



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

- **1.1 Product identifier**
- **Trade name: Testoval Chlorid Test B**
- **UFI: MXHR-ATDH-QC0C-3WU2**
- **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  
Analystechnik GmbH & Co. KG  
Orleansstraße 75 b  
D-31135 Hildesheim  
Phone +49 (0) 5121 2893390  
Fax +49 (0) 5121 2893367  
E-mail [info@heyl.de](mailto:info@heyl.de)  
Internet [www.heyl.de](http://www.heyl.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**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS08 health hazard

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

- **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**



GHS02 GHS08

- **Signal word** Danger
- **Hazard-determining components of labelling:**  
mercury dithiocyanate
- **Hazard statements**  
H225 Highly flammable liquid and vapour.  
H373 May cause damage to organs through prolonged or repeated exposure.
- **Precautionary statements**  
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P233 Keep container tightly closed.  
P260 Do not breathe mist/vapours/spray.

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P280 Wear protective gloves/protective clothing/eye protection/face protection.  
 P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

P314 Get medical advice/attention if you feel unwell.

- **Labelling of packages where the contents do not exceed 125 ml**
- **Hazard pictograms**



GHS02 GHS08

- **Signal word** Danger
- **Hazard-determining components of labelling:**  
mercury dithiocyanate
- **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: 64-17-5 EINECS: 200-578-6 Index number: 603-002-00-5 Reg.nr.: 01-2119457610-43	ethanol Flam. Liq. 2, H225	50 – 100%
CAS: 592-85-8 EINECS: 209-773-0 Index number: 080-004-00-7	mercury dithiocyanate Acute Tox. 2, H300; Acute Tox. 1, H310; Acute Tox. 2, H330; STOT RE 2, H373; Aquatic Acute 1, H400; Aquatic Chronic 1, H410 Specific concentration limit: STOT RE 2; H373: C ≥ 0.1 %	≥ 0.1 – < 0.25%

- **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:**

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

Immediately remove any clothing soiled by the product.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· **After inhalation:**

Supply fresh air.

Call a doctor immediately.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:**

Immediately wash with water and soap and rinse thoroughly.

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- *Seek medical treatment.*
- **After eye contact:**  
*Rinse opened eye for several minutes under running water.*  
*Seek medical treatment.*
- **After swallowing:**  
*A person vomiting while laying on their back should be turned onto their side.*  
*Call a doctor immediately.*  
*Induce vomiting, if person is conscious. Seek medical help.*
- **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 protective equipment. Keep unprotected persons away.*
- **6.2 Environmental precautions:** *Do not allow to enter sewers/ surface or ground water.*
- **6.3 Methods and material for containment and cleaning up:**  
*Ensure adequate ventilation.*  
*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:**  
*Keep ignition sources away - Do not smoke.*  
*Protect against electrostatic charges.*
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
*Store in a cool location.*  
*Store only in the original receptacle.*
- **Information about storage in one common storage facility:** *Store away from foodstuffs.*

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- **Further information about storage conditions:**  
 Keep container tightly sealed.  
 Protect from heat and direct sunlight.  
 Store in cool, dry conditions in well sealed receptacles.
- **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: 592-85-8 mercury dithiocyanate**

IOELV	Long-term value: 0.02 mg/m <sup>3</sup> as Hg
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- **Regulatory information IOELV:** (EU) 2019/1831
- **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.  
 Store protective clothing separately.  
 Do not inhale gases / fumes / aerosols.  
 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-P3  
 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.
- **Protection of hands:**



Protective gloves

- 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:**  
 Butyl rubber, BR  
 Recommended thickness of the material: ≥ 0.7 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:  $\geq 0.4$  mm

Value for the permeation: Level = 4 (> 120 min)

· **Eye 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**

· **Appearance:**

Form: Fluid

Colour: Colourless

· **Odour:** Characteristic

· **Odour threshold:** Not determined.

· **pH-value (80 g/l) at 20 °C:** 5.7

· **Change in condition**

Melting point/freezing point: Undetermined.

Initial boiling point and boiling range: 78 °C

· **Flash point:** 13 °C

· **Flammability (solid, gas):** Not applicable.

· **Ignition temperature:** 425 °C  
 Not determined.

· **Decomposition temperature:** Not determined.

· **Auto-ignition temperature:** Product is not selfigniting.

· **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· **Explosion limits:**

Lower: 3.5 Vol %

Upper: 15 Vol %

· **Vapour pressure at 20 °C:** 59 hPa

· **Density at 20 °C:** 0.79 g/cm<sup>3</sup>

· **Relative density:** Not determined.

· **Vapour density:** Not determined.

· **Evaporation rate:** Not determined.

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

Fully miscible.

· **Partition coefficient: n-octanol/water:** Not determined.

· **Viscosity:**

Dynamic: Not determined.

Kinematic: Not determined.

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· **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**  
 Forms flammable gases/fumes.  
 Forms explosive gas mixture with air.  
 Reacts with strong acids and 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:** Mercury

\* **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: 64-17-5 ethanol**

Oral	LD50	> 8,300 mg/kg (mouse)
Inhalative	LC50/4 h	115.9 – 133.8 mg/l (rat)

**CAS: 592-85-8 mercury dithiocyanate**

Oral	LD50	46 mg/kg (rat)
Dermal	LD50	685 mg/kg (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.
- **CMR effects (carcinogenicity, 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**  
 May cause damage to organs through prolonged or repeated exposure.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

**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:**  
 Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water  
 Do not allow product to reach ground water, water course or sewage system.  
 Danger to drinking water if even small quantities leak into the ground.

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- **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**  
 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.
- **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>	UN1993
· <b>14.2 UN proper shipping name</b> · <b>ADR</b>  · <b>IMDG</b>  · <b>IATA</b>	1993 FLAMMABLE LIQUID, N.O.S. (ETHANOL (ETHYL ALCOHOL)) FLAMMABLE LIQUID, N.O.S. (ETHANOL (ETHYL ALCOHOL)) FLAMMABLE LIQUID, N.O.S. (ETHANOL)
· <b>14.3 Transport hazard class(es)</b> · <b>ADR, IMDG, IATA</b>	
	
· <b>Class</b> · <b>Label</b>	3 Flammable liquids. 3
· <b>14.4 Packing group</b> · <b>ADR, IMDG, IATA</b>	II
· <b>14.5 Environmental hazards:</b> · <b>Marine pollutant:</b>	No
· <b>14.6 Special precautions for user</b> · <b>Hazard identification number (Kemler code):</b> · <b>EMS Number:</b> · <b>Segregation groups</b>	Warning: Flammable liquids. 33 F-E, S-E Heavy metals and their salts (including their organometallic compounds), mercury and mercury compounds
· <b>Stowage Category</b>	B
· <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.

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· <b>Transport/Additional information:</b>	Void
· <b>ADR</b>	
· <b>Limited quantities (LQ)</b>	1L
· <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>Transport category</b>	2
· <b>Tunnel restriction code</b>	D/E
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	1L
· <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>UN "Model Regulation":</b>	UN 1993 FLAMMABLE LIQUID, N.O.S. (ETHANOL (ETHYL ALCOHOL)), 3, II

**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 P5c** FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 18

· **Regulation (EU) No 649/2012**

CAS: 592-85-8	mercury dithiocyanate	Annex I Part 1 Annex I Part 3 Annex V Part 2
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- **National regulations:**
- **Information about limitation of use:**  
Employment restrictions concerning juveniles must be observed.  
Employment restrictions concerning pregnant and lactating women must be observed.
- **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**  
H225 Highly flammable liquid and vapour.  
H300 Fatal if swallowed.  
H310 Fatal in contact with skin.  
H330 Fatal if inhaled.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.
- **Department issuing SDS:** product safety department.

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· **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*

*Flam. Liq. 2: Flammable liquids – Category 2*

*Acute Tox. 2: Acute toxicity - oral – Category 2*

*Acute Tox. 1: Acute toxicity - dermal – Category 1*

*STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2*

*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*

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

EU