

Safety data sheet according to 1907/2006/EC, Article 31

Printing date 10.05.2011

Revision: 06.05.2011

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

- **Product identifier**
- **Trade name: Precision Reagent - Chloride**
- **Article number:** KR 101
- **Relevant identified uses of the substance or mixture and uses advised against**
Water Testing Reagent
- **Application of the substance / the preparation** Water Testing Reagent
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Serosep Ltd
Annacotty Business Park
Annacotty
Co.Limerick
IRELAND
- **Further information obtainable from:**
Product safety department.
trussell@serosep.com
- **Emergency telephone number:** During normal opening times: 00353/61/358190

2 Hazards identification

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



GHS08 health hazard

STOT SE 1 H370 Causes damage to organs.

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



GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



T; Toxic

R23/24/25-39/23/24/25: Toxic by inhalation, in contact with skin and if swallowed. Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.



Xi; Irritant

R36/38: Irritating to eyes and skin.

R33: Danger of cumulative effects.

- **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

- **Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

- **Label elements**

- **Labelling according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

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Code letter and hazard designation of product:


T Toxic

Hazard-determining components of labelling:

 methanol
mercury dithiocyanate

Risk phrases:

23/24/25 Toxic by inhalation, in contact with skin and if swallowed.
33 Danger of cumulative effects.
36/38 Irritating to eyes and skin.
39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.

Safety phrases:

1/2 Keep locked up and out of the reach of children.
29/56 Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.
36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
63 In case of accident by inhalation: remove casualty to fresh air and keep at rest.


















Other hazards
Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Description:** Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 67-56-1 EINECS: 200-659-6	methanol  T R23/24/25-39/23/24/25;  F R11 -----  Flam. Liq. 2, H225;  Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331;  STOT SE 1, H370	12.0%
CAS: 10421-48-4	Ferric Nitrate  Xi R38-41 -----  Eye Dam. 1, H318;  Skin Irrit. 2, H315	3.0%
CAS: 7697-37-2 EINECS: 231-714-2	nitric acid  C R35;  O R8 -----  Ox. Liq. 3, H272;  Skin Corr. 1A, H314	1.0%
CAS: 592-85-8 EINECS: 209-773-0	mercury dithiocyanate  T+ R26/27/28;  N R50/53 R33 -----  Acute Tox. 2, H300; Acute Tox. 1, H310; Acute Tox. 2, H330;  STOT RE 2, H373;  Aquatic Acute 1, H400; Aquatic Chronic 1, H410	0.2%

- **Additional information:** For the wording of the listed risk phrases refer to section 16.

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4 First aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Remove breathing equipment only after contaminated clothing have been completely removed.
In case of irregular breathing or respiratory arrest provide artificial respiration.
- **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.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Do not induce vomiting; call for medical help immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

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

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **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.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.

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- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

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

Ingredients with limit values that require monitoring at the workplace:	
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67-56-1 methanol	
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OEL	Short-term value: 310 mg/m ³ , 250 ppm Long-term value: 260 mg/m ³ , 200 ppm Sk, IOELV
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7697-37-2 nitric acid	
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OEL	Short-term value: 1 ppm IOELV
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- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
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.
- **Respiratory protection:**
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

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

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

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

- **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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **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.

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- **Eye protection:**
Safety glasses



Tightly sealed goggles

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form:	Fluid
Colour:	According to product specification
· Odour:	Characteristic
· Odour threshold:	Not determined.

- pH-value: Not determined.

- **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	64°C

- Flash point: > 55°C

- Flammability (solid, gaseous): Not applicable.

- Ignition temperature: 455°C

- Decomposition temperature: Not determined.

- Self-igniting: Product is not selfigniting.

- Danger of explosion: Product does not present an explosion hazard.

- **Explosion limits:**

Lower:	5.5 Vol %
Upper:	44.0 Vol %

- Vapour pressure at 20°C: 128 hPa

- Density: Not determined.

- Relative density: Not determined.

- Vapour density: Not determined.

- Evaporation rate: Not determined.

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

Not miscible or difficult to mix.

- Segregation coefficient (n-octanol/water): Not determined.

- **Viscosity:**

Dynamic:	Not determined.
Kinematic:	Not determined.

- **Solvent content:**

Organic solvents:	0.0 %
Water:	83.8 %
VOC (EC)	12.00 %

- Solids content: 88.0 %

- Other information: No further relevant information available.

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10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

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

67-56-1 methanol

Oral	LD50	5628 mg/kg (rat)
Dermal	LD50	15800 mg/kg (rabbit)

592-85-8 mercury dithiocyanate

Oral	LD50	46 mg/kg (rat)
Dermal	LD50	685 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Toxic
Irritant

12 Ecological information

- **Toxicity**
- **Acquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **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.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

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13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **Land transport ADR/RID (cross-border)**



- **ADR/RID class:** 3 Flammable liquids.
- **Danger code (Kemler):** 36
- **UN-Number:** 1992
- **Packaging group:** III
- **Hazard label:** 3+6.1
- **UN proper shipping name:** 1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL)
- **Tunnel restriction code** D/E

- **Maritime transport IMDG:**



- **IMDG Class:** 3
- **UN Number:** 1992
- **Label** 3+6.1
- **Packaging group:** III
- **EMS Number:** F-E,S-D
- **Marine pollutant:** No
- **Proper shipping name:** FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL)

- **Air transport ICAO-TI and IATA-DGR:**



- **ICAO/IATA Class:** 3
- **UN/ID Number:** 1992
- **Label** 3+6.1
- **Packaging group:** III
- **Proper shipping name:** FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL)

- **UN "Model Regulation":** UN1992, FLAMMABLE LIQUID, TOXIC, N.O.S., 3 (6.1), III
- **Special precautions for user** Warning: Flammable liquids.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

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15 Regulatory information

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

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.
H272	May intensify fire; oxidiser.
H300	Fatal if swallowed.
H301	Toxic if swallowed.
H310	Fatal in contact with skin.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H370	Causes damage to organs.
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.
R11	Highly flammable.
R23/24/25	Toxic by inhalation, in contact with skin and if swallowed.
R26/27/28	Very toxic by inhalation, in contact with skin and if swallowed.
R33	Danger of cumulative effects.
R35	Causes severe burns.
R38	Irritating to skin.
R39/23/24/25	Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
R41	Risk of serious damage to eyes.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R8	Contact with combustible material may cause fire.

- **Department issuing MSDS:** Product safety department.

- **Contact:** Mr. Russell

- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

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

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent