



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

- **1.1 Product identifier**
    - **Trade name:** **Titromat TC 2150 Reagenz A**
    - **UFI:** 7RRU-DEH4-100A-8P29
  - **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
    - **Further information obtainable from:** product safety department
  - **1.4 Emergency telephone number:**

Giftinformationszentrum Nord  
Phone +49 (0) 551 19240
- Phone +49 (0) 5121 2893390  
Fax +49 (0) 5121 2893367  
E-mail [info@heylandanalysis.de](mailto:info@heylandanalysis.de)  
Internet [www.heylandanalysis.de](http://www.heylandanalysis.de)

## SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
  - **Classification according to Regulation (EC) No 1272/2008**

The product is not classified, according to the CLP regulation.
- **2.2 Label elements**
  - **Labelling according to Regulation (EC) No 1272/2008** Void
  - **Hazard pictograms** Void
  - **Signal word** Void
  - **Hazard statements** Void
  - **Labelling of packages where the contents do not exceed 125 ml**
  - **Hazard pictograms** Void
  - **Signal word** Void
  - **Hazard statements** Void
- **2.3 Other hazards**
  - **Results of PBT and vPvB assessment**
  - **PBT:** Not applicable.
  - **vPvB:** Not applicable.
  - **Determination of endocrine-disrupting properties** 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.  
Propane-1,2-diol CAS 57-55-6
  - **Dangerous components:** Void
  - **SVHC** Not applicable.
  - **Additional information:** For the wording of the listed hazard phrases refer to section 16.



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#### 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; consult doctor in case of complaints.

##### · **After skin contact:**

Immediately 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. If symptoms persist, consult a doctor.

##### · **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:**

CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

##### · 5.2 Special hazards arising from the substance or mixture

Can form explosive gas-air mixtures.

Formation of toxic gases is possible during heating or in case of fire.

##### · 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:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

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.

See Section 13 for disposal information.

#### SECTION 7: Handling and storage

##### · 7.1 Precautions for safe handling

Prevent formation of aerosols.

Ensure good ventilation/exhaustion at the workplace.

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

Fumes can combine with air to form an explosive mixture.

Keep ignition sources away - Do not smoke.

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- **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 foodstuffs.
- **Further information about storage conditions:**
  - Keep container tightly sealed.
  - Protect from heat and direct sunlight.
  - Store receptacle in a well ventilated area.
- **Recommended storage temperature:** 15 - 25 °C
- **Storage class:**
  - Storage class 10: Combustible liquids that cannot be assigned to any other storage classes (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:**

**CAS: 57-55-6 Propylene glycol**

**MAK (Germany)** als Dampf und Aerosol; vgl. Abschn. IIb und Xc

- **Regulatory information** MAK (Germany): MAK- und BAT-Liste
- **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**

- **Appropriate engineering controls** No further data; see section 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.
  - Do not eat, drink, smoke or sniff while working.
- **Respiratory protection:**
  - Use suitable respiratory protective device when aerosol or mist is formed. Filter: Type A
  - 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**
  - 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)

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- **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** Goggles according to EN 166 recommended during refilling
- **Body protection:** Protective work clothing

**SECTION 9: Physical and chemical properties**

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

· **General Information**

- |   |                        |
|---|------------------------|
| · <b>Physical state</b>   | Liquid                 |
| · <b>Colour:</b>  | Yellow                 |
| · <b>Odour:</b>   | Odourless              |
| · <b>Odour threshold:</b>   | Not determined.        |
| · <b>Melting point/freezing point:</b>                            | Undetermined.          |
| · <b>Boiling point or initial boiling point and boiling range</b> | Undetermined.          |
| · <b>Flammability</b>   | Not applicable.        |
| · <b>Lower and upper explosion limit</b>                          |                        |
| · <b>Lower:</b>   | 2.6 Vol %              |
| · <b>Upper:</b>   | 12.6 Vol %             |
| · <b>Flash point:</b>   | Undetermined.          |
| · <b>Auto-ignition temperature:</b>                               | Not determined.        |
| · <b>Decomposition temperature:</b>                               | Not determined.        |
| · <b>pH at 20 °C</b>  | 4                      |
| · <b>Viscosity:</b>   |                        |
| · <b>Kinematic:</b>   | Not determined.        |
| · <b>Dynamic:</b>   | Not determined.        |
| · <b>Solubility</b>   |                        |
| · <b>water:</b>   | Fully miscible.        |
| · <b>Partition coefficient n-octanol/water (log value)</b>        | Not determined.        |
| · <b>Vapour pressure:</b>   | Not determined.        |
| · <b>Density and/or relative density</b>                          |                        |
| · <b>Density at 20 °C:</b>  | 1.03 g/cm <sup>3</sup> |
| · <b>Relative density</b>   | Not determined.        |
| · <b>Vapour density</b>   | Not determined.        |

· **9.2 Other information**

· **Important information on protection of health and environment, and on safety.**

- |                                |   |
|--------------------------------|---|
| · <b>Ignition temperature:</b> | Product is not selfigniting.  |
| · <b>Explosive properties:</b> | Product is not explosive. However, formation of explosive air/vapour mixtures are possible. |
| · <b>Solvent content:</b>      |   |
| · <b>VOCV (CH)</b>             | 0.0 %   |
| · <b>Change in condition</b>   |   |
| · <b>Evaporation rate</b>      | Not determined.   |

· **Information with regard to physical hazard classes**

- |                               |      |
|-------------------------------|------|
| · <b>Explosives</b>           | Void |
| · <b>Flammable gases</b>      | Void |
| · <b>Aerosols</b>             | Void |
| · <b>Oxidising gases</b>      | Void |
| · <b>Gases under pressure</b> | Void |

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· <b>Flammable liquids</b>	Void
· <b>Flammable solids</b>	Void
· <b>Self-reactive substances and mixtures</b>	Void
· <b>Pyrophoric liquids</b>	Void
· <b>Pyrophoric solids</b>	Void
· <b>Self-heating substances and mixtures</b>	Void
· <b>Substances and mixtures, which emit flammable gases in contact with water</b>	Void
· <b>Oxidising liquids</b>	Void
· <b>Oxidising solids</b>	Void
· <b>Organic peroxides</b>	Void
· <b>Corrosive to metals</b>	Void
· <b>Desensitised explosives</b>	Void

## SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
 To avoid thermal decomposition do not overheat.
- **10.3 Possibility of hazardous reactions**  
 Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomised.  
 Reacts with oxidising 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:** Flammable gases/vapours

## 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.

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

**CAS: 57-55-6 Propylene glycol**

Oral	LD50	22,000 mg/kg (rat)
Dermal	LD50	> 2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	44.9 mg/l (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **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** Based on available data, the classification criteria are not met.
- **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.

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## 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**
- **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.

## SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation** 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.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

## SECTION 14: Transport information

- |   |  |
|---|--|
| · <b>14.1 UN number or ID number</b>                                  |  |
| · <b>ADR, ADN, IMDG, IATA</b>   | Void   |
| · <b>14.2 UN proper shipping name</b>                                 |  |
| · <b>ADR, ADN, IMDG, IATA</b>   | Void   |
| · <b>14.3 Transport hazard class(es)</b>                              |  |
| · <b>ADR, ADN, IMDG, IATA</b>   |  |
| · <b>Class</b>  | Void   |
| · <b>14.4 Packing group</b>   |  |
| · <b>ADR, IMDG, IATA</b>  | Void   |
| · <b>14.5 Environmental hazards:</b>                                  |  |
| · <b>Marine pollutant:</b>  | No   |
| · <b>14.6 Special precautions for user</b>                            | Not applicable.                                      |
| · <b>14.7 Maritime transport in bulk according to IMO instruments</b> | Not applicable.                                      |
| · <b>Transport/Additional information:</b>                            | Not dangerous according to the above specifications. |

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· **UN "Model Regulation":** Void

## 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.

· **REGULATION (EU) 2019/1021 on persistent organic pollutants (POP)**

None of the ingredients is listed.

· **Regulation (EU) No 649/2012 concerning the export and import of hazardous chemicals**

None of the ingredients is listed.

· **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.

· **REGULATION (EU) 2024/590 on substances that deplete the ozone layer**

None of the ingredients is listed.

· **National regulations:**

· **Technical instructions (air):**

Class	Share in %
NK	50 – 100

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

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

· **Substances of very high concern (SVHC) according to REACH, Article 57**

None of the ingredients is listed.

· **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. This Safety Data Sheet is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

· **Department issuing SDS:** product safety department

· **Date of previous version:** 28.01.2022

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## Safety data sheet

according to Regulation (EC) No 1907/2006

Printing date 19.06.2025

Version number 13 (replaces version 12)

Revision: 19.06.2025

**Trade name: Titromat TC 2150 Reagenz A**

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· **Version number of previous version: 12**

· **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)*

*VOCV: Lenkungsabgabe auf flüchtigen organischen Verbindungen, Schweiz (Swiss Ordinance on volatile organic compounds)*

*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*

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

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