

Material Safety Data Sheet

According to 91/155 EEC

Reviewed on 23.02.2005

* 1 Identification of substance:

- **Product details:** Reagent for water analysis
- **Product name:** Reactive Phosphate (PO4-P Dilution 0-5.0 mg/l)
- **Catalog number:** 251 989 **Model:** PO4-2 TC
- **Supplier:**
WTW Wissenschaftlich-Technische Werkstätten GmbH
Dr.-Karl-Slevogt-Str. 1
D-82362 Weilheim
Fax: +49(0)881 183-420
Tel.: +49(0)881 183-0
Tel.: +49(0)881 183-100
Internet: <http://www.WTW.com>
E-Mail: Info@WTW.com
- **Emergency information:**
Poison Center Berlin, Germany
Tel.: +49(0)30 19240

2 Composition/Data on components:

- **Chemical characterization:**
- **CAS No. Designation:**
7732-18-5 water, distilled, conductivity or of similar purity
- **Identification number(s):**
- **EINECS Number:** 231-791-2

3 Hazards identification

- **Hazard designation:** void
- **Information pertaining to particular dangers for man and environment** void

4 First aid measures

- **General information** No special measures required.

* 5 Fire fighting measures

- **Suitable extinguishing agents** Use fire fighting measures that suit the environment.
- **Additional information** Ambient fire may liberate hazardous vapours.

6 Accidental release measures

- **Person-related safety precautions:** Not required.
- **Measures for environmental protection:** No special measures required.
- **Measures for cleaning/collecting:** No special measures required.
- **Additional information:** No dangerous materials are released.

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* 7 Handling and storage

- **Handling**
- **Information for safe handling:** No special measures required.
- **Information about protection against explosions and fires:** The product is not flammable
- **Storage**
- **Requirements to be met by storerooms and containers:** Store in cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
 - Store under dry conditions.
 - Protect from the effects of light.
- **Storage class** Not required.

* 8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Components with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists that were valid during the compilation were used as basis.
- **Personal protective equipment**
- **Breathing equipment:** Not required.
- **Protection of hands:** Not required.
- **Penetration time of glove material** Not required.
- **Eye protection:** Not required.
- **Body protection:** Not required.

9 Physical and chemical properties:

· Form:	Fluid
· Colour:	Colourless
· Odour:	Odourless
· Melting point/Melting range:	0°C
· Boiling point/Boiling range:	100°C
· Flash point:	Not applicable
· Danger of explosion:	Product is not explosive.
· Vapour pressure at 20°C:	23 hPa
· Density at 20°C	1 g/cm ³
· Solubility in / Miscibility with Water:	Fully miscible
· pH-value at 20°C:	7
· Viscosity:	
dynamic at 20°C:	0.952 mPas
Organic solvents:	0.0 %
Water:	100.0 %

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Dangerous reactions** No dangerous reactions known

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· **Dangerous products of decomposition:** see chapter 5

* 11 Toxicological information

- **Acute toxicity:**
 - **Primary irritant effect:**
 - **on the skin:** No irritant effect.
 - **on the eye:** No irritant effect.
 - **Sensitization:** No sensitizing effect known.
 - **Additional toxicological information:**
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
The material is not subject to classification according to EC lists in the last version.
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12 Ecological information:

- **General notes:** Generally not hazardous for water.
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13 Disposal considerations

- **Product:**
 - **Recommendation** Smaller quantities can be disposed with household waste.
 - **Uncleaned packagings:**
 - **Recommendation:** Disposal must be made according to official regulations.
-

14 Transport information

- | |
|---|
| · ADR/GGVSE: |
| · IMDG/GGVSee:
· EMS-Number: |
| · ICAO/ IATA: |

- **Transport/Additional information:** Not dangerous according to the above specifications.
-

* 15 Regulatory information

- **Designation according to EC guidelines:**
The product is not subject to identification regulations under EC Directives and the Ordinance on Hazardous Materials (GefStoffV).
 - **National regulations**
 - **Water hazard class:** Generally not hazardous for water.
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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.

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- **Department issuing data specification sheet:** Department TSS, Dr. Manfred Kaul
 - **Data compared to the previous version altered.**
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Product name: Reactive Phosphate (Vario Phosphate RGT F10)

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- **After swallowing**
Rinse out mouth and then drink plenty of water.
Seek immediate medical advice.
 - **The following symptoms may occur:**
after inhalation:
irritation
coughing
breathing difficulty
after swallowing:
gastric or intestinal trouble
sickness
vomiting
mucous membrane irritation
-

* 5 Fire fighting measures

- **Suitable extinguishing agents**
CO₂, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
Use fire fighting measures that suit the environment.
 - **Special hazards caused by the material, its products of combustion or resulting gases:**
Formation of toxic gases is possible during heating or in case of fire.
Nitrogen oxides (NO_x)
Sulphur oxides (SO_x)
ammonia
 - **Protective equipment:** Wear self-contained breathing apparatus.
 - **Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Collect contaminated fire fighting water separately. It must not enter drains.
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* 6 Accidental release measures

- **Person-related safety precautions:**
Avoid causing dust.
Wear protective equipment. Keep unprotected persons away.
 - **Measures for environmental protection:** Do not allow product to reach sewage system or water bodies.
 - **Measures for cleaning/collecting:**
Dilute with much water.
Use neutralizing agent.
(NaOH)
Dispose of the material collected according to regulations.
Collect mechanically.
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* 7 Handling and storage

- **Handling**
 - **Information for safe handling:** No special measures required.
 - **Information about protection against explosions and fires:** The product is not flammable
 - **Storage**
 - **Requirements to be met by storerooms and containers:** Store in cool location.
 - **Information about storage in one common storage facility:**
Store away from water.
Store away from metals.
 - **Further information about storage conditions:**
Keep container tightly sealed.
Store under dry conditions.
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Product name: Reactive Phosphate (Vario Phosphate RGT F10)

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Protect from humidity and keep away from water.

Protect from the effects of light.

· **Storage class** Not required.

* 8 Exposure controls and personal protection

· **Additional information about design of technical systems:** No further data; see item 7.· **Components with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· **Additional information:** The lists that were valid during the compilation were used as basis.· **Personal protective equipment**· **General protective and hygienic measures**

Keep away from foodstuffs, beverages and food.

Take off immediately all contaminated clothing

Wash hands during breaks and at the end of the work.

Avoid contact with the eyes and skin.

· **Breathing equipment:** Use breathing protection against the effects of fumes/dust/aerosol.· **Recommended filter device for short term use:** Filter P2· **Protection of hands:**

Only use chemical-protective gloves with CE-labelling of category III.

After use of gloves apply skin-cleaning agents and skin cosmetics.

Preventive skin protection by use of skin-protecting agents is recommended.

· **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.

nitrile rubber, NBR

Nitrile

Recommended thickness of the material: ≥ 0.11 mm· **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.

Value for the permeation: Level ≥ 6 (480 min)· **Eye protection:** Tightly sealed safety glasses.· **Body protection:** Protective work clothing.

* 9 Physical and chemical properties:

· Form:	Powder
· Colour:	White
· Odour:	Odourless
· Melting point/Melting range:	Not determined
· Boiling point/Boiling range:	1689°C
· Flash point:	Not applicable
· Self-inflammability:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive.
· Density at 20°C	2.373 g/cm ³
· Solubility in / Miscibility with Water:	Soluble
· pH-value (30 g/l) at 20°C:	1.2

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· Solvent content:	
Organic solvents:	0.0 %
· Solids content:	
	100.0 %

* 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** To avoid thermal decomposition do not overheat.
- **Materials to be avoided:**
 - oxidizing agents
 - alkalis
 - acids
 - metals
 - halogen compounds
 - nitrites
- **Dangerous reactions**
 - Corrosive action on metals
 - (Reacts with water)
 - Forms hydrogen in aqueous solution with metals
 - The solution in water is a strong acid.
- **Dangerous products of decomposition:** see chapter 5

* 11 Toxicological information

- **Acute toxicity:** Quantitative data on the toxicity of the preparation are not available.

· **LD/LC50 values that are relevant for classification:**

5329-14-6 sulphamidic acid

Oral	LD50	3160 mg/kg (rat)
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50-81-7 ascorbic acid

Oral	LD50	11900 mg/kg (rat)
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10102-40-6 sodium molybdate

Oral	LD50	4233 mg/kg (rat)
Dermal	LD50	> 2000 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritant effect.
- **Sensitization:** No sensitizing effect known.
- **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
 - The aerosol is corrosive to the eyes, the skin and the respiratory tract. Inhalation of sulfamic acid aerosols may cause lung oedema.

* 12 Ecological information:

- **Information about elimination (persistence and degradability):**
- **Other information:** Quantitative data on the ecological effect of this product are not available.

· **Behaviour in environmental systems:**

5329-14-6 sulphamidic acid

log P(o/w)	-4.34 (.)
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50-81-7 ascorbic acid	
log P(o/w)	-2.15 (.)
· Ecotoxical effects:	
· Aquatic toxicity:	
5329-14-6 sulphamidic acid	
LC50	70.3 mg/l/96h (Pimephales promelas)
50-81-7 ascorbic acid	
LC50	33000 (Merck) mg/l/48h (Leuciscus idus)
	1020 mg/l/96h (Onchorhynchus mykiss)
10102-40-6 sodium molybdate	
EC50	330 mg/l/48h (Daphnia magna)
LC50	7600 mg/l/96h (Onchorhynchus mykiss)

· **General notes:**

Water hazard class 1 (German Regulation) (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.

Must not reach sewage water or drainage ditch undiluted or unneutralized.

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.

* 13 Disposal considerations

· **Product:**

· **Recommendation** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **European waste catalogue**

16 05 06 laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals

· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

· **Recommended cleaning agent:** Water, if necessary with cleaning agent.

* 14 Transport information

· ADR/GGVSE:	UN 3316 CHEMIE-TESTSATZ, 9 II
· IMDG/GGVSee:	UN 3316 CHEMICAL KIT, 9, II .
· EMS-Number:	F-A S-P
· ICAO/IATA:	CHEMICAL KIT, 9, UN 3316, II

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Product name: Reactive Phosphate (Vario Phosphate RGT F10)

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* 15 Regulatory information

· Designation according to EC guidelines:

The product has been classified and labelled in accordance with EC Directives / Ordinance on Hazardous Materials (GefStoffV)

· Code letter and hazard designation of product:

Xi Irritant

· Risk phrases:

36/38 Irritating to eyes and skin.

· Safety phrases:

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

37 Wear suitable gloves.

60 This material and its container must be disposed of as hazardous waste.

* 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 R-phrases

36/38 Irritating to eyes and skin.

52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· Department issuing data specification sheet: Department TSS, Dr. Manfred Kaul**· Data compared to the previous version altered.**
