

Trade name: RATIONAL Special Descaler

Product no: 6006.0110

Date: 04.08.2005

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(GB)

1. Name of Substance / Formulation & Name of Company

Product details

Trade name: RATIONAL Special Descaler

Manufacturer / Supplier details

Address: RATIONAL AG
Iglingerstraße 62
D-86899 Landsberg/Lech
Tel.: 08191/3270

Emergency telephone no.: "Rechts der Isar" international poisons centre 0049 (0)89 19240 Product-no:101

2. Composition / Details of Ingredients

Chemical characterisation: Formulated from phosphoric acid, sulphonic acid derivative, anticorrosion agent, inhibitor and water.

Ingredients

Content	CAS no.	Symbols	R phrases	Substance
< 10%	7664-38-2	C	34	Phosphoric acid 80 %
< 10%	5329-14-6	Xi	36/38-52/53	Sulphamic acid
> 70%	7732-18-5			Water

3. Potential Risks

Danger Symbols



Irritant

R phrases: 36/38

Irritating to eyes and skin.

4. First Aid Measures

General:	Remove soiled clothing. Keep quiet, fresh air. Transport to doctor lying down, in recovery position if necessary.
On inhalation:	If inhaled, keep quiet, fresh air, seek medical attention.
On contact with the skin:	Clean affected areas immediately and thoroughly with plenty of soap and water.
On contact with the eyes:	Rinse the eye thoroughly with running water, holding the eyelid away from the eyeball (protect unaffected eye, remove contact lenses). Consult an eye specialist.
If swallowed:	If swallowed, rinse out mouth immediately and drink plenty of water. Seek medical attention. Avoid vomiting.
Information for the doctor	
Symptoms:	Irritation of the eyes; burning and reddening in the mouth, pharynx and oesophagus; irritation of the skin
Effects:	Irritation of the mucous membranes of the eyes and respiratory system
Treatment:	Decontaminate, then treat the symptoms.

5. Fire-Fighting Measures

Suitable extinguishers: Combat surrounding fire with suitable extinguishers. Cool containers affected by the fire by spraying with plenty of water. All known extinguishers may be used.

Specific risk from the substance or product itself, its combustion waste products or gases released:

Fire may release Oxides of phosphorous (e.g. phosphorous pentoxide); oxides of sulphur

Special protective equipment for fire-fighting:

Fire-fighters must wear protective clothing, rubber boots, rubber gloves and breathing apparatus (in the open air, a full-face mask, filter type A/B/P2, may also be worn).

6. Measures in the Event of Accidental Release

Personal safety measures:	Avoid contact with skin, eyes and clothing. Wear acid-resistant boots.
Environmental safety measures:	Contain to prevent entering the drains.
Cleaning procedure:	Apply chemical neutralising agent. Clean contaminated surfaces thoroughly with water. Soak up with absorbent materials (e.g. sand, kieselguhr, acid binder, universal binder, sawdust).

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7. Handling and Storage

Special procedures required for safe usage:	Avoid the formation of aerosol mists. Ensure that there is adequate ventilation.
Protection against fire and explosion:	The product is not combustible.
Storage area and container requirements:	Use polyethylene containers.
Information on combined storage areas:	Keep in a cool place. Keep away from alkalis.

8. Exposure Restrictions & Personal Protective Equipment

Ingredients with workplace-related limits that require monitoring

Health risks at the workplace

MAK values of ingredients from section 2

Designation of substance	CAS no.	ml/m ³ (ppm)	mg/m ³	Fibres/m ³	Type
Phosphoric acid 80 %	7664-38-2				
Sulphamic acid	5329-14-6				
Water	7732-18-5				

General protection and hygiene measures

Avoid direct contact with eyes, skin or clothing.

Personal protective equipment

Breathing apparatus:	If breathing apparatus is worn, particle filter.
Hand protection:	Wear gloves (acid-resistant) made from nitrile, butyl rubber or natural latex.
Eye protection:	Wear tightly-sealing safety goggles.
Body protection:	Wear a rubber apron.

9. Physical & Chemical Properties

Appearance:	Form: Liquid			
	Colour: Pale yellowish			Odour: Almost odourless
Specific gravity:	at 20 °C	1.082 g/ml		Method: DIN 51757
Boiling point:	at 1013 mbar	98 °C		
Solubility in water:	at 20 °C	Miscible mg/l		
Odour threshold:	Odourless	mg/m ³		
pH of substance	at 20 °C	0.1 – 0.5		
pH of substance in solution	at 20 °C	2.4		Concentration: 10 g / l

10. Stability & Reactivity

Thermal decomposition:	Sulphur dioxide, sulphuric decomposition products
Reaction with materials:	Attacks light metals and their alloys.
Reacts very violently with:	Alkalis, forming salts (heat generation)
Substances to be avoided:	Alkalis

11. Toxicological Information

The product causes irritation of the eyes, skin and mucous membranes.

12. Ecological Information

General:	Must be diluted or neutralised before it is allowed to enter the waste water or drainage system.
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13. Information on Disposal

Information on disposal

Product:	Small quantities may be diluted with plenty of water and flushed away.
Packaging:	Contaminated packaging should be emptied as completely as possible. If it is cleaned appropriately it may then be reused.

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14. Transport Regulations**Transport by road**
GGVS/ADR/RID:**UN 1805 Phosphoric acid, 8, III**

Technical designation for dispatch: Phosphoric acid

15. Regulations**Labelling information:****R phrases:** 36/38**Danger Symbols**

Irritant

S phrases: 1/2
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Keep locked up and out of the reach of children.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

In case of accident or if you feel unwell, seek medical advice immediately (show the label whenever possible).

German incidents directive
VbF classification (Germany):**Water risk category:****Classification according to**
technical regulations for
prevention of air pollution
(Germany):

of 2000

N/A

Water risk no.: 3

WGK: 1

To be handled as total airborne dust: max. permitted emissions: mass flow rate > 0.5 kg/h: 50 mg/m³, mass flow rate ≤ 0.5 kg/h: 0.15 g/m³**16. Other Information****Contact**

Mr Funk