24h) (english)

Company +49 (0)89-455045-0

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]

Acute Tox. 4: H302 Harmful if swallowed.

STOT RE 2: H373 May cause damage to organs through prolonged or repeated exposure.

2.1.2 Classification according to Directive 67/548/EEC or 1999/45/EC

Xn, Harmful - R 22: Harmful if swallowed.

2.2 Label elements

The product is required to be labelled in accordance with GHS/CLP-Directives.

Labelling according to Regulation (EC) 1272/2008

Hazard pictograms



Signal word

WARNING

Contains:

Ethylene glycol

Hazard statements

H302 Harmful if swallowed.

H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

P260 Do not breathe vapours.

P501 Dispose of contents/container in accordance with local/regional/national/international regulation.

2.3 Other hazards

Human health dangers

If swallowed or in the event of vomiting, risk of product entering the lungs.
Frequent persistent contact with the skin can cause skin irritation.

Environmental hazards

Does not contain any PBT or vPvB substances.

Other hazards

Further hazards were not determined with the current level of knowledge.

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SECTION 3: Composition / Information on ingredients

Product-type:

The product is a mixture.

Range [%]	Substance
>90	Ethylene glycol
	CAS: 107-21-1, EINECS/ELINCS: 203-473-3, EU-INDEX: 603-027-00-1, ECB-Nr.: 01-2119456816-28-XXXX
	GHS/CLP: Acute Tox. 4: H302 - STOT RE 2: H373
	EEC: Xn, R 22
2 - <3	Sodium 2-ethylhexanoate
	CAS: 19766-89-3, EINECS/ELINCS: 243-283-8
	GHS/CLP: Repr. 2: H361d
	EEC: Xn, R 63
0,3 - 1	disodium tetraborate pentahydrate
	CAS: 12179-04-3, EINECS/ELINCS: 215-540-4, EU-INDEX: 005-011-02-9
	GHS/CLP: Repr. 1B: H360D
	EEC: T, R 60-61

Comment on component parts

SVHC (Candidate List of Substances of Very High Concern for authorisation) $\geq 0,1\%$
CAS 12179-04-3 - disodium tetraborate pentahydrate
For full text of H-statements and R-phrases: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

Take off contaminated clothing and wash before reuse.

Inhalation

Ensure supply of fresh air.
In the event of symptoms seek for medical treatment.

Skin contact

In case of contact with skin wash off immediately with soap and water.
Consult a doctor if skin irritation persists.

Eye contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

Ingestion

Rinse out mouth and give plenty of water to drink.
Consult a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

Irritant effects
Nausea, vomiting.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Carbon dioxide.
Dry powder.
Foam.

Extinguishing media that must not be used

Full water jet.

5.2 Special hazards arising from the substance or mixture

In the event of fire the following can be released:
Carbon monoxide (CO)

5.3 Advice for firefighters

Use self-contained breathing apparatus.
Fire residues must be disposed of in accordance within the local regulations.
Cool containers at risk with water spray jet.
Collect contaminated firefighting water separately, must not be discharged into the drains.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

High risk of slipping due to leakage/spillage of product.
Keep away from all sources of ignition.

6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater.
Prevent spread over a wide area (e.g. by containment or oil barriers).

6.3 Methods and material for containment and cleaning up

Pick up with absorbent material (e.g. sand, sawdust, universal absorbent, diatomaceous earth).
Dispose of absorbed material in accordance within the regulations.

6.4 Reference to other sections

See SECTION 8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Use only in well-ventilated areas.
Keep away from all sources of ignition - Refrain from smoking.
Vapours can form an explosive mixture with air.
Wash hands before breaks and after work.
Use barrier skin cream.
Do not eat, drink, smoke or take drugs at work.
Take off contaminated clothing and wash before reuse.

7.2 Conditions for safe storage, including any incompatibilities

Keep only in original container.
Prevent penetration into the ground.
Do not store together with oxidizing agents.
Keep container tightly closed.
Protect from heat/overheating and from sun.
Store in a dry place.

7.3 Specific end use(s)

See product use, SECTION 1.2

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SECTION 8: Exposure controls / personal protection

8.1 Control parameters

Ingredients with occupational exposure limits to be monitored (GB)

Range [%]	Substance
>90	Ethylene glycol
	CAS: 107-21-1, EINECS/ELINCS: 203-473-3, EU-INDEX: 603-027-00-1, ECB-Nr.: 01-2119456816-28-XXXX
	Long-term exposure: 20 ppm, 52 mg/m ³ , Vapour, particulate: 10 mg/m ³
	Short-term exposure (15-minute): 40 ppm, 104 mg/m ³

Ingredients with occupational exposure limits to be monitored (EU)

Range [%]	Substance / EC LIMIT VALUES
>90	Ethylene glycol
	CAS: 107-21-1, EINECS/ELINCS: 203-473-3, EU-INDEX: 603-027-00-1, ECB-Nr.: 01-2119456816-28-XXXX
	Eight hours: 20 ppm, 52 mg/m ³ , H
	Short-term (15-minute): 40 ppm, 104 mg/m ³

DNEL

Range [%]	Substance
>90	Ethylene glycol, CAS: 107-21-1
	Industrial, dermal, Long-term - systemic effects: 106 mg/m ³ .
	Industrial, inhalative, Long-term - local effects: 35 mg/m ³ .
	general population, dermal, Long-term - systemic effects: 53 mg/m ³ .
	general population, inhalative, Long-term - local effects: 7 mg/m ³ .

PNEC

Range [%]	Substance
>90	Ethylene glycol, CAS: 107-21-1
	soil, 1,53 mg/kg.
	sediment (freshwater), 20,9 mg/kg.
	sewage treatment plants (STP), 199,5 mg/l.
	seawater, 1 mg/l.
	freshwater, 10 mg/l.

8.2 Exposure controls

Additional advice on system design

Ensure adequate ventilation on workstation.

Eye protection

safety glasses

Hand protection

Nitrile rubber, >480 min (EN 374).

The details concerned are recommendations. Please contact the glove supplier for further information.

Skin protection

Impermeable protective clothing.

Other

Avoid contact with eyes and skin.

Do not breathe vapour/spray.

Respiratory protection

Breathing apparatus in the event of aerosol or mist formation.

Short term: filter apparatus, combination filter A-P2.

Thermal hazards

not applicable

Delimitation and monitoring of the environmental exposition

Protect the environment by applying appropriate control measures to prevent or limit emissions.

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	liquid
Color	blue
Odor	characteristic
Odour threshold	not applicable
pH-value	7,1 - 7,3
pH-value [1%]	not determined
Boiling point [°C]	>= 165 (ASTM D 1120)
Flash point [°C]	> 126,5 (DIN EN 22719, ISO 2719)
Flammability [°C]	not determined
Lower explosion limit	4,9 Vol.-%
Upper explosion limit	14,6 Vol.-%
Oxidizing properties	no
Vapour pressure/gas pressure [kPa]	0,02 (20 °C)
Density [g/ml]	1,122 (DIN 51757) (20 °C / 68,0 °F)
Bulk density [kg/m³]	not applicable
Solubility in water	miscible
Partition coefficient [n-octanol/water]	not determined
Viscosity	20 - 30 mm²/s (20 °C) (DIN 51562)
Relative vapour density determined in air	not applicable
Evaporation speed	not applicable
Melting point [°C]	< -18 (DIN/ISO 3016)
Autoignition temperature [°C]	> 440 (DIN 51794)
Decomposition temperature [°C]	not determined

9.2 Other information

none

SECTION 10: Stability and reactivity

10.1 Reactivity

See SECTION 10.3.

10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).

10.3 Possibility of hazardous reactions

No hazardous reactions known.

10.4 Conditions to avoid

See SECTION 7.2.
Strong heating.

10.5 Incompatible materials

Strong oxidizing agent.

10.6 Hazardous decomposition products

No dangerous reactions known if used as directed.

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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product
ATE-mix, oral, Rat: ~ 1600 mg/kg.

Range [%]	Substance
>90	Ethylene glycol, CAS: 107-21-1
	LD50, dermal, mouse: > 3500 mg/kg.
	LD50, oral, Rat: 7712 mg/kg.
	LC50, inhalative, Rat: > 2,5 mg/l 6h.
	LDLo, oral, Human: ca. 1600 mg/kg.

Serious eye damage/irritation not determined

Skin corrosion/irritation not determined

Respiratory or skin sensitisation not determined

Specific target organ toxicity — single exposure not determined

Specific target organ toxicity — repeated exposure not determined

Mutagenicity not determined

Reproduction toxicity This product contains one or more substance(s) of Repr. Cat. 2 (EC).
(CAS 12179-04-3)
This product contains one or more substance(s) of Repr. Cat. 3 (EC).
(CAS 19766-89-3)

Carcinogenicity not determined

General remarks

Toxicological data of complete product are not available.
The toxicity data listed pertaining to the ingredients are intended for those working in the medicinal professions, experts for occupational health and safety and toxicologists. The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

SECTION 12: Ecological information

12.1 Toxicity

Range [%]	Substance
>90	Ethylene glycol, CAS: 107-21-1
	LC50, (96h), Pimephales promelas: 72860 mg/l.
	EC50, (96h), Selenastrum capricornutum: 6500 - 13000 mg/l.
	EC50, (48h), Daphnia magna: > 100 mg/l OECD 202.

12.2 Persistence and degradability

Behaviour in environment compartments not determined

Behaviour in sewage plant not determined

Biological degradability > 70 % (28 d)
The product is readily biodegradable to OECD 301A criteria.

12.3 Bioaccumulative potential

Accumulation in organisms is not expected.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

Based on all available information not to be classified as PBT or vPvB respectively.

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12.6 Other adverse effects

Ecological data of complete product are not available.

The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

Do not discharge product unmonitored into the environment.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

Product

Disposal in an incineration plant in accordance with the regulations of the local authorities.

Waste no. (recommended)

160114*

Contaminated packaging

Uncontaminated packaging may be reused.

Contaminated packing should be disposed of as product waste.

Waste no. (recommended)

150110*

150102

SECTION 14: Transport information

14.1 UN number

See SECTION 14.2 in accordance with UN shipping name

14.2 UN proper shipping name

Transport by land according to
ADR/RID

NO DANGEROUS GOODS

Inland navigation (ADN)

NO DANGEROUS GOODS

Marine transport in accordance with
IMDG

NOT CLASSIFIED AS "DANGEROUS GOODS"

Air transport in accordance with IATA

NOT CLASSIFIED AS "DANGEROUS GOODS"

14.3 Transport hazard class(es)

See SECTION 14.2 in accordance with UN shipping name

14.4 Packing group

See SECTION 14.2 in accordance with UN shipping name

14.5 Environmental hazards

See SECTION 14.2 in accordance with UN shipping name

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

not applicable

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SECTION 15: Regulatory information

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

EEC-REGULATIONS	1967/548 (1999/45); 1991/689 (2001/118); 1999/13; 2004/42; 648/2004; 1907/2006 (Reach); 1272/2008; 75/324/EEC (2008/47/EC); 453/2010/EC
TRANSPORT-REGULATIONS	DOT-Classification, ADR (2013); IMDG-Code (2013, 36. Amdt.); IATA-DGR (2013).
NATIONAL REGULATIONS (GB):	EH40/2005 Workplace exposure limits (Second edition, published December 2011). CHIP 3/ CHIP 4
- Observe employment restrictions for people	Observe employment restrictions for young people. Observe employment restrictions for mothers-to-be and nursing mothers.
- VOC (1999/13/CE)	0 %

15.2 Chemical safety assessment

not applicable

SECTION 16: Other information

16.1 R-phrases (SECTION 3)

R 22: Harmful if swallowed.
R 63: Possible risk of harm to the unborn child.
R 60: May impair fertility.
R 61: May cause harm to the unborn child.

16.2 Hazard statements (SECTION 3)

H360F May damage fertility.
H360D May damage the unborn child.
H361d Suspected of damaging the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.
H302 Harmful if swallowed.

16.3 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
CAS = Chemical Abstracts Service
CLP = Classification, Labelling and Packaging
DMEL = Derived Minimum Effect Level
DNEL = Derived No Effect Level
EC50 = Median effective concentration
ECB = European Chemicals Bureau
EEC = European Economic Community
EINECS = European Inventory of Existing Commercial Chemical Substances
ELINCS = European List of Notified Chemical Substances
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IC50 = Inhibition concentration, 50%
IMDG = International Maritime Code for Dangerous Goods
IUCLID = International Uniform Chemical Information Database
LC50 = Lethal concentration, 50%
LD50 = Median lethal dose
MARPOL = International Convention for the Prevention of Marine Pollution from Ships
PBT = Persistent, Bioaccumulative and Toxic substance
PNEC = Predicted No-Effect Concentration
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
TLV®/TWA = Threshold limit value – time-weighted average
TLV®STEL = Threshold limit value – short-time exposure limit
VOC = Volatile Organic Compounds
vPvB = very Persistent and very Bioaccumulative

16.4 Other information

Classification procedure

Acute Tox. 4: H302 Harmful if swallowed. (Calculation method)
STOT RE 2: H373 May cause damage to organs through prolonged or repeated exposure. (Calculation method)

Modified position

SECTION 2 been added: The product is required to be labelled in accordance with GHS/CLP-Directives.

SECTION 2 been added: P501 Dispose of contents/container to in accordance with local/regional/national/international regulation.

SECTION 2 been added: P260 Do not breathe vapours.

SECTION 2 deleted: Classification according to conversion table Annex VII 1272/2008/EC

SECTION 4 deleted: Change soaked clothing immediately.

SECTION 4 been added: If eye irritation persists: Get medical advice/attention.

SECTION 4 been added: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

SECTION 4 deleted: In case of contact with eyes rinse thoroughly with plenty of water and seek medical advice.

SECTION 4 been added: Take off contaminated clothing and wash before reuse.

SECTION 5 been added: In the event of fire the following can be released:

SECTION 5 deleted: Risk of formation of toxic pyrolysis products.

SECTION 7 been added: Vapours can form an explosive mixture with air.

SECTION 7 been added: Prevent penetration into the ground.

SECTION 7 been added: Take off contaminated clothing and wash before reuse.

SECTION 8 deleted: See SECTION 6+7.

SECTION 8 been added: Protect the environment by applying appropriate control measures to prevent or limit emissions.

SECTION 9 been added: blue

SECTION 11 deleted: The product was classified on the basis of the calculation procedure of the preparation directive.

SECTION 12 been added: Accumulation in organisms is not expected.

SECTION 12 been added: Do not discharge product unmonitored into the environment.

SECTION 12 deleted: No classification on the basis of the calculation procedure of the preparation directive.

SECTION 15 deleted: Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16 been added: Observe employment restrictions for mothers-to-be and nursing mothers.

SECTION 16 been added: Calculation method

SECTION 16 been added: Observe employment restrictions for young people.



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