

Trade name: TRAzol

Cat No: NB-03-0166

Material Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date: 28-01-2011

Revision: 28-01-2011

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

- **Product identifier**
- **Trade name:** TRAzol
- **Relevant identified uses of the substance or mixture and uses advised against** No relevant identified uses - mixture of substances.
- **Application of the substance / the preparation**
For research use in RNA purification assays
- **Company/Undertaking Identification**
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2. HAZARDS IDENTIFICATION

- **Classification of the substance or mixture**
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



T; Toxic

R23/24/25: Toxic by inhalation, in contact with skin and if swallowed.



C; Corrosive

R34: Causes burns.



Xn; Harmful

R48/20/21/22-68: Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed. Possible risk of irreversible effects.

R32: Contact with acids liberates very toxic gas.

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

The product does not have 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:**



T Toxic

• **Hazard-determining components of labelling:**

phenol

• **Risk phrases:**

23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

32 Contact with acids liberates very toxic gas.

34 Causes burns.

48/20/21/22 Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.

68 Possible risk of irreversible effects.

• **Safety phrases:**

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

27 Take off immediately all contaminated clothing.

28 After contact with skin, wash immediately with plenty of water.

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).

51 Use only in well-ventilated areas.

53 Avoid exposure - obtain special instructions before use.

• **Other hazards**

• **Results of PBT and vPvB assessment**






• **PBT:** Not applicable.

• **vPvB:** Not applicable.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous/Non-hazardous Components

Compenents		
CAS:7732-18-5 EINECS:231-791-2	Water	30-50%
CAS: 108-95-2 EINECS: 203-632-7 Index number: 604-001-00-2	Phenol T R23/24/25 C R34 Xn R48/20/21/22-68 Muta. Cat. 3	25-35%

	<p>-----</p> <p> Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331</p> <p> Muta. 2, H341; STOT RE 2, H373</p> <p> Skin Corr. 1B, H314</p>	
<p>CAS:593-84-0</p> <p>EINECS:209-812-1</p> <p>Index number: 615-004-00-3</p>	<p>Guanidinium thiocyanate</p> <p> Xn; R20/21/22-32</p> <p>-----</p> <p> Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332</p>	10-25%

Other components:

Components not listed here are not dangerous or their concentrations do not exceed the limits specified in the EU directive 1907/2006/EC, Article 31

4. FIRST AID MEASURES

- **Description of first aid measures**

- General information: Take affected persons out into the fresh air.

- **After inhalation:**

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

- **After skin contact:**

Immediately wash with water. If symptoms persist, call a doctor.

- **After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

- **After swallowing:** Rinse mouth. Consult a doctor for safety reasons.

- **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. FIRE-FIGHTING MEASURES

- **Extinguishing media**

- **Suitable extinguishing agents:** Water

- **Special hazards arising from the substance or mixture**

No further relevant information available.

- **Advice for firefighters**

- **Protective equipment:**

During fire-fighting, wear suitable respiratory equipment and protective clothes.

6. ACCIDENTAL RELEASE MEASURES

- **Personal precautions, protective equipment and emergency procedures**

Not required.

- **Environmental precautions:** No special measures required.

- **Methods and material for containment and cleaning up:**

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

- **Reference to other sections**

See Section 7 for information on safe handling.

Disposal must be made according to official regulations.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7. HANDLING AND STORAGE

- **Handling:**

- **Precautions for safe handling**

No special precautions are necessary if used correctly.

- **Information about fire - and explosion protection:** No special measures required.

- **Conditions for safe storage, including any incompatibilities**

- **Storage:**

- **Requirements to be met by storerooms and receptacles:**

No special measures required.

- **Information about storage in one common storage facility:** Not required.

- **Further information about storage conditions:** Not required.

- **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:**

108-95-2 phenol

WEL

Long-term value: 2 ppm

Sk

- **Additional information:** The lists valid during the making were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

- **Respiratory protection: Not required in normal conditions.**

- **Protection of hands:**



Protective gloves

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.

- **Penetration time of glove material**

The determined penetration times according to EN 374 part III are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.

- **Eye protection:**



Tightly sealed goggles

- **Body protection:**



Protective work clothing

9. PHYSICAL AND CHEMICAL PROPERTIES

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

- **General Information**

- **Appearance:**

Form:	liquid
Colour:	colorless
Odour:	characteristic (odour of phenol)
Odour threshold:	Not determined.
pH-value:	Not determined.

- **Change in condition**

- **Melting point/Melting range:** Not applicable.

- **Boiling point/Boiling range:** Not applicable.

- **Flash point:** Not applicable.

- **Flammability (solid, gaseous):** Not applicable.

- **Ignition temperature:**

- **Decomposition temperature:** Not determined.

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

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

- **Explosion limits:**

- **Lower:** Not determined.

- **Upper:** Not determined.
- **Vapour pressure:** Not determined.
- **Density:** Not determined.
- **Relative density** Not determined.
- **Vapour density** Not determined.
- **Evaporation rate** Not determined.
- **Solubility in / Miscibility with water:** Soluble
- **Segregation coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
 - Dynamic:** Not determined.
 - Kinematic:** Not determined.
- **Other information** No further relevant information available.

10. STABILITY AND REACTIVITY

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** Stable at environment temperature.
- **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:**

108-95-2 phenol

Oral	LD50	317 mg/kg (rat)
Dermal	LD50	850 mg/kg (rabbit)

- **Primary irritant effect:**

- **on the skin:** Caustic effect on skin and mucous membranes.

- **on the eye:** Strong caustic effect.

- **Sensitization:** No sensitizing effects known.

- **Additional toxicological information:**

Harmful

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

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) (Selfassessment): 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. Harmful to aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13. DISPOSAL CONSIDERATIONS

- **Waste treatment methods**
- **Recommendation**
Disposal must be made according to National Legislation.
Contact manufacturer for recycling information.
- **Uncleaned packaging:**
- **Recommendation:**
Disposal must be made according to official regulations.
Packaging may be reused or recycled after cleaning.

14. TRANSPORT INFORMATION

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



- **ADR/RID class:** 6.1 Toxic substances.
- **Danger code (Kemler):** 60
- **UN-Number:** 2810
- **Packaging group:** II
- **Hazard label:** 6.1
- **UN proper shipping name:** 2810 TOXIC LIQUID, ORGANIC, N.O.S. (PHENOL)
- **Tunnel restriction code:** D/E

- **Maritime transport IMDG:**



- **IMDG Class:** 6.1
- **UN Number:** 2810
- **Label** 6.1
- **Packaging group:** II

- **EMS Number:** F-A,S-A
- **Proper shipping name:** TOXIC LIQUID, ORGANIC, N.O.S. (PHENOL)

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



- **ICAO/IATA Class:** 6.1
- **UN/ID Number:** 2810
- **Label 6.1**
- **Packaging group:** II
- **Proper shipping name:** TOXIC LIQUID, ORGANIC, N.O.S. (PHENOL)
- **Special precautions for user** Warning: Toxic substances.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

15. REGULATORY INFORMATION

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Labelling according to EU guidelines:**
The product has been classified and marked in accordance with EU Directives /Ordinance on Hazardous Materials.
- **Code letter and hazard designation of product:**



T Toxic

- **Hazard-determining components of labelling:** (phenol)
- **Risk phrases:**

23/24/25	Toxic by inhalation, in contact with skin and if swallowed.
32	Contact with acids liberates very toxic gas.
34	Causes burns.
48/20/21/22 Harmful:	danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.
68	Possible risk of irreversible effects.
• Safety phrases:	
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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).
51	Use only in well-ventilated areas.
53	Avoid exposure - obtain special instructions before use.

- **Chemical safety assessment:**

A Chemical Safety Assessment has not been carried out.

16. OTHER INFORMATION

• Relevant phrases

H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H341	Suspected of causing genetic defects.
H373	May cause damage to organs through prolonged or repeated exposure.
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
R23/24/25	Toxic by inhalation, in contact with skin and if swallowed.
R32	Contact with acids liberates very toxic gas.
R34	Causes burns.
R48/20/21/22	Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.
R68	Possible risk of irreversible effects.

For research use only

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End of Safety Data Sheet