

Safety Data Sheet

according to UK REACH Regulation

926 AGR Ventil Reiniger MF92600250A

Revision date: 21.01.2021

Product code: 1102036

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

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

Cleaner

1.3. Details of the supplier of the safety data sheet

Company name:	TUNAP GmbH & Co. KG	
Street:	Buergermeister-Seidl-Strasse 2	
Place:	D-82515 Wolfratshausen	
Telephone:	+49 (0) 8171/1600-0	Telefax: +49 (0) 8171/1600-40
e-mail:	sdb@tunap.com	
Internet:	www.tunap.com	

1.4. Emergency telephone number: 111 NHS (National Health Service)**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****GB CLP Regulation**

Hazard categories:

Aerosol: Aerosol 3

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Dam. 1

Hazard Statements:

Pressurised container: May burst if heated.

Causes skin irritation.

Causes serious eye damage.

2.2. Label elements**GB CLP Regulation****Hazard components for labelling**

2-aminoethanol; ethanolamine

N-dodecyl-β-alanine, compound with 2,2',2"-nitrioltriethanol (1:1)

Signal word: Danger**Pictograms:****Hazard statements**

H229	Pressurised container: May burst if heated.
H315	Causes skin irritation.
H318	Causes serious eye damage.

Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P251	Do not pierce or burn, even after use.
P280	Wear eye protection.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

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P310 present and easy to do. Continue rinsing.
 P410+P412 Immediately call a POISON CENTER/doctor.
 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Special labelling of certain mixtures

5 % by mass of the contents are flammable.

2.3. Other hazards

Heating causes rise in pressure with risk of bursting.

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

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
141-43-5	2-aminoethanol; ethanolamine			3 - < 5 %
	205-483-3	603-030-00-8	01-2119486455-28	
	Acute Tox. 4, Acute Tox. 4, Acute Tox. 4, Skin Corr. 1B, STOT SE 3, Aquatic Chronic 3; H332 H312 H302 H314 H335 H412			
14171-00-7	N-dodecyl-β-alanine, compound with 2,2',2"-nitrilotriethanol (1:1)			0.1 - < 1 %
	238-015-1			
	Skin Irrit. 2, Eye Dam. 1; H315 H318			
100-37-8	2-diethylaminoethanol; N,N-diethylethanolamine			0.1 - < 1 %
	202-845-2	603-048-00-6		
	Flam. Liq. 3, Acute Tox. 3, Acute Tox. 3, Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1, STOT SE 3, STOT RE 2; H226 H331 H311 H302 H314 H318 H335 H373			

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		
141-43-5	205-483-3	2-aminoethanol; ethanolamine	3 - < 5 %
	inhalation: ATE = 11 mg/l (vapours); inhalation: LC50 = 1,3 mg/l (dusts or mists); dermal: LD50 = 2504 mg/kg; oral: LD50 = ca. 1515 mg/kg STOT SE 3; H335: >= 5 - 100		
100-37-8	202-845-2	2-diethylaminoethanol; N,N-diethylethanolamine	0.1 - < 1 %
	inhalation: LC50 = ca. 4,6 mg/l (vapours); inhalation: ATE = 0,5 mg/l (dusts or mists); dermal: LD50 = ca. 1100 mg/kg; oral: LD50 = ca. 1320 mg/kg STOT SE 3; H335: >= 5 - 100		

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

< 5 % amphoteric surfactants, perfumes (Limonene).

SECTION 4: First aid measures**4.1. Description of first aid measures****General information**

First aider: Pay attention to self-protection! Remove persons to safety. Never give anything by mouth to an unconscious person or a person with cramps.

After inhalation

Remove person to fresh air and keep comfortable for breathing. In all cases of doubt, or when symptoms persist, seek medical advice.

After contact with skin

Wash with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse.

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In all cases of doubt, or when symptoms persist, seek medical advice.

After contact with eyes

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. In case of troubles or persistent symptoms, consult an ophthalmologist.

After ingestion

Do NOT induce vomiting. Observe risk of aspiration if vomiting occurs. Call a physician in any case!

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

Headache, nausea, dizziness, fatigue, skin irritation

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

Treat symptomatically. Call a POISON CENTER. Symptoms can occur only after several hours.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Water fog. Foam. Carbon dioxide (CO₂). Extinguishing powder.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

Incomplete combustion and thermolysis gases of different toxicity can occur. In the case of hydrocarbonaceous products such as CO, CO₂, aldehydes and soot. These can be very dangerous if they are inhaled in high concentrations or in enclosed spaces.

5.3. Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Move undamaged containers from immediate hazard area if it can be done safely. In case of fire: Wear self-contained breathing apparatus.

Additional information

Danger of bursting container.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures

Wear breathing apparatus if exposed to vapours/dusts/aerosols. Remove all sources of ignition. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Wear personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Prevent spread over a wide area (e.g. by containment or oil barriers). Ensure all waste water is collected and treated via a waste water treatment plant.

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). 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

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Observe instructions for use.

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Dust must be exhausted directly at the point of origin. Vapours/aerosols must be exhausted directly at the point of origin. If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means.

When using do not eat, drink, smoke, sniff.

Wear personal protection equipment (refer to section 8).

In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop.

Advice on protection against fire and explosion

Heating causes rise in pressure with risk of bursting.

Advice on general occupational hygiene

Avoid exposure. Wear suitable protective clothing. Draw up and observe skin protection programme.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep container tightly closed. Observe legal regulations and provisions.

Hints on joint storage

Do not store together with: Oxidizing agents. Pyrophoric or self-heating substances. Food and feedingstuffs.

Further information on storage conditions

Protect from frost. Protect from direct sunlight. Store in a cool dry place. Observe legal regulations and provisions.

7.3. Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
141-43-5	2-Aminoethanol	1	2.5		TWA (8 h)	WEL
		3	7.6		STEL (15 min)	WEL

DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
141-43-5	2-aminoethanol; ethanolamine			
	Worker DNEL, long-term	inhalation	local	3,3 mg/m ³
	Worker DNEL, long-term	dermal	systemic	1 mg/kg bw/day
	Consumer DNEL, long-term	inhalation	local	2 mg/m ³
	Consumer DNEL, long-term	dermal	systemic	0,24 mg/kg bw/day
	Consumer DNEL, long-term	oral	systemic	3,75 mg/kg bw/day
100-37-8	2-diethylaminoethanol; N,N-diethylethanolamine			
	Worker DNEL, long-term	inhalation	systemic	18,3 mg/m ³
	Worker DNEL, long-term	inhalation	local	10,7 mg/m ³
	Worker DNEL, long-term	dermal	systemic	2,5 mg/kg bw/day

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PNEC values

CAS No	Substance	
Environmental compartment		Value
141-43-5	2-aminoethanol; ethanolamine	
Freshwater		0,085 mg/l
Freshwater (intermittent releases)		0,028 mg/l
Marine water		0,009 mg/l
Freshwater sediment		0,434 mg/kg
Marine sediment		0,043 mg/kg
Micro-organisms in sewage treatment plants (STP)		100 mg/l
Soil		0,037 mg/kg
100-37-8	2-diethylaminoethanol; N,N-diethylethanolamine	
Freshwater		0,062 mg/l
Freshwater (intermittent releases)		0,34 mg/l
Marine water		0,006 mg/l
Freshwater sediment		0,673 mg/kg
Marine sediment		0,067 mg/kg
Micro-organisms in sewage treatment plants (STP)		10 mg/l
Soil		0,098 mg/kg

Additional advice on limit values

- a no restriction
- b End of exposure or end of shift
- c at long-term exposure:
- d before next shift

blood (B)
Urine (U)

8.2. Exposure controls**Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Suitable eye protection: Tightly sealed safety glasses.
DIN EN 166

Hand protection

Protect skin by using skin protective cream. 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.

Suitable material: NBR (Nitrile rubber) Breakthrough time: 480min
Thickness of the glove material 0,45 mm
EN ISO 374

Skin protection

Wear suitable protective clothing. Take off immediately all contaminated clothing and wash it before reuse.

Respiratory protection

Wear breathing apparatus if exposed to vapours/dusts/aerosols.
When exceeding the relevant workplace exposure limits, note the following:

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Suitable respiratory protective equipment: Combination filter device (DIN EN 141)..
 Filtering device with filter or ventilator filtering device of type: A
 Observe the wear time limits as specified by the manufacturer.
 Observe legal regulations and provisions.

Environmental exposure controls

Observe legal regulations and provisions.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state:	Aerosol
Colour:	neon yellow
Odour:	Lemon

Test method**Changes in the physical state**

Boiling point or initial boiling point and boiling range:	100 °C
Flash point:	179 °C
pH-Value (at 20 °C):	10,7 DIN 19268
Density:	1 g/cm ³ DIN 51757

9.2. Other information**Other safety characteristics**

Data apply to technical substance: Relative density, Colour, Odour, Viscosity, pH.

SECTION 10: Stability and reactivity**10.1. Reactivity**

No information available.

10.2. Chemical stability

The product is stable under normal conditions.

10.3. Possibility of hazardous reactions

Do not expose to temperatures above 50 °C. Heating causes rise in pressure with risk of bursting.

10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air. Take precautionary measures against static discharges.

10.5. Incompatible materials

Oxidizing agents. Pyrophoric or self-heating substances.

10.6. Hazardous decomposition products

Incomplete combustion and thermolysis gases of different toxicity can occur. In the case of hydrocarbonaceous products such as CO, CO₂, aldehydes and soot. These can be very dangerous if they are inhaled in high concentrations or in enclosed spaces.

Further information

Do not mix with acids.

SECTION 11: Toxicological information**11.1. Information on hazard classes as defined in GB CLP Regulation****Toxicokinetics, metabolism and distribution**

There are no data available on the mixture itself.

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Acute toxicity

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

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
141-43-5	2-aminoethanol; ethanolamine				
	oral	LD50 mg/kg ca. 1515	Rat	Study report (1966)	OECD Guideline 401
	dermal	LD50 mg/kg 2504	Rabbit	Study report (1988)	OECD Guideline 402
	inhalation vapour	ATE 11 mg/l			
	inhalation (4 h) aerosol	LC50 1,3 mg/l	Rat		
100-37-8	2-diethylaminoethanol; N,N-diethylethanolamine				
	oral	LD50 mg/kg ca. 1320	Rat	Study report (1969)	BASF-Test: The study was conducted accor
	dermal	LD50 mg/kg ca. 1100	Rabbit	Cited in: Documentation of the Threshold	The study was conducted prior to the imp
	inhalation (1 h) vapour	LC50 mg/l ca. 4,6	Rat	Study report (1969)	BASF TEST: The test demonstrates the tox
	inhalation aerosol	ATE 0,5 mg/l			

Irritation and corrosivity

Causes skin irritation.

Causes serious eye damage.

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.

No indications of human carcinogenicity exist.

No indications of human germ cell mutagenicity exist.

No indications of human reproductive toxicity exist.

STOT-single exposure

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

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.

Specific effects in experiment on an animal

No information available.

SECTION 12: Ecological information**12.1. Toxicity**

There are no data available on the mixture itself.

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
141-43-5	2-aminoethanol; ethanolamine					
	Acute fish toxicity	LC50	349 mg/l	96 h	Cyprinus carpio	Study report (1997) other: Directive 92/69/EEC, C.1.
	Acute algae toxicity	ErC50	2,8 mg/l	72 h	Pseudokirchneriella subcapitata	unpublished (1997) OECD Guideline 201
	Acute crustacea toxicity	EC50	65 mg/l	48 h	Daphnia magna	Study report (1997) EU Method C.2
	Fish toxicity	NOEC mg/l	1,24	41 d	Oryzias latipes	unpublished (2008) OECD Guideline 210
	Crustacea toxicity	NOEC mg/l	0,85	21 d	Daphnia magna	unpublished (1997) other: OECD 202 "Daphnia sp., Acute Immo
100-37-8	2-diethylaminoethanol; N,N-diethylethanolamine					
	Acute fish toxicity	LC50	147 mg/l	96 h	Leuciscus idus	Study report (1987) other: German Industrial Standard DIN 38
	Acute algae toxicity	ErC50 mg/l	62,3	72 h	Desmodesmus subspicatus	Study report (1988) other: German industrial standard test g
	Acute crustacea toxicity	EC50 mg/l	83,6	48 h	Daphnia magna	Study report (1988) EU Method C.2

12.2. Persistence and degradability

There are no data available on the mixture itself. AOX (mg/l): 0

12.3. Bioaccumulative potential

There are no data available on the mixture itself.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
141-43-5	2-aminoethanol; ethanolamine	-2,3
100-37-8	2-diethylaminoethanol; N,N-diethylethanolamine	0,21

BCF

CAS No	Chemical name	BCF	Species	Source
141-43-5	2-aminoethanol; ethanolamine	2,3		SAR and QSAR in Envi
100-37-8	2-diethylaminoethanol; N,N-diethylethanolamine	< 6,1	Cyprinus carpio	Publication (2002)

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

This substance does not meet the criteria for classification as PBT or vPvB.

12.7. Other adverse effects

No information available.

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.

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List of Wastes Code - residues/unused products

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing hazardous substances; hazardous waste

List of Wastes Code - used product

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing hazardous substances; hazardous waste

List of Wastes Code - contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

SECTION 14: Transport information**Land transport (ADR/RID)**

14.1. UN number or ID number: UN 1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2
14.4. Packing group: -
 Hazard label: 2.2
 Classification code: 5A
 Special Provisions: 190 327 344 625
 Limited quantity: 1 L
 Excepted quantity: E0
 Transport category: 3
 Tunnel restriction code: E

Inland waterways transport (ADN)

14.1. UN number or ID number: UN 1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2
14.4. Packing group: -
 Hazard label: 2.2
 Classification code: 5A
 Special Provisions: 190 327 344 625
 Limited quantity: 1 L
 Excepted quantity: E0

Marine transport (IMDG)

14.1. UN number or ID number: UN 1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2.2
14.4. Packing group: -
 Hazard label: 2.2
 Marine pollutant: no
 Special Provisions: 63, 190, 277, 327, 344, 959
 Limited quantity: 1000 mL
 Excepted quantity: E0
 EmS: F-D, S-U

Air transport (ICAO-TI/IATA-DGR)

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14.1. UN number or ID number:	UN 1950
14.2. UN proper shipping name:	AEROSOLS, non-flammable
14.3. Transport hazard class(es):	2.2
14.4. Packing group:	-
Hazard label:	2.2
Special Provisions:	A98 A145 A167 A802
Limited quantity Passenger:	30 kg G
Passenger LQ:	Y203
Excepted quantity:	E0
IATA-packing instructions - Passenger:	203
IATA-max. quantity - Passenger:	75 kg
IATA-packing instructions - Cargo:	203
IATA-max. quantity - Cargo:	150 kg

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.

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

2010/75/EU (VOC): No information available.

2004/42/EC (VOC): No information available.

Additional informationSafety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)
Aerosol directive (75/324/EEC)**National regulatory information**

Water hazard class (D): 1 - slightly hazardous to water

SECTION 16: Other information**Changes**

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

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)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IATA: International Air Transport Association

IMDG: International Maritime Code for Dangerous Goods

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 (division of the American Chemical Society)

DNEL/DMEL: Derived No Effect Level / Derived Minimal Effect Level

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WEL (UK): Workplace Exposure Limits
 TWA (EC): Time-Weighted Average
 ATE: Acute Toxicity Estimate
 STEL (EC) Short Term Exposure Limit
 LC50: Lethal Concentration
 EC50: half maximal Effective Concentration
 ErC50: means EC50 in terms of reduction of growth rate

Classification for mixtures and used evaluation method according to GB CLP Regulation

Classification	Classification procedure
Aerosol 3; H229	On basis of test data
Skin Irrit. 2; H315	Bridging principle "Aerosols"
Eye Dam. 1; H318	Bridging principle "Aerosols"

Relevant H and EUH statements (number and full text)

H226	Flammable liquid and vapour.
H229	Pressurised container: May burst if heated.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.

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.)