



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

- **1.1 Product identifier**
 - **Trade name:** **Titromat TC 2020 Reagenz A**
 - **UFI:** M1RU-AEYX-K00C-YXDS
 - **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
Internet 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:**

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**

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: ≥ 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: ≥ 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**

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

· **9.2 Other information**

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

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

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

- | | |
|-------------------------------|------|
| · Explosives | Void |
| · Flammable gases | Void |
| · Aerosols | Void |
| · Oxidising gases | Void |
| · Gases under pressure | Void |

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· 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	Void
· 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:**
 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

- | | |
|---|--|
| · 14.1 UN number or ID number | |
| · ADR, ADN, IMDG, IATA | Void |
| · 14.2 UN proper shipping name | |
| · ADR, ADN, IMDG, IATA | Void |
| · 14.3 Transport hazard class(es) | |
| · ADR, ADN, IMDG, IATA | |
| · Class | Void |
| · 14.4 Packing group | |
| · ADR, IMDG, IATA | Void |
| · 14.5 Environmental hazards: | |
| · Marine pollutant: | No |
| · 14.6 Special precautions for user | Not applicable. |
| · 14.7 Maritime transport in bulk according to IMO instruments | Not applicable. |
| · Transport/Additional information: | 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 12 (replaces version 11)

Revision: 19.06.2025

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· **Version number of previous version: 11**

· **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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