



Safety Data Sheet

according to Regulation (EU) No. 1907/2006

Radiator Conditioner

Print date: 04.10.2011

Product code: 235

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

Product identifier

Radiator Conditioner

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

Details of the supplier of the safety data sheet

Company name:	PRO-TEC Deutschland	
Street:	Großgeschwenda 51	
Place:	D-07330 Probstzella	
Telephone:	+4936735/444-0	Telefax: +4936735/444-44
e-mail:	info@pro-tec-deutschland.com	
Contact person:	Jens Möller, Dipl.-Chem.	
Internet:	www.pro-tec-deutschland.de	

Further Information

Article Number: 1401, 1402, 1403

SECTION 2: Hazards identification

Classification of the substance or mixture

Indications of danger : Harmful

R-phrases:

Harmful if swallowed.

Label elements

Danger symbols: Xn - Harmful



Xn - Harmful

Hazardous components which must be listed on the label

ethanediol, ethylene glycol

R phrases

22 Harmful if swallowed.

S phrases

02 Keep out of the reach of children.

46 If swallowed, seek medical advice immediately and show this container or label.

SECTION 3: Composition/information on ingredients

Mixtures

Chemical characterization

Additives

corrosion preventing agent

Sum of ingredients:

> 50 %

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Hazardous components

EC No.	Chemical name	Quantity
CAS No.	Classification	
Index No.	GHS classification	
REACH No.		
203-473-3	ethanediol, ethylene glycol	65 - 70 %
107-21-1	Xn R22	
603-027-00-1	Acute Tox. 4; H302	
	polymers, org. phosphorus compound	1 - 5 %
N/A	Xi R36/38	
	Eye Irrit. 2, Skin Irrit. 2; H319 H315	
	carboxylic acid with ethanolamine	1 - 5 %
N/A	Xi R36/38	
	Eye Irrit. 2, Skin Irrit. 2; H319 H315	
205-483-3	2-aminoethanol, ethanolamine	1 - 5 %
141-43-5	Xn, C R20/21/22-34	
603-030-00-8	Acute Tox. 4, Acute Tox. 4, Acute Tox. 4, Skin Corr. 1B; H332 H312 H302 H314	
215-540-4	disodium tetraborate decahydrate; borax decahydrate	1 - 5 %
1303-96-4	Repr. Cat. 2 R60-61	
005-011-01-1	Repr. 1B; H360FD	

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

SECTION 4: First aid measures

Description of first aid measures

General information

Move victim out of danger zone and lay down.
Take off immediately all contaminated clothing

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.

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 large quantities of water.
Give activated carbon, in order to reduce the resorption in the gastro-enteric tract.
Do not induce vomiting. Consult physician.

Indication of any immediate medical attention and special treatment needed

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

SECTION 5: Firefighting measures

Extinguishing media



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Suitable extinguishing media

Water spray.
alcohol resistant foam.
Extinguishing powder.
Carbon dioxide (CO₂).

Extinguishing media which must not be used for safety reasons

High power water jet.

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

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.

Environmental precautions

Do not empty into drains or the aquatic environment.
In case of gas being released or leakage into waters, ground or the drainage system, the appropriate authorities must be informed.

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.

SECTION 7: Handling and storage

Precautions for safe handling

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.

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

Advice on storage compatibility

Should be stored separately from oxidizing agents.

Further information on storage conditions

Hygroscopic product.

SECTION 8: Exposure controls/personal protection

Control parameters

Exposure controls

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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 when done working with material; at breaks, lunch, shift changes, etc."

Respiratory protection

Provide for good ventilation, when develop aerosols/mist.
In case of insufficient ventilation, wear suitable respiratory equipment.

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

Eye protection

Tightly sealed safety glasses.

Skin protection

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

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state: liquid
Colour: colourless, clear
Odour: odourless

pH-Value (at 20 °C): 9 - 10

Test method

Changes in the physical state

Ignition temperature: > 400 °C
Density (at 20 °C): 1,09 g/cm³
Water solubility: easily soluble.
(at 20 °C)

SECTION 10: Stability and reactivity

Conditions to avoid

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

Incompatible materials

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

Hazardous decomposition products

nitrogen oxides (NOx).

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SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

CAS No.	Chemical name		Exposure routes	Method	Dose	Species	h
107-21-1	ethanediol, ethylene glycol						
	Acute oral toxicity		ATE		500 mg/kg		
	Acute dermal toxicity		LD50		10600 mg/kg	Kaninchen	
141-43-5	2-aminoethanol, ethanolamine						
	Acute oral toxicity		LD50		1515 mg/kg	Ratte	
	Acute dermal toxicity		LD50		1025 mg/kg	Kaninchen	
	Acute inhalation toxicity		ATE		11 mg/l		
1303-96-4	disodium tetraborate decahydrate; borax decahydrate						
	Acute dermal toxicity		LD50		>10000 mg/kg	rat.	

Irritation and corrosivity

In case of prolonged or frequently repeated skin contact: irritant.

Following eye contact: irritant.

After ingestion: Irritation and etching

SECTION 12: Ecological information

Toxicity

CAS No.	Chemical name		Aquatic toxicity	Method	Dose	Species	h
141-43-5	2-aminoethanol, ethanolamine						
	Acute fish toxicity		LC50		150 mg/l	Onchorhynchus mykiss	96
	Acute algae toxicity		ErC50		22 mg/l	Desmodesmus subspicatus	72
	Acute crustacea toxicity		EC50		65 mg/l	Daphnia magna	48
1303-96-4	disodium tetraborate decahydrate; borax decahydrate						
	Acute fish toxicity		LC50		74 mg/l	Onchorhynchus mykiss	96
	Acute algae toxicity		ErC50		158 mg/l	Algae	96
	Acute crustacea toxicity		EC50		1085-1400 mg/l	Daphnia magna	48

Persistence and degradability

Product is partially biodegradable.

Bioaccumulative potential

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)
1303-96-4	disodium tetraborate decahydrate; borax decahydrate	-1,53

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Further information

Do not empty into drains or the aquatic environment.

SECTION 13: Disposal considerations

Waste treatment methods

Advice on disposal

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)

Other applicable information (land transport)

Not a hazardous material with respect to these transportation regulations.

Inland waterways transport

Other applicable information (inland waterways transport)

Not a hazardous material with respect to these transportation regulations.

Marine transport

Other applicable information (marine transport)

Not a hazardous material with respect to these transportation regulations.

Air transport

Other applicable information (air transport)

Not a hazardous material with respect to these transportation regulations.

SECTION 15: Regulatory information

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

National regulatory information

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

SECTION 16: Other information

Full text of R-phrases referred to under sections 2 and 3

20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
22 Harmful if swallowed.
34 Causes burns.
36/38 Irritating to eyes and skin.
60 May impair fertility.
61 May cause harm to the unborn child.

Full text of H-Statements referred to under sections 2 and 3

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.



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H332 Harmful if inhaled.
H360FD May damage fertility. May damage the unborn child.

Further Information

The information is based on present level of our knowledge. It does not, however, give assurances 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.)