

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

- **1.1 Product identifier**
- **Trade name: Titromat TC 2060 Reagenz B**
- **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
- **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@hey.de  
Internet www.hey.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**  
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
- **Additional information:**  
Safety data sheet available on request.
- **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.

**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.

· **Dangerous components:**

CAS: 7647-01-0 EINECS: 231-595-7 Index number: 017-002-00-2 Reg.nr.: 01-2119484862-27	hydrogen chloride  Skin Corr. 1B, H314;  STOT SE 3, H335	0, 1-≤2,5%
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- **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** Hydrogen chloride (HCl)
- **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**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- **Information about fire - and explosion protection:** No special measures required.
- **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.

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- Protect from heat and direct sunlight.
- Store receptacle in a well ventilated area.
- **Recommended storage temperature:** 15 - 25 °C
- **7.3 Specific end use(s)** No further relevant information available.

**SECTION 8: Exposure controls/personal protection**

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

**CAS: 7647-01-0 hydrogen chloride**

IOELV	Short-term value: 15 mg/m <sup>3</sup> , 10 ppm
	Long-term value: 8 mg/m <sup>3</sup> , 5 ppm

- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **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:** Not required.
- **Protection of hands:**
  - 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 protection:** Goggles according to EN 166 recommended during refilling
- **Body protection:** Protective work clothing

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### SECTION 9: Physical and chemical properties

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

· **General Information**

· **Appearance:**

· <b>Form:</b>	Fluid
· <b>Colour:</b>	Colourless
· <b>Odour:</b>	Odourless

· **pH-value (100 g/l) at 20 °C:** < 1

· **Change in condition**

· **Melting point/Melting range:** Undetermined.  
 · **Boiling point/Boiling range:** Undetermined.

· **Flash point:** Not applicable.

· **Self-igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Density at 20 °C:** 1,01 g/cm<sup>3</sup>

· **Solubility in / Miscibility with water:**

Fully miscible.

· **9.2 Other information** No further relevant information available.

### 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 according to specifications.

· **10.3 Possibility of hazardous reactions** Reacts with metals forming hydrogen.

· **10.4 Conditions to avoid** No further relevant information available.

· **10.5 Incompatible materials:** No further relevant information available.

· **10.6 Hazardous decomposition products:** Hydrogen chloride (HCl)

### SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**

· **Acute toxicity** Based on available data, the classification criteria are not met.

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

**CAS: 7647-01-0 hydrogen chloride**

Oral	LD50	900 mg/kg (rabbit)
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· **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.

· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**

· **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.

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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.
- **Additional ecological information:**
- **General notes:** Generally not hazardous for water
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

### 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</b>  |   |
| · <b>ADR, IMDG, IATA</b>   | UN1789  |
| · <b>14.2 UN proper shipping name</b>  |   |
| · <b>ADR</b>   | 1789 HYDROCHLORIC ACID solution   |
| · <b>IMDG, IATA</b>  | HYDROCHLORIC ACID solution  |
| · <b>14.3 Transport hazard class(es)</b>   |   |
| · <b>ADR, IMDG, IATA</b>   |   |
|  |  |
| · <b>Class</b>   | 8 Corrosive substances.   |
| · <b>Label</b>   | 8   |
| · <b>14.4 Packing group</b>  |   |
| · <b>ADR, IMDG, IATA</b>   | III   |
| · <b>14.5 Environmental hazards:</b>   |   |
| · <b>Marine pollutant:</b>   | No  |
| · <b>14.6 Special precautions for user</b>                                       | Warning: Corrosive substances.  |
| · <b>Danger code (Kemler):</b>   | 80  |
| · <b>EMS Number:</b>   | F-A,S-B   |
| · <b>Segregation groups</b>  | Acids   |
| · <b>Stowage Category</b>  | E   |
| · <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b> | Not applicable.   |

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· **Transport/Additional information:**

· **ADR**

- **Limited quantities (LQ)** 5L
- **Excepted quantities (EQ)** Code: E1  
Maximum net quantity per inner packaging: 30 ml  
Maximum net quantity per outer packaging: 1000 ml
- **Transport category** 3
- **Tunnel restriction code** E

· **IMDG**

- **Limited quantities (LQ)** 5L
- **Excepted quantities (EQ)** Code: E1  
Maximum net quantity per inner packaging: 30 ml  
Maximum net quantity per outer packaging: 1000 ml

- **UN "Model Regulation":** UN 1789 HYDROCHLORIC ACID SOLUTION, 8, III

**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 hydrogen chloride**
- **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**

H314 Causes severe skin burns and eye damage.  
H335 May cause respiratory irritation.

- **Department issuing SDS:** product safety department.

· **Contact:**

· **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 européen sur le transport 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

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

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

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**LENNTECH**

info@lenntech.com Tel. +31-152-610-900

www.lenntech.com Fax. +31-152-616-289