



**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

**1.1 Product identifier**

- Trade name: **Testoval Mangan Test 0 - 0,5 mg/l C**
- UFI: 228V-1TYV-FC00-5Q8K

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

No further relevant information available.

**Application of the substance / the preparation:**

Reagent for analysis  
 EuPCS: PC-TEC-19 Reagents and laboratory chemical

**1.3 Details of the supplier of the safety data sheet**

**Manufacturer/Supplier:**

Gebrüder Heyl  
 Analysentechnik GmbH & Co. KG  
 Orleansstraße 75 b  
 D-31135 Hildesheim

Phone +49 (0) 5121 2893390  
 Fax +49 (0) 5121 2893367  
 E-mail [info@heylanalysis.de](mailto:info@heylanalysis.de)  
 Internet [www.heylanalysis.de](http://www.heylanalysis.de)

**Further information obtainable from:** product safety department

**1.4 Emergency telephone number:**

Giftinformationszentrum Nord  
 Phone +49 (0) 551 19240

**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

**Classification according to Regulation (EC) No 1272/2008**



GHS03 flame over circle

Ox. Sol. 2      H272 May intensify fire; oxidiser.



GHS08 health hazard

STOT RE 1      H372 Causes damage to organs through prolonged or repeated exposure.



GHS05 corrosion

Skin Corr. 1C      H314 Causes severe skin burns and eye damage.  
 Eye Dam. 1      H318 Causes serious eye damage.



GHS09 environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

**2.2 Label elements**

**Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

**Hazard pictograms**



GHS03

GHS05

GHS08

GHS09



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- **Signal word** *Danger*
- **Hazard-determining components of labelling:**  
sodium periodate
- **Hazard statements**  
H272 *May intensify fire; oxidiser.*  
H314 *Causes severe skin burns and eye damage.*  
H372 *Causes damage to organs through prolonged or repeated exposure.*  
H411 *Toxic to aquatic life with long lasting effects.*
- **Precautionary statements**  
P210 *Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.*  
P280 *Wear protective gloves/protective clothing/eye protection/face protection.*  
P301+P330+P331 *IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.*  
P303+P361+P353 *IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.*  
P305+P351+P338 *IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*  
P308+P311 *IF exposed or concerned: Call a POISON CENTER/doctor.*
- **Labelling of packages where the contents do not exceed 125 ml**
- **Hazard pictograms**



GHS03 GHS05 GHS08 GHS09

- **Signal word** *Danger*
- **Hazard-determining components of labelling:**  
sodium periodate
- **Hazard statements**  
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P308+P311 *IF exposed or concerned: Call a POISON CENTER/doctor.*
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

**SECTION 3: Composition/information on ingredients**

- **3.2 Mixtures**
- **Description:**  
Mixture of substances listed below with nonhazardous additions according to Regulation (EC) No 1272/2008.

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**Dangerous components:**

CAS: 7790-28-5 EINECS: 232-197-6 Reg.nr.: 01-2119980983-20	sodium periodate Ox. Sol. 1, H271 STOT RE 1, H372 Skin Corr. 1C, H314; Eye Dam. 1, H318 Aquatic Acute 1, H400; Aquatic Chronic 1, H410	10%
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- **SVHC** Not applicable.
- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

**SECTION 4: First aid measures**

- **4.1 Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:**  
 Supply fresh air or oxygen; call for doctor.  
 In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**  
 Immediately wash with water and soap and rinse thoroughly.  
 Call a doctor immediately.
- **After eye contact:**  
 Rinse opened eye for several minutes under running water.  
 Call a doctor immediately.
- **After swallowing:**  
 A person vomiting while laying on their back should be turned onto their side.  
 Rinse out mouth and then drink plenty of water.  
 Seek medical treatment.
- **4.2 Most important symptoms and effects, both acute and delayed**  
 No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
 No further relevant information available.

**SECTION 5: Firefighting measures**

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**  
 CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture**  
 No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

**SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures**  
 Wear personal protection equipment.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
 Pick up mechanically.  
 Dispose of the material collected according to regulations.  
 Clean the affected area carefully; suitable cleaners are:  
 Warm water
- **6.4 Reference to other sections**  
 See Section 7 for information on safe handling.  
 See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

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## SECTION 7: Handling and storage

### · 7.1 Precautions for safe handling

Prevent formation of dust.

Ensure good ventilation/exhaustion at the workplace.

### · Information about fire - and explosion protection:

Substance/product is oxidising when dry.

Keep ignition sources away - Do not smoke.

### · 7.2 Conditions for safe storage, including any incompatibilities

#### · Storage:

· **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.

· **Information about storage in one common storage facility:**

Store away from flammable substances.

Store away from foodstuffs.

· **Further information about storage conditions:**

Keep container tightly sealed.

Protect from heat and direct sunlight.

Store in dry conditions.

Store receptacle in a well ventilated area.

· **Recommended storage temperature:** 15 - 25 °C

· **Storage class:** Storage class 5.1A: Highly oxidising substances (TRGS 510)

· **7.3 Specific end use(s)** No further relevant information available.

## SECTION 8: Exposure controls/personal protection

### · 8.1 Control parameters

· **Ingredients 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 valid during the making were used as basis.

### · 8.2 Exposure controls

· **Appropriate engineering controls** No further data; see item 7.

· **Individual protection measures, such as personal protective equipment**

· **General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes and skin.

Do not eat, drink, smoke or sniff while working.

· **Respiratory protection:**

Use suitable respiratory protective device when high concentrations are present.

Short term filter device:

Filter P2

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· **Hand protection**



Protective gloves

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Wear gloves according to EN 374.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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

Check protective gloves prior to each use for their proper condition.

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

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.

· **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.

· **For the permanent contact gloves made of the following materials are suitable:**

Nitrile rubber, NBR

Recommended thickness of the material:  $\geq 0.12$  mm

Value for the permeation: Level = 6 (> 480 min)

· **As protection from splashes gloves made of the following materials are suitable:**

Nitrile rubber, NBR

Recommended thickness of the material:  $\geq 0.12$  mm

Value for the permeation: Level = 6 (> 480 min)

· **Eye/face protection**



Tightly sealed goggles according to EN 166

· **Body protection:** Protective work clothing

**SECTION 9: Physical and chemical properties**

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

· **General Information**

· **Physical state**

Solid

· **Colour:**

Colourless

· **Odour:**

Odourless

· **Odour threshold:**

Not determined.

· **Melting point/freezing point:**

Undetermined.

· **Boiling point or initial boiling point and boiling range**

Undetermined.

· **Flammability**

Not determined.

· **Lower and upper explosion limit**

· **Lower:**

Not determined.

· **Upper:**

Not determined.

· **Flash point:**

Undetermined.

· **Ignition temperature:**

Not determined.

· **Decomposition temperature:**

Not determined.

· **pH (20 g/l) at 20 °C**

5.5

· **Viscosity:**

· **Kinematic viscosity**

Not applicable.

· **Dynamic:**

Not applicable.

· **Solubility**

· **water:**

Soluble.

· **Partition coefficient n-octanol/water (log value)**

Not determined.

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- **Vapour pressure:** Not applicable.
  - **Density and/or relative density**
  - **Density:** Not determined.
  - **Relative density** Not determined.
  - **Vapour density** Not applicable.
  - **Particle characteristics** See item 3.
- **9.2 Other information**
  - **Important information on protection of health and environment, and on safety.**
  - **Auto-ignition temperature:** Product is not selfigniting.
  - **Explosive properties:** Product does not present an explosion hazard.
  - **Change in condition**
  - **Evaporation rate** Not applicable.
- **Information with regard to physical hazard classes**
  - **Explosives** Void
  - **Flammable gases** Void
  - **Aerosols** Void
  - **Oxidising gases** Void
  - **Gases under pressure** Void
  - **Flammable liquids** Void
  - **Flammable solids** Void
  - **Self-reactive substances and mixtures** Void
  - **Pyrophoric liquids** Void
  - **Pyrophoric solids** Void
  - **Self-heating substances and mixtures** Void
  - **Substances and mixtures, which emit flammable gases in contact with water** Void
  - **Oxidising liquids** Void
  - **Oxidising solids** May intensify fire; oxidiser.
  - **Organic peroxides** Void
  - **Corrosive to metals** Void
  - **Desensitised explosives** Void

**SECTION 10: Stability and reactivity**

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
 No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions**  
 Reacts with flammable substances.  
 Reacts with powdered metals.  
 Reacts with acids.  
 Reacts with reducing agents.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

**SECTION 11: Toxicological information**

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Based on available data, the classification criteria are not met.

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

**CAS: 7757-82-6 sodium sulphate**

Oral LD50 > 2,000 mg/kg (rat)

- **Skin corrosion/irritation** Causes severe skin burns and eye damage.
- **Serious eye damage/irritation** Causes serious eye damage.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Causes damage to organs through prolonged or repeated exposure.
- **Aspiration hazard** Based on available data, the classification criteria are not met.
- **11.2 Information on other hazards**

· **Endocrine disrupting properties**

None of the ingredients is listed.

**SECTION 12: Ecological information**

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties**  
The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**
- **Remark:** Toxic for fish
- **Additional ecological information:**
- **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 course or sewage system.  
Must not reach sewage water or drainage ditch undiluted or unneutralised.  
Also poisonous for fish and plankton in water bodies.  
Toxic for aquatic organisms

**SECTION 13: Disposal considerations**

- **13.1 Waste treatment methods**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.  
Disposal must be made according to official regulations.
- **Uncleaned packaging:**
- **Recommendation:**  
Packagings that may not be cleansed are to be disposed of in the same manner as the product.  
Disposal must be made according to official regulations.

DE\_EN




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**SECTION 14: Transport information**

<ul style="list-style-type: none"> <li>· 14.1 UN number or ID number</li> <li>· ADR, IMDG, IATA</li> </ul>	<p>UN1759</p>
<ul style="list-style-type: none"> <li>· 14.2 UN proper shipping name</li> <li>· ADR</li> <li>· IMDG, IATA</li> </ul>	<p>1759 CORROSIVE SOLID, N.O.S., MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS CORROSIVE SOLID, N.O.S.</p>
<ul style="list-style-type: none"> <li>· 14.3 Transport hazard class(es)</li> <li>· ADR</li> </ul>	<div style="display: flex; align-items: center;">   </div> <p>8 Corrosive substances.</p> <p>8</p>
<ul style="list-style-type: none"> <li>· IMDG, IATA</li> </ul>	<div style="display: flex; align-items: center;">  </div> <p>8 Corrosive substances.</p> <p>8</p>
<ul style="list-style-type: none"> <li>· 14.4 Packing group</li> <li>· ADR, IMDG, IATA</li> </ul>	<p>III</p>
<ul style="list-style-type: none"> <li>· 14.5 Environmental hazards:</li> <li>· Marine pollutant:</li> <li>· Special marking (ADR):</li> </ul>	<p>No</p> <p>Symbol (fish and tree)</p>
<ul style="list-style-type: none"> <li>· 14.6 Special precautions for user</li> <li>· Hazard identification number (Kemler code):</li> <li>· EMS Number:</li> <li>· Stowage Category</li> </ul>	<p>Warning: Corrosive substances.</p> <p>80</p> <p>F-A,S-B</p> <p>A</p>
<ul style="list-style-type: none"> <li>· 14.7 Maritime transport in bulk according to IMO instruments</li> </ul>	<p>Not applicable.</p>
<ul style="list-style-type: none"> <li>· Transport/Additional information:</li> </ul>	<p>Void</p>
<ul style="list-style-type: none"> <li>· ADR</li> <li>· Limited quantities (LQ)</li> <li>· Excepted quantities (EQ)</li> <li>· Transport category</li> <li>· Tunnel restriction code</li> </ul>	<p>5 kg</p> <p>Code: E1</p> <p>Maximum net quantity per inner packaging: 30 g</p> <p>Maximum net quantity per outer packaging: 1000 g</p> <p>3</p> <p>E</p>
<ul style="list-style-type: none"> <li>· IMDG</li> <li>· Limited quantities (LQ)</li> <li>· Excepted quantities (EQ)</li> </ul>	<p>5 kg</p> <p>Code: E1</p> <p>Maximum net quantity per inner packaging: 30 g</p> <p>Maximum net quantity per outer packaging: 1000 g</p>

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· **UN "Model Regulation":** UN 1759 CORROSIVE SOLID, N.O.S., 8, III, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS

**SECTION 15: Regulatory information**

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **Seveso category**

P8 OXIDISING LIQUIDS AND SOLIDS

E2 Hazardous to the Aquatic Environment

· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 50 t

· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t

· **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

None of the ingredients is listed.

· **REGULATION (EU) 2019/1148**

· **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**

None of the ingredients is listed.

· **Annex II - REPORTABLE EXPLOSIVES PRECURSORS**

None of the ingredients is listed.

· **Regulation (EC) No 273/2004 on drug precursors**

None of the ingredients is listed.

· **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**

None of the ingredients is listed.

· **National regulations:**

· **Information about limitation of use:**

Employment restrictions concerning juveniles must be observed.

Employment restrictions concerning pregnant and lactating women must be observed.

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

· **Other regulations, limitations and prohibitive regulations**

The product is subject to Annex 2 of the Chemikalienverbotsverordnung (ChemVerbotsV) - requirements in relation to the delivery

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

**SECTION 16: Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

H271 May cause fire or explosion; strong oxidiser.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H372 Causes damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

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H410 Very toxic to aquatic life with long lasting effects.

- **Department issuing SDS:** product safety department
- **Date of previous version:** 20.05.2020
- **Version number of previous version:** 10

· **Abbreviations and acronyms:**

*RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)*

*ICAO: International Civil Aviation Organisation*

*ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)*

*IMDG: International Maritime Code for Dangerous Goods*

*IATA: International Air Transport Association*

*GHS: Globally Harmonised System of Classification and Labelling of Chemicals*

*EINECS: European Inventory of Existing Commercial Chemical Substances*

*ELINCS: European List of Notified Chemical Substances*

*CAS: Chemical Abstracts Service (division of the American Chemical Society)*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

*PBT: Persistent, Bioaccumulative and Toxic*

*SVHC: Substances of Very High Concern*

*vPvB: very Persistent and very Bioaccumulative*

*Ox. Sol. 1: Oxidizing solids – Category 1*

*Ox. Sol. 2: Oxidizing solids – Category 2*

*Skin Corr. 1C: Skin corrosion/irritation – Category 1C*

*Eye Dam. 1: Serious eye damage/eye irritation – Category 1*

*STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1*

*Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1*

*Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1*

*Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2*

- **\* Data compared to the previous version altered.**