

# 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:** Total Phosphate (Vario Potassium Persulfate F 10)
- **Catalog number:** 251 988 **Model:** PO4-3 TC
- **Supplier:**  
WTW Wissenschaftlich-Technische Werkstätten GmbH  
Dr.-Karl-Slevogt-Straße 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](mailto:Info@WTW.com)
- **Emergency information:**  
Poison Center Berlin, Germany  
Tel.: +49(0)30 19240

### 2 Composition/Data on components:

- **Description:** Mixture of the substances listed below with harmless additions.

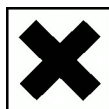
#### · Dangerous components:

|                                                                |                           |                                                                                                                                                                                                         |         |
|----------------------------------------------------------------|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| CAS: 7775-27-1<br>EINECS: 231-892-1                            | disodium peroxodisulphate |  Xn,  O; R 8-22-36/37/38-42/43 | 90-100% |
| CAS: 7727-21-1<br>EINECS: 231-781-8<br>EC Number: 016-061-00-1 | potassium persulphate     |  Xn,  O; R 8-22-36/37/38-42/43 | 5-10%   |

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

### \* 3 Hazards identification

#### · Hazard designation:



Xn Harmful  
O Oxidising

#### · Information pertaining to particular dangers for man and environment

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.

- R 8 Contact with combustible material may cause fire.
- R 22 Harmful if swallowed.
- R 36/37/38 Irritating to eyes, respiratory system and skin.
- R 42/43 May cause sensitisation by inhalation and skin contact.

#### · Classification system

The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

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### \* 4 First aid measures

- **General information**

Instantly remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- **After inhalation**

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness bring patient into stable side position for transport.

- **After skin contact**

Instantly rinse with water.

Seek medical treatment.

- **After eye contact**

Rinse opened eye for several minutes under running water.

Call a doctor immediately.

- **After swallowing** Drink copious amounts of water and provide fresh air. Instantly call for doctor.

- **The following symptoms may occur:**

after inhalation:

coughing

breathing difficulty

irritation

after swallowing:

headache

sickness

mucous membrane irritation

gastric or intestinal trouble

- **Danger**

risk of skin sensitization

risk of airways sensitization

Danger of pulmonary oedema.

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### \* 5 Fire fighting measures

- **Suitable extinguishing agents**

Water

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.

Sulphur oxides (SOx)

Oxygen (O2)

- **Protective equipment:**

Wear full protective suit.

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:**

Wear protective equipment. Keep unprotected persons away.

Put on breathing apparatus.

- **Measures for environmental protection:** Do not allow product to reach sewage system or water bodies.

- **Measures for cleaning/collecting:**

Collect mechanically.

Dispose of contaminated material as waste according to item 13.

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Ensure adequate ventilation.

### \* 7 Handling and storage

- **Handling**
- **Information for safe handling:** Work only in fume cupboard.
- **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Protect from heat.  
Dust can combine with air to form an explosive mixture.
- **Storage**
- **Requirements to be met by storerooms and containers:** Store in cool location.
- **Information about storage in one common storage facility:**  
Store away from reducing agents.  
Store away from flammable substances.
- **Further information about storage conditions:**  
Keep container tightly sealed.  
Store under dry conditions.  
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:**

##### **7775-27-1 disodium peroxodisulphate (90-100%)**

|     |                                                            |
|-----|------------------------------------------------------------|
| OES | Long-term value: 1 mg/m <sup>3</sup><br>measured as [S2O8] |
|-----|------------------------------------------------------------|

##### **7727-21-1 potassium persulphate (5-10%)**

|     |                                                            |
|-----|------------------------------------------------------------|
| OES | Long-term value: 1 mg/m <sup>3</sup><br>measured as [S2O8] |
|-----|------------------------------------------------------------|

- **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:**  
In case of brief exposure or low pollution use breathing filter apparatus. In case of intensive or longer exposure use breathing apparatus that is independent of circulating air.
- **Recommended filter device for short term use:** Filter P2
- **Protection of hands:**  
Only use chemical-protective gloves with CE-labelling of category III.  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
After use of gloves apply skin-cleaning agents and skin cosmetics.
- **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  
Recommended thickness of the material:  $\geq 0.11$  mm

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**· 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  $\geq 6$  (480 min)

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

**· Body protection:** Protective work clothing.

### \* 9 Physical and chemical properties:

|                                                  |                                                   |
|--------------------------------------------------|---------------------------------------------------|
| · <b>Form:</b>                                   | Powder                                            |
| · <b>Colour:</b>                                 | White                                             |
| · <b>Odour:</b>                                  | Odourless                                         |
| · <b>Melting point/Melting range:</b>            | Not applicable                                    |
| · <b>Boiling point/Boiling range:</b>            | Not applicable                                    |
| · <b>Flash point:</b>                            | Not determined                                    |
| · <b>Inflammability (solid, gaseous)</b>         | Contact with combustible material may cause fire. |
| · <b>Self-inflammability:</b>                    | Product is not selfigniting.                      |
| · <b>Density at 20°C</b>                         | 1.224 g/cm <sup>3</sup>                           |
| · <b>Solubility in / Miscibility with Water:</b> | Soluble                                           |
| · <b>pH-value (9 g/l) at 20°C:</b>               | 4.2                                               |
| · <b>Solvent content:</b>                        |                                                   |
| <b>Organic solvents:</b>                         | 0.0 %                                             |
| · <b>Solids content:</b>                         | 100.0 %                                           |

### \* 10 Stability and reactivity

**· Thermal decomposition / conditions to be avoided:** To avoid thermal decomposition do not overheat.

**· Materials to be avoided:**

combustible substances

alcohols

reducing agents

**· Dangerous reactions**

Can react violently with oxygen rich (oxidizing) material. Explosive.

Risk of dust explosion

**· 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:**
**7775-27-1 disodium peroxodisulphate**

|      |      |                 |
|------|------|-----------------|
| Oral | LD50 | 930 mg/kg (rat) |
|------|------|-----------------|

**7727-21-1 potassium persulphate**

|      |      |                 |
|------|------|-----------------|
| Oral | LD50 | 802 mg/kg (rat) |
|------|------|-----------------|

**· Primary irritant effect:**
**· on the skin:** Irritant to skin and mucous membranes.

**· on the eye:** Irritant effect.

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**Product name: Total Phosphate (Vario Potassium Persulfate F 10)**

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**· Sensitization:**

Sensitization possible by inhalation.  
Sensitization possible by skin contact.

**· Subacute to chronic toxicity:**

CAS 7775-27-1:

MERCK: Sensitization test (guinea pig): positiv (OECD 406)

**· 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:

Harmful

Irritant

### \*12 Ecological information:

**· Information about elimination (persistence and degradability):**
**· Other information:**

Quantitative data on the ecological effect of this product are not available.

Does not cause bioclogical oxygen deficit.

**· Ecotoxical effects:**
**· Aquatic toxicity:**
**7775-27-1 disodium peroxodisulphate**

|      |                                     |
|------|-------------------------------------|
| EC50 | 133 mg/l/48h (Daphnia magna)        |
| LC50 | 771 mg/l/96h (Onchorhynchus mykiss) |

**7727-21-1 potassium persulphate**

|              |                                    |
|--------------|------------------------------------|
| Daphnia EC50 | 357 mg/l/24h (Daphnia magna)       |
| LC50         | 100 mg/l/96h (Poecilia reticulata) |

**· Remark:**

Toxic for fish:

sulphates &gt; 7 g/l

Reacts with water to form toxic decomposition products.

**· 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.

### 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 07 | discarded inorganic chemicals consisting of or containing dangerous substances |
|----------|--------------------------------------------------------------------------------|

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

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

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**Product name: Total Phosphate (Vario Potassium Persulfate F 10)**

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**\*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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**\*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:**

Xn Harmful  
O Oxidising

· **Hazard-determining components of labelling:**

disodium peroxodisulphate  
potassium persulphate

· **Risk phrases:**

8 Contact with combustible material may cause fire.  
22 Harmful if swallowed.  
36/37/38 Irritating to eyes, respiratory system and skin.  
42/43 May cause sensitisation by inhalation and skin contact.

· **Safety phrases:**

17 Keep away from combustible material.  
22 Do not breathe dust.

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**Product name: Total Phosphate (Vario Potassium Persulfate F 10)**

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- 24 Avoid contact with skin.
  - 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
  - 37 Wear suitable gloves.
  - 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
  - 60 This material and its container must be disposed of as hazardous waste.
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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.

· **Relevant R-phrases**

- 22 Harmful if swallowed.
- 36/37/38 Irritating to eyes, respiratory system and skin.
- 42/43 May cause sensitisation by inhalation and skin contact.
- 8 Contact with combustible material may cause fire.

· **Department issuing data specification sheet:** Department TSS, Dr. Manfred Kaul

· **Data compared to the previous version altered.**

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