



Radiator Flush

Print date : 04.05.2006

Product code : 236

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1. Identification of the substance/preparation and of the company/undertaking

1.1 Identification of the substance or preparation

Radiator Flush

Use of the substance/preparation

Cleaning agent for radiators

1.2 Company/undertaking identification

Company name	PRO-TEC Deutschland	
Street	Gewerbegebiet Aschbach	
Place	D-07338 Großgeschwenda	
Contact person	Jens Möller, Dipl.-Chem.	Telephone 036735/444-0
e-mail	info@pro-tec-deutschland.com	Telefax 036735/444-44
Internet	www.pro-tec-deutschland.de	

2. Composition/information on ingredients

Chemical characterization (preparation)

Organic and inorganic acids
corrosion preventing agent
Cleaning agent.

Sum of ingredients:
70 - 85 %

Hazardous components

EC-No.	CAS-No.	Chemical name	Quantity	Classification
226-218-8	5329-14-6	sulfamic acid, sulphamic acid, sulphamidic acid	10 - 30 %	Xi R36/38-52-53
201-069-1	5949-29-1	citric acid	< 10 %	Xi R36

Full text of each relevant R phrase can be found in heading 16.

3. Hazards identification

Classification

Symbols : Corrosive
R-phrases :
Causes burns.

4. First aid measures

General information

Take the injured person out of the danger area and lay him/her down. Move victim to fresh air. Instruct person to keep calm and warm.
Immediately remove any contaminated clothing, shoes or stockings.

After inhalation

Provide fresh air. In case of difficulties of breathing consult physician.

After contact with skin

Change contaminated clothing. After contact with skin, wash immediately with soap and plenty of water.
Wash contaminated clothing prior to re-use.

After contact with eyes

Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart.
Consult physician.

After ingestion



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Rinse mouth immediately and drink large quantities of water.
Do not induce vomiting. Consult physician.

Advice to doctor

The following symptoms can occur:
Coughing. Nausea. dyspnoea. Belly-ache.

5. Fire-fighting measures

Suitable extinguishing media

Extinguishing powder. Sand. alcohol resistant foam.

Extinguishing media which must not be used for safety reasons

High power water jet.

Special exposure hazards arriving from substance or preparation itself, combustion products, resulting gases

Sulphur dioxide (SO₂). Nitrogen oxides (NO_x). Ammonia.

Additional information

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

6. Accidental release measures

Personal precautions

Provide adequate ventilation. Avoid contact with skin and eyes.

Environmental precautions

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

Methods for cleaning up/taking up

Prevent allover extension (e.g.knocking-down or a boom).
Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

7. Handling and storage

7.1 Handling

Advice on safe handling

Keep container tightly closed in a cool place.
Avoid contact with skin and eyes.

7.2 Storage

Advice on storage compatibility

Do not store together with: Alkalis (alkalis).

Storageclass (VCI)

8 B

8. Exposure controls/personal protection

8.1 Exposure limit values

8.2 Exposure controls

Protective and hygiene measures

Take off immediately all contaminated clothing
Avoid contact with skin and eyes.

Hand protection

Tested protective gloves are to be worn: Butyl rubber.

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Eye protection

Wear tightly sealed safety glasses against possible splashes into the eyes.

9. Physical and chemical properties**9.1 General information**

Physical state	liquid, clear
Colour	light yellow
Odour	odourless

9.2 Important health, safety and environmental information

	Test method
pH-Value (at 20 °C) :	0-1
Changes in the physical state	
Melting point	< 0 °C
Boiling point	> 100 °C
Density (at 20 °C) :	1,07 g/cm ³
Water solubility : at (20 °C)	easily soluble.

10. Stability and reactivity**Conditions to avoid**

No decomposition when used as intended.

Materials to avoid

Oxidizing agents. Alkalis (alkalis), concentrated.

Hazardous decomposition productsSulphur dioxide (SO₂), nitrogen oxides (NO_x), Ammonia.**11. Toxicological information****Corrosive and irritant effects**Irritant effect on the skin: Irritation and etching
Following eye contact: Risk of serious damage to eyes.**Sensitising effects**

none

12. Ecological information**Additional information**Do not empty into drains or the aquatic environment.
The product is acid. The product needs to apply neutralizing agents before draining to wastewater treatment plants.**13. Disposal considerations****Advice on disposal**Do not dispose with household waste.
Do not empty into drains or the aquatic environment.
Arrange about the exact waste code with the local waste disposal expert.
The product is acid. The product needs to apply neutralizing agents before draining to wastewater treatment plants.**14. Transport information**



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15.2 National regulations

Water contaminating class

1 - slightly water contaminating

16. Other information

List of relevant R phrases

- 34 Causes burns.
- 36 Irritating to eyes.
- 52 Harmful to aquatic organisms.
- 53 May cause long-term adverse effects in the aquatic environment.
- 36/38 Irritating to eyes and skin.

Other data

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.)