

**Radiator Conditioner**

Revision date: 16.02.2021

Product code: 1400

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

**1.1. Product identifier**

Radiator Conditioner

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

**Use of the substance/mixture**

care agent

corrosion preventing agent

**1.3. Details of the supplier of the safety data sheet**

Company name: CTP GmbH

Street: Saalfelder Strasse 35h

Place: D-07338 Leutenberg

Telephone: +49 (0)36734 230-0

Telefax: +49 (0)36734 230-22

e-mail: msds@bluechemgroup.com

Contact person: Jens Moeller, Dipl.-Chem.

Telephone: +49 (0)36734 230-19

Internet: www.bluechemgroup.com

**1.4. Emergency telephone**

GBK GmbH: +49-(0)6132-84463 (24/7)

**number:**

**Further Information**

Article Number: 1401, 1402, 1403, 1405, 1408

**SECTION 2: Hazards identification**

**2.1. Classification of the substance or mixture**

**Regulation (EC) No. 1272/2008**

Hazard categories:

Acute toxicity: Acute Tox. 4

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Specific target organ toxicity - repeated exposure: STOT RE 2

Hazard Statements:

Harmful if swallowed.

Causes skin irritation.

Causes serious eye irritation.

May cause damage to organs through prolonged or repeated exposure.

**2.2. Label elements**

**Regulation (EC) No. 1272/2008**

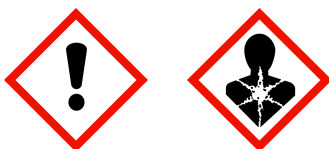
**Hazard components for labelling**

ethanediol, ethylene glycol

2-aminoethanol, ethanolamine

**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.

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**Precautionary statements**

- |                |  |
|----------------|--|
| P101           | If medical advice is needed, have product container or label at hand.  |
| P102           | Keep out of reach of children.   |
| P270           | Do not eat, drink or smoke when using this product.  |
| P280           | Wear protective gloves and eye/face protection.  |
| P302+P352      | IF ON SKIN: Wash with plenty of 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. |
| P314           | Get medical advice/attention if you feel unwell.   |
| P501           | Dispose of this material and its container to hazardous or special waste collection point.                                       |

**Labelling of packages where the contents do not exceed 125 ml**

**Signal word:** Warning

**Pictograms:**



**Hazard statements**

H302-H373

**Precautionary statements**

P101-P102-P270-P314-P501

**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**

**Chemical characterization**

Additives  
corrosion preventing agent

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**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
107-21-1	ethanediol, ethylene glycol			65 - < 70 %
	203-473-3		01-2119456816-28	
	Acute Tox. 4, STOT RE 2; H302 H373			
	polymers, org. phosphorus compound			1 - < 5 %
	235-741-0			
	Skin Irrit. 2, Eye Irrit. 2; H315 H319			
	carboxylic acid with ethanolamine			1 - < 5 %
	221-651-9			
	Skin Irrit. 2, Eye Irrit. 2; H315 H319			
141-43-5	2-aminoethanol, ethanolamine			1 - < 5 %
	205-483-3		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			
1303-96-4	disodium tetraborate pentahydrate; borax pentahydrate			1 - < 5 %
	215-540-4		01-2119490790-32	
	Repr. 1B, Eye Irrit. 2; H360FD H319			

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	65 - < 70 %
		dermal: LD50 = 10600 mg/kg; oral: LD50 = 4700 mg/kg	
141-43-5	205-483-3	2-aminoethanol, ethanolamine	1 - < 5 %
		inhalation: ATE = 11 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: LD50 = 1025 mg/kg; oral: LD50 = 1515 mg/kg STOT SE 3; H335: >= 5 - 100	
1303-96-4	215-540-4	disodium tetraborate pentahydrate; borax pentahydrate	1 - < 5 %
		inhalation: LC50 = >2,03 mg/l (vapours) Repr. 1B; H360FD: >= 4,5 - 100	

**Further Information**

This mixture contains the following substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH:  
 >= 0,1 % disodium tetraborate decahydrate; borax decahydrate

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

**General information**

Remove affected person from the danger area and lay down.  
 Remove contaminated, saturated clothing immediately.

**After inhalation**

Move victim to fresh air. Put victim at rest and keep warm.  
 In case of breathing difficulties administer oxygen. Consult physician.

**After contact with skin**

After contact with skin, wash immediately with: Water and soap.

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**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.  
Give activated carbon, in order to reduce the resorption in the gastro-enteric tract.  
Do NOT induce vomiting. Consult physician.

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

Frequently or prolonged contact with skin may cause dermal irritation.  
Irritation of eyes: Irritant effect possible.  
After ingestion: Harmful.  
Irritant and corrosive effects.

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

Symptoms: Dizziness. Nausea. unconsciousness.  
Nature of Hazard: Heart circulatory collapse.

**SECTION 5: Firefighting measures**

**5.1. Extinguishing media**

**Suitable extinguishing media**

Water spray. alcohol resistant foam. Dry extinguishing powder. Carbon dioxide (CO<sub>2</sub>).

**Unsuitable extinguishing media**

High power water jet.

**5.2. Special hazards arising from the substance or mixture**

No information available.

**5.3. Advice for firefighters**

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

**Additional information**

Contaminated fire-fighting water must be collected separately.  
Contaminated fire-fighting water must not get into the sewerage network.

**SECTION 6: Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

Wear personal protection equipment.  
Provide adequate ventilation.  
Remove all sources of ignition.  
Avoid contact with skin and eyes.  
Do not breathe gas/fumes/vapour/spray.

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains.  
In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

**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).  
Provide adequate ventilation.

**6.4. Reference to other sections**

No data

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

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**Advice on safe handling**

Keep container tightly closed in a cool, well-ventilated place.

**Advice on protection against fire and explosion**

Keep away from sources of ignition - No smoking.

Concentrated vapors are heavier than air. Vapours may form explosive mixtures with air.

**7.2. Conditions for safe storage, including any incompatibilities**

**Requirements for storage rooms and vessels**

Keep in a cool, well-ventilated place.

Storage temperature: at below °C: 50 °C

**Hints on joint storage**

Should be stored separately from oxidizing agents.

**Further information on storage conditions**

Hygroscopic product.

Store container under dry conditions and firmly closed.

**7.3. Specific end use(s)**

No information available.

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

**Occupational exposure limits**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fib/cm <sup>3</sup>	Category	Origin
107-21-1	1,2-Dihydroxyethane, particulate	-	10		TWA (8 h)	
141-43-5	2-Aminoethanol	1	2.5		TWA (8 h)	
		3	7.6		STEL (15 min)	
12179-04-3	Borate compounds inorganic: Disodium tetraborate pentahydrate	-	2		TWA (8 h)	

**8.2. Exposure controls**

**Protective and hygiene measures**

Take off immediately all contaminated clothing

Do not breathe gas/fumes/vapour/spray.

Avoid contact with skin and eyes.

When using do not eat, drink or smoke.

Wash hands before breaks and after work.

**Eye/face protection**

Tightly sealed safety glasses.

**Hand protection**

Tested protective gloves are to be worn:

CR (polychloroprenes, Chloroprene rubber). Butyl rubber.

Material thickness: 0,5 mm

penetration time: >= 8 h

NBR (Nitrile rubber).

Material thickness: 0,35 mm

penetration time: >= 8 h

**Skin protection**

Wear suitable solvent-proof protective clothing according to EN 465.

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**Respiratory protection**

In case of accumulation of fumes/aerosols, provide adequate ventilation.

In case of insufficient ventilation, wear suitable respiratory equipment.

**SECTION 9: Physical and chemical properties**

**9.1. Information on basic physical and chemical properties**

Physical state:	liquid	
Colour:	colourless, clear	
Odour:	odourless	
pH-Value (at 20 °C):		9 - 10

**Changes in the physical state**

Auto-ignition temperature:	> 400 °C
Density (at 20 °C):	1,09 g/cm <sup>3</sup>
Water solubility: (at 20 °C)	easily soluble.

**9.2. Other information**

No data

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

No information available.

**10.2. Chemical stability**

No decomposition when used as intended.

**10.3. Possibility of hazardous reactions**

No dangerous reactions are known.

**10.4. Conditions to avoid**

UV-solarization/sunlight.  
Keep away from moisture.  
Do not store at temperatures over: 50 °C  
No decomposition when used as intended.

**10.5. Incompatible materials**

Oxidizing agents, strong.  
acid, concentrated.  
Alkalis (alkalis), concentrated.

**10.6. Hazardous decomposition products**

nitrogen oxides (NO<sub>x</sub>).

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

**Acute toxicity**

Harmful if swallowed.

**ATEmix calculated**

ATE (oral) 753,8 mg/kg

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CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
107-21-1	ethanediol, ethylene glycol				
	oral	LD50 4700 mg/kg	Rat	GESTIS	
	dermal	LD50 10600 mg/kg	Rabbit	GESTIS	
141-43-5	2-aminoethanol, ethanolamine				
	oral	LD50 1515 mg/kg	Rat		
	dermal	LD50 1025 mg/kg	Rabbit	IUCLID	
	inhalation vapour	ATE 11 mg/l			
	inhalation aerosol	ATE 1,5 mg/l			
1303-96-4	disodium tetraborate pentahydrate; borax pentahydrate				
	inhalation (4 h) vapour	LC50 >2,03 mg/l	Rat		

**Irritation and corrosivity**

Causes skin irritation.

Causes serious eye irritation.

**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.

**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)

**Aspiration hazard**

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

**Practical experience**

**Other observations**

No information available.

**SECTION 12: Ecological information**

**12.1. Toxicity**

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
141-43-5	2-aminoethanol, ethanolamine					
	Acute fish toxicity	LC50 150 mg/l	96 h	Onchorhynchus mykiss	IUCLID	
	Acute algae toxicity	ErC50 22 mg/l	72 h	Desmodesmus subspicatus		
	Acute crustacea toxicity	EC50 65 mg/l	48 h	Daphnia magna		

**12.2. Persistence and degradability**

No information available.

**12.3. Bioaccumulative potential**

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No indication of bio-accumulation potential.

**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
107-21-1	ethanediol, ethylene glycol	-1,36
141-43-5	2-aminoethanol, ethanolamine	-1,91 (25°C)

**12.4. Mobility in soil**

No information available.

**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. Other adverse effects**

No information available.

**Further information**

Do not allow to enter into surface water or drains.

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

**Disposal recommendations**

Do not dispose with household waste.

Arrange about the exact waste code with the local waste disposal expert.

Have to add a Special treatment in compliance with official regulations in contact with approved waste disposal companies and with authorities in charge.

**Contaminated packaging**

Container must be completely emptied.

Cleaned containers may be recycled.

**SECTION 14: Transport information**

**Land transport (ADR/RID)**

**14.1. UN number:** -

**14.2. UN proper shipping name:** -

**14.3. Transport hazard class(es):** -

**14.4. Packing group:** -

**Other applicable information (land transport)**

No dangerous good in sense of these transport regulations.

**Inland waterways transport (ADN)**

**Other applicable information (inland waterways transport)**

No dangerous good in sense of these transport regulations.

**Marine transport (IMDG)**

**Other applicable information (marine transport)**

No dangerous good in sense of these transport regulations.

**Air transport (ICAO-TI/IATA-DGR)**

**Other applicable information (air transport)**

No dangerous good in sense of these transport regulations.

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**14.6. Special precautions for user**

No information available.



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**14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**

No information available.

**SECTION 15: Regulatory information**

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

**EU regulatory information**

Authorisations (REACH, annex XIV):

Substances of very high concern, SVHC (REACH, article 59):  
disodium tetraborate pentahydrate; borax pentahydrate

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 30

2010/75/EU (VOC): 1 % (10,9 g/l)

2004/42/EC (VOC): 67 % (730,3 g/l)

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

**National regulatory information**

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

**15.2. Chemical safety assessment**

For the following substances of this mixture a chemical safety assessment has been carried out:

ethanediol, ethylene glycol  
2-aminoethanol, ethanolamine  
disodium tetraborate pentahydrate; borax pentahydrate

**SECTION 16: Other information**

**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)**

H302 Harmful if swallowed.  
H312 Harmful in contact with skin.  
H314 Causes severe skin burns and eye damage.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.  
H335 May cause respiratory irritation.  
H360FD May damage fertility. May damage the unborn child.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H412 Harmful 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 hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*