

**641 Intercooler Cleaner 1 I AB**

Print date: 04.08.2020

Product code: 1103687

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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:	Bürgermeister-Seidl-Str. 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: +49 (0) 30 30 686 790 (Giftnotruf Berlin)**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:

Skin corrosion/irritation: Skin Corr. 1B

Serious eye damage/eye irritation: Eye Dam. 1

Specific target organ toxicity - single exposure: STOT SE 3

Hazard Statements:

Causes severe skin burns and eye damage.

May cause respiratory irritation.

2.2. Label elements**Regulation (EC) No. 1272/2008****Hazard components for labelling**2-aminoethanol; ethanolamine
disodium metasilicate**Signal word:** Danger**Pictograms:****Hazard statements**

H314	Causes severe skin burns and eye damage.
H335	May cause respiratory irritation.

Precautionary statements

P260	Do not breathe vapours.
P262	Do not get in eyes, on skin, or on clothing.
P280	Wear eye/face 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 present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.

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P304+P340
P314IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Get medical advice/attention if you feel unwell.**2.3. Other hazards**

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

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	
	Acute Tox. 4, Acute Tox. 4, Acute Tox. 4, Skin Corr. 1B, STOT SE 3, Aquatic Chronic 3; H332 H312 H302 H314 H335 H412	
10213-79-3	disodium metasilicate	3 - < 5 %
	229-912-9	
	Met. Corr. 1, Skin Corr. 1B, STOT SE 3; H290 H314 H335	

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

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

< 5 % anionic surfactants.

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. 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**

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Suitable extinguishing media

Non-combustible liquids. Co-ordinate fire-fighting measures to the fire surroundings.

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

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**

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

Absorb with liquid-binding material (e.g. 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.
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).

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking.

Further information on handling

Avoid contact with skin and eyes.

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.



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Further information on storage conditions

Protect from frost.

7.3. Specific end use(s)

Cleaner

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

PNEC values

CAS No	Substance	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

Additional advice on limit values

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

blood (B)

Urine (U)

8.2. Exposure controls

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Appropriate engineering controls

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

Protective and hygiene measures

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

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 (maximum wearing 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:

Suitable respiratory protective equipment: Combination filter device (DIN EN 141)..

Filtering device with filter or ventilator filtering device of type: P2

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: Liquid

Colour:

Odour: mild

pH-Value (at 20 °C):

Test method
12,5 DIN 19268

Changes in the physical state

Melting point: not determined

Initial boiling point and boiling range: 100 °C

Sublimation point: No information available.

Softening point: No information available.

Pour point: No information available.

Flash point: not applicable

Sustaining combustion: No data available

Flammability

Solid: not determined

Gas: not applicable

Lower explosion limits: No information available.

Ignition temperature: No information available.

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Auto-ignition temperature

Solid:

No information available.

Gas:

No information available.

Decomposition temperature:

No information available.

Oxidizing properties

Not oxidising.

Vapour pressure:

No information available.

Vapour pressure:

No information available.

Density (at 20 °C):

1,022 g/cm³ DIN 51757

Water solubility:

highly soluble.

Solubility in other solvents

not determined

Partition coefficient:

not determined

Viscosity / dynamic:

DIN 53019-1

Vapour density:

not determined

Evaporation rate:

not determined

9.2. Other information

Solid content:

not determined

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

No hazardous reaction when handled and stored according to provisions.

10.4. Conditions to avoid

Do not mix with acids.

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 other chemicals.

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Toxicokinetics, metabolism and distribution**

There are no data available on the mixture itself.

Acute toxicity

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



according to Regulation (EC) No 1907/2006

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CAS No	Chemical name			
	Exposure route	Dose	Species	Source
141-43-5	2-aminoethanol; ethanolamine			
	oral	LD50 ca. 1515 mg/kg	Rat	Study report (1966)
	dermal	LD50 2504 mg/kg	Rabbit	Study report (1988)
	inhalation (4 h) aerosol	LC50 1,3 mg/l	Rat	
10213-79-3	disodium metasilicate			
	oral	LD50 1152-1349 mg/kg	Rat	
	dermal	LD50 >5000 mg/kg	Rat	

Irritation and corrosivity

Causes severe skin burns and eye damage.

In vitro Skin Irritation: Human Skin Model Test (OECD 439): Not an irritant. according to UN GHS according to EU CLP: no category

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

May cause respiratory irritation.

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.

Additional information on tests

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

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

There are no data available on the mixture itself.

CAS No	Chemical name				
	Aquatic toxicity	Dose	[h] [d]	Species	Source
141-43-5	2-aminoethanol; ethanolamine				
	Acute fish toxicity	LC50 349 mg/l	96 h	Cyprinus carpio	Study report (1997)
	Acute algae toxicity	ErC50 2,8 mg/l	72 h	Pseudokirchneriella subcapitata	unpublished (1997)
	Acute crustacea toxicity	EC50 65 mg/l	48 h	Daphnia magna	Study report (1997)
	Fish toxicity	NOEC 1,24 mg/l	41 d	Oryzias latipes	unpublished (2008)
	Crustacea toxicity	NOEC 0,85 mg/l	21 d	Daphnia magna	unpublished (1997)

12.2. Persistence and degradability



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The product has not been tested.

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
141-43-5	2-aminoethanol; ethanolamine	-2,3

BCF

CAS No	Chemical name	BCF	Species	Source
141-43-5	2-aminoethanol; ethanolamine	2,3		SAR and QSAR in Envi

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The product has not been tested.

12.6. Other adverse effects

No information available.

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

070701 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fine chemicals and chemical products not otherwise specified; aqueous washing liquids and mother liquors; hazardous waste

List of Wastes Code - used product

070701 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fine chemicals and chemical products not otherwise specified; aqueous washing liquids and mother liquors; 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

Contaminated packaging

Water (with cleaning agent). Completely emptied packages can be recycled.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number:	UN 1760
14.2. UN proper shipping name:	CORROSIVE LIQUID, N.O.S. (disodium metasilicate; 2-aminoethanol; ethanolamine)
14.3. Transport hazard class(es):	8
14.4. Packing group:	III
Hazard label:	8

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Classification code:	C9
Special Provisions:	274
Limited quantity:	5 L
Excepted quantity:	E1
Transport category:	3
Hazard No:	80
Tunnel restriction code:	E

Inland waterways transport (ADN)

14.1. UN number:	UN 1760
14.2. UN proper shipping name:	CORROSIVE LIQUID, N.O.S. (disodium metasilicate; 2-aminoethanol; ethanolamine)
14.3. Transport hazard class(es):	8
14.4. Packing group:	III
Hazard label:	8
Classification code:	C9
Special Provisions:	274
Limited quantity:	5 L
Excepted quantity:	E1

Marine transport (IMDG)

14.1. UN number:	UN 1760
14.2. UN proper shipping name:	CORROSIVE LIQUID, N.O.S. (disodium metasilicate; 2-aminoethano
14.3. Transport hazard class(es):	8
14.4. Packing group:	III
Hazard label:	8
Marine pollutant:	no
Special Provisions:	223, 274
Limited quantity:	5 L
Excepted quantity:	E1
EmS:	F-A, S-B

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number:	UN 1760
14.2. UN proper shipping name:	CORROSIVE LIQUID, N.O.S. (disodium metasilicate; 2-aminoethano
14.3. Transport hazard class(es):	8
14.4. Packing group:	III
Hazard label:	8
Special Provisions:	A3 A803
Limited quantity Passenger:	1 L
Passenger LQ:	Y841
Excepted quantity:	E1
IATA-packing instructions - Passenger:	852
IATA-max. quantity - Passenger:	5 L
IATA-packing instructions - Cargo:	856
IATA-max. quantity - Cargo:	60 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS:	no
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14.6. Special precautions for user

Warning: strongly corrosive.

14.7. Transport in bulk according to Annex II of Marpol 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****EU regulatory information**

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

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

Additional information

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

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): 2,9,10.

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

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

Relevant H and EUH statements (number and full text)

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H412	Harmful to aquatic life with long lasting effects.

Further Information

Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]: Calculation method.

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

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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.)