

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 25.11.2010

Version number 1


Revision: 23.11.2010

## 1 Identification of the substance/mixture and of the company/undertaking


- **Product identifier**
- **Trade name:** RATIONAL SPEZIALENTKALKER
- **Article number(s):** 6006.0110
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the preparation:** Delimiting agent
- **Details of the supplier of the safety data sheet**
- **Manufacturer / Supplier:**  
Rational AG  
Iglinger Straße 62  
D-86899 Landsberg
- Tel.: ++49-(0)8191 - 32 70  
Fax: ++49-(0)8191 - 21735
- **E-mail address of the competent person responsible for the Safety Data Sheet:** [sdb@csb-online.de](mailto:sdb@csb-online.de)
- **Informing department:** Quality management
- **Emergency telephone number:**  
Internationale Giftzentrale Tel.: +49-(0)89-19240  
"Rechts der Isar"



## 2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**  
 Xi; Irritant  
R36/38: Irritating to eyes and skin.
- **Classification system:**  
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

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- **Label elements**
- **Labelling according to EU guidelines:**  
The product has been classified/labelled in accordance with EC Directives / relevant national laws.
- **Code letter and hazard designation of product:**  
 Xi Irritant
- **Risk phrases:**  
36/38 Irritating to eyes and skin.
- **Safety phrases:**  
2 Keep out of the reach of children.  
25 Avoid contact with eyes.  
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
37 Wear suitable gloves.  
46 If swallowed, seek medical advice immediately and show this container or label.  
56 Dispose of this material and its container to hazardous or special waste collection point.
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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### 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 5329-14-6 EINECS: 226-218-8 Index number: 016-026-00-0	Sulphamic acid  Xi R36/38 R52/53 <hr style="border-top: 1px dashed black;"/>  Skin Irrit. 2, H315; Eye Irrit. 2, H319 Aquatic Chronic 3, H412	2.5-10%
CAS: 7664-38-2 EINECS: 231-633-2 Index number: 015-011-00-6	Phosphoric acid  C R34  Met. Corr.1, H290; Skin Corr. 1B, H314	2.5-10%

- **Additional information:** For the wording of the listed risk phrases refer to section 16.

### 4 First aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing contaminated by the product.
- **After inhalation:**  
Supply fresh air; consult doctor in case of symptoms.  
In case of unconsciousness bring patient into stable side position for transport.
- **After skin contact:**  
Instantly wash with water and soap and rinse thoroughly.  
If skin irritation continues, consult a doctor.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult doctor.
- **After swallowing:**  
Rinse out mouth and then drink plenty of water.  
If swallowed, seek medical advice immediately and show this container or label.

### 5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents** Use fire fighting measures that suit the environment.
- **For safety reasons unsuitable extinguishing agents** none
- **Special hazards arising from the substance or mixture**  
Can be released in case of fire:  
Nitrogen oxides (NO<sub>x</sub>)  
Oxides of phosphorus (P<sub>x</sub>O<sub>y</sub>)  
Sulphur oxides (SO<sub>x</sub>)
- **Advice for firefighters**
- **Protective equipment:** Wear self-contained breathing apparatus.
- **Additional information**  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective clothing.  
Ensure adequate ventilation.  
Avoid contact with skin and eyes.
- **Environmental precautions:**  
Dilute with much water.  
Do not allow to enter drainage system, surface or ground water.

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- **Methods and material for containment and cleaning up:**  
Ensure adequate ventilation.  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Send for recovery or disposal in suitable containers.  
Dispose of the material collected according to regulations.
- **Reference to other sections**  
See Section 8 for information on personal protection equipment.

## 7 Handling and storage

- **Handling**
- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Avoid contact with skin and eyes.  
Do not inhale vapours/aerosols.  
Make sure that all applicable workplace limits are observed.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:**  
Store in the original container.  
Observe all local and national regulations for storage of water polluting products.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:** Keep container tightly sealed.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

- **Components with critical values that require monitoring at the workplace:**

### 7664-38-2 Phosphoric acid

WEL (Great Britain)	Short-term value: 2 mg/m <sup>3</sup> Long-term value: 1 mg/m <sup>3</sup>
IOELV (European Union)	Short-term value: 2 mg/m <sup>3</sup> Long-term value: 1 mg/m <sup>3</sup>

- **Additional information:** The lists that were valid during the compilation were used as basis.
- **Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**  
Keep away from foodstuffs, beverages and food.  
Instantly remove any contaminated garments.  
Wash hands during breaks and at the end of the work.  
Do not inhale gases / fumes / aerosols.  
Avoid contact with the eyes and skin.  
Do not eat, drink or smoke while working.
- **Breathing equipment:**  
If all workplace limits are observed and good ventilation is ensured, no special precautions necessary.
- **Protection of hands:**  
Protective gloves  
To avoid skin problems reduce the wearing of gloves to the required minimum.  
Check the permeability prior to each renewed use of the glove.  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Tightly sealed safety glasses

· **Body protection:**

Protective work clothing

Protective clothing should be selected specifically for the working place.

## 9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

**Form:** liquid  
**Colour:** yellowish  
**Smell:** characteristic

· **pH-value at 20°C:** < 1

· **Change in condition**

**Melting point/Melting range:** not determined  
**Boiling point/Boiling range:** ≥ 100 °C

· **Flash point:** not applicable

· **Self-inflammability:** Product is not selfigniting.

· **Danger of explosion:** Product is not explosive.

· **Vapor pressure at 20°C:** 23 hPa

· **Density at 20°C:** 1.085 g/cm<sup>3</sup>

· **Solubility in / Miscibility with**

**Water:** fully miscible  
**Organic solvents:** 0 %

· **Other information** Further informations please refer to technical data sheet.

## 10 Stability and reactivity

· **Reactivity**

· **Chemical stability**

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

· **Possibility of hazardous reactions** No dangerous reactions known.

· **Hazardous decomposition products:**

Nitrogen oxides (NO<sub>x</sub>)  
Phosphorus oxides (e.g. P<sub>2</sub>O<sub>5</sub>)  
Sulphur oxides (SO<sub>x</sub>)

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### 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** Irritant for skin and mucous membranes.
- **on the eye:** Irritant effect
- **Additional toxicological information:**  
The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:  
Irritant

### 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.  
Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.  
Disposal must be made according to official regulations.
- **European waste catalogue:**  
Waste disposal key numbers from EWC have to be assigned depending on origin and processing.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleaning agent:** Water, if necessary with cleaning agent.

### 14 Transport information

- **Land transport ADR/RID (cross-border):**



- **ADR/RID Class:** 8 (C1) Corrosive substances.
- **Kepler Number:** 80
- **UN-Number:** 3264
- **Packaging group:** III
- **Label:** 8

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- **UN proper shipping name:** UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (PHOSPHORIC ACID, SOLUTION, SULPHAMIC ACID)
- **Excepted quantities (EQ):** E1
- **Limited quantities (LQ):** LQ7
- **Transport category:** 3
- **Tunnel restriction code:** E

- **Maritime transport IMDG-Code:**



- **IMDG Class:** 8
- **UN Number:** 3264
- **Label:** 8
- **Packaging group:** III
- **EMS Number:** F-A,S-B
- **Correct technical name:** CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (PHOSPHORIC ACID, SULPHAMIC ACID)

- **Air transport ICAO-TI and IATA-DGR:**



- **ICAO/IATA Class:** 8
- **UNID Number:** 3264
- **Label:** 8
- **Packaging group:** III
- **Correct technical name:** CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (PHOSPHORIC ACID, SULPHAMIC ACID)

- **Special precautions for user** Warning: Corrosive substances.
- **Transport/Additional information:** Transport by post may be prohibited or restricted.

## 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Designation according to EC guidelines:**  
The product has been classified/labelled in accordance with EC Directives / relevant national laws.
- **Code letter and hazard designation of product:**



Xi Irritant

- **Risk phrases:**  
36/38 Irritating to eyes and skin.
- **Safety phrases:**  
2 Keep out of the reach of children.  
25 Avoid contact with eyes.  
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
37 Wear suitable gloves.  
46 If swallowed, seek medical advice immediately and show this container or label.

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56 Dispose of this material and its container to hazardous or special waste collection point.

**· Ingredients according to Regulation (EC) No 648/2004:**

non-ionic surfactants	< 5%
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**· National regulations**

**· Information about limitation of use:** Employment restrictions concerning young persons must be observed.

**· Decree to be applied in case of technical fault:** -

**· Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water

**· Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**· Relevant phrases**

The(se) R-phrase(s) are those of the ingredient(s) and do(es) not necessarily represent the classification of the preparation.

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H412 Harmful to aquatic life with long lasting effects.

R34 Causes burns.

R36/38 Irritating to eyes and skin.

R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**· Department issuing MSDS:**

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