Safety Data Sheet

according to Regulation (EC) No 1907/2006

144 Cooling system agent MP1440250AB

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

1.1. Product identifier

144 Cooling system agent MP1440250AB

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

Use of the substance/mixture

Additive

1.3. Details of the supplier of the safety data sheet

Company name:	TUNAP Deutschland Vertriebs GmbH & Co. Betriebs 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

This mixture is not classified as hazardous according to Directive 1999/45/EC.

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

Hazard categories:
Skin corrosion/irritation: Skin Irrit. 2
Serious eye damage/eye irritation: Eye Dam. 1
Specific target organ toxicity - repeated exposure: STOT RE 2
Hazard Statements:
Causes skin irritation.
Causes serious eye damage.
May cause damage to organs through prolonged or repeated exposure.

2.2. Label elements

Hazard components for labelling

ethanediol, ethylene glycol
tetrasodium ethylene diamine tetraacetate
Tolyltriazol Sodium salt

Signal word: Danger

Pictograms: GHS05-GHS08

Hazard statements

H315	Causes skin irritation.
H318	Causes serious eye damage.
H373	May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

P260	Do not breathe vapour.
P280	Wear Eye/face protection.
P302+P352	IF ON SKIN: Wash with plenty of Water and soap..

P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTER/doctor if you feel unwell.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification according to Directive 67/548/EEC	
Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
REACH No		
203-473-3	ethanediol, ethylene glycol	10 - < 20 %
107-21-1	Xn - Harmful R22	
	Acute Tox. 4, STOT RE 2; H302 H373	
01-2119456816-28		
200-573-9	tetrasodium ethylene diamine tetraacetate	1 - < 3 %
64-02-8	Xn - Harmful, Xi - Irritant R20/22-41	
	Acute Tox. 4, Eye Dam. 1; H302 H318	
265-004-9	Tolyltriazol Sodium salt	1 - < 3 %
64665-57-2	C - Corrosive, Xn - Harmful R22-34-52-53	
	Acute Tox. 4, Skin Corr. 1B, Aquatic Chronic 3; H302 H314 H412	
253-733-5	2-phosphonobutane-1,2,4-tricarboxylic acid	1 - < 3 %
37971-36-1	Xi - Irritant R36	
	Met. Corr. 1, Eye Irrit. 2; H290 H319	
01-2119436643-39		

Full text of R, H and EUH phrases: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

After inhalation

Provide fresh air.

After contact with skin

Wash with plenty of water. Change contaminated clothing.

After contact with eyes

If product gets into the eye, keep eyelid open and rinse immediately with large quantities of water, for at least 5 minutes. Subsequently consult an ophthalmologist.

After ingestion

Rinse mouth immediately and drink plenty of water.
Caution if victim vomits: Risk of aspiration!

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.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

The product itself does not burn.

5.3. Advice for firefighters

Use appropriate respiratory protection.

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

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Wear personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

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). Treat the recovered material as prescribed in the section on waste disposal.

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

If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means. Dust must be exhausted directly at the point of origin. When using do not eat, drink, smoke, sniff.

Advice on protection against fire and explosion

No special measures are necessary.

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.

Advice on storage compatibility

No special measures are necessary.

Further information on storage conditions

Protect from frost.

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/m³	fibres/ml	Category	Origin
107-21-1	Ethane-1,2-diol, vapour	20	52		TWA (8 h)	WEL
		40	104		STEL (15 min)	WEL

Additional advice on limit values

a no restriction
b End of exposure or shift
c in long-term exposure: after several shifts
d prior to next shift

STEL (EC) : Short Term Exposure Limit
TWA (EC): time-weighted average
U: Urea
B: Blood

8.2. Exposure controls

Protective and hygiene measures

Protect skin by using skin protective cream. After work, wash hands and face. When using do not eat or drink.

Eye/face protection

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

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

Skin protection

Only wear fitting, comfortable and clean protective clothing.

Respiratory protection

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: liquid
Colour: pink
Odour: mild

		Test method
pH-Value (at 20 °C):	9	DIN 19268

Changes in the physical state

Melting point: No information available.
Initial boiling point and boiling range: 100 °C
Sublimation point: No information available.
Softening point: No information available.

Flash point:	No information available.	
Lower explosion limits:	No information available.	
Upper explosion limits:	No information available.	
Ignition temperature:	No information available.	
Vapour pressure:	No information available.	
Vapour pressure:	No information available.	
Density (at 20 °C):	1,1 g/cm³	DIN 51757
Bulk density:	No information available.	
Water solubility:	insoluble	
Partition coefficient:	No information available.	
Viscosity / dynamic:	No information available.	DIN 53019-1
Flow time: (at 20 °C)	No information available.	
Vapour density:	No information available.	
Evaporation rate:	No information available.	
Solvent separation test:	No information available.	
Solvent content:	No information available.	

9.2. Other information

Solid content:	No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts with : Acid, Oxidizing agents.

10.2. Chemical stability

The product is stable under normal conditions.

10.3. Possibility of hazardous reactions

No information available.

10.4. Conditions to avoid

No special precautionary measures are necessary.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

No information available.

Further information

Do not mix with other chemicals.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicocinetics, metabolism and distribution

No information available.

Acute toxicity

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

Acute toxicity

CAS No	Chemical name				
	Exposure route	Method	Dose	Species	Source
107-21-1	ethanediol, ethylene glycol				
	oral	LD50	1600 mg/kg	Rat	
	dermal	LD50 mg/kg	>3500	Rabbit	
64-02-8	tetrasodium ethylene diamine tetraacetate				
	oral	LD50	1780 mg/kg	Rat	
	inhalative aerosol	LC50	3 mg/l	Rat	
64665-57-2	Tolyltriazol Sodium salt				
	oral	LD50	735 mg/kg	Rat.	
	dermal	LD50 mg/kg	>2000	Rabbit	
37971-36-1	2-phosphonobutane-1,2,4-tricarboxylic acid				
	oral	LD50 mg/kg	>6500	Rat	
	dermal	LD50 mg/kg	>4000	Rat	

Irritation and corrosivity

Causes skin irritation.
Causes serious eye damage.
Irritating to eyes.

Sensitising effects

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

STOT-single exposure

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

Severe effects after repeated or prolonged exposure

May cause damage to organs through prolonged or repeated exposure. (ethanediol, ethylene glycol)

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.

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

CAS No	Chemical name					
	Aquatic toxicity	Method	Dose	[h] | [d]	Species	Source
107-21-1	ethanediol, ethylene glycol					
	Acute fish toxicity	LC50	72860 mg/l	96 h	Pimephales promelas	
	Acute algae toxicity	ErC50 mg/l	6500 - 13000	96 h	Selenastrum capricornutum	
	Acute crustacea toxicity	EC50	> 100 mg/l	48 h	Daphnia magna	
	Fish toxicity	NOEC	72860 mg/l	7 d	Pimephales promelas	
	Crustacea toxicity	NOEC	8590 mg/l	7 d	Ceriodaphnia spec	
64-02-8	tetrasodium ethylene diamine tetraacetate					
	Acute fish toxicity	LC50	121 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)	
	Acute algae toxicity	ErC50	2,7 mg/l	72 h	Selenastrum capricornutum	
	Acute crustacea toxicity	EC50	600 mg/l	48 h	Daphnia magna (Big water flea)	
64665-57-2	Tolyltriazol Sodium salt					
	Acute fish toxicity	LC50	25 mg/l	96 h	salmo gairdneri	
	Acute algae toxicity	ErC50	26,2 mg/l	96 h	Selenastrum capricornutum	
	Acute crustacea toxicity	EC50	280 mg/l	48 h	Daphnia magna	
37971-36-1	2-phosphonobutane-1,2,4-tricarboxylic acid					
	Acute fish toxicity	LC50	>1042 mg/l	96 h	Brachydanio rerio (zebra-fish)	
	Acute crustacea toxicity	EC50	>1071 mg/l	48 h	Daphnia magna	

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
107-21-1	ethanediol, ethylene glycol	-1,36
64665-57-2	Tolyltriazol Sodium salt	2,1

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.

12.6. Other adverse effects

No information available.

Further information

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Dispose of waste according to applicable legislation.

Waste disposal number of waste from residues/unused products

070601 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics; aqueous washing liquids and mother liquors
Classified as hazardous waste.

Waste disposal number of used product

070601 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics; aqueous washing liquids and mother liquors
Classified as hazardous waste.

Waste disposal number of contaminated packaging

150102 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); plastic packaging

Contaminated packaging

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

SECTION 14: Transport information

Land transport (ADR/RID)

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

Inland waterways transport (ADN)

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

Marine transport (IMDG)

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

Air transport (ICAO)

14.1. UN number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	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. Transport in bulk according to Annex II of Marpol and the IBC Code

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

1999/13/EC (VOC): VOC-CH: - kg/l
VOC 1999/13/EG: - % w/w

Additional information

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

National regulatory information

Water contaminating class (D): 1 - slightly water contaminating

Additional information

94/69/EC (21st ATP). The benzene content of the product is less than 0.1%. It applies the annotation P. Classification and labeling as carcinogenic is not necessary.

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 1,2.

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
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 R phrases (number and full text)

20/22	Harmful by inhalation and if swallowed.
22	Harmful if swallowed.
34	Causes burns.
36	Irritating to eyes.
41	Risk of serious damage to eyes.
52	Harmful to aquatic organisms.
53	May cause long-term adverse effects in the aquatic environment.

Relevant H and EUH statements (number and full text)

H290	May be corrosive to metals.
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.
H373	May cause damage to kidneys through prolonged or repeated exposure by skin contact.
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.)