

# Material Safety Data Sheet (MSDS)

Date of Issue: October 2016



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## 1. IDENTIFICATION OF THE SUBSTANCE /COMPANY DETAILS

Product Name: **PRImeZOL™ Reagent**

Cat Nº: AN1100; AN1102

Product Information: For research use only. Not intended for human or animal diagnostics, therapeutics or other clinical uses.

### CANVAX BIOTECH, S.L.



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### Toxicological Information Service:

European emergency number: **112**

Italy:

CHEMTREC 800-789-767

CHEMTREC (Milan) +(39)-0245557031

Spain:

CHEMTREC 900-868538

CHEMTREC (Barcelona) +(34)-931768545

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

**Chemical Name:** Aqueous Solution of Phenol and Guanidinium Thiocyanate

**Hazardous Ingredients / Components:** Phenol 25-50% (CAS: 108-95-2, EINECS: 203-632-7)

Guanidinium thiocyanate 10-25% (CAS: 593-84-0, EINECS: 209-812-1)

**Other Components:** All other components not listed here are either not dangerous or their concentration do not exceed the limits specified in the EU directive 1999/45/EC

## 3. HAZARDS IDENTIFICATION

**Classification of the substance or mixture**

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

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

Corrosive R34: Causes burns.

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

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Mutagenic  
Category 3: R32: Contact with acids liberates very toxic gas.  
R68: Possible risk of irreversible effects.

## Risk phrases:

23/24/25 Toxic by inhalation, in contact with skin and if swallowed.  
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.  
32 Contact with acids liberates very toxic gas.  
52 Harmful to aquatic organisms.  
53 May cause long-term adverse effects in the aquatic environment.

## Safety phrases:

24/25 Avoid contact with skin and eyes.  
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.  
61 Avoid release in the environment. Refer to special instructions/safety data sheets.

## Label elements

Labelling according to Regulation (EC) N° 1272/2008

## CLP

### Hazard pictograms:



Signal word: Danger

## Health Hazard

Acute oral toxicity: Category 3  
Acute dermal toxicity: Category 3  
Acute inhalation toxicity – Dusts and Mists: Category 2  
Skin corrosion/irritation: Category 1B  
Serious eye damage/eye irritation: Category 1  
Specific target organ systemic toxicity (repeated exposure): Category 2

Mutagenicity: Mutagenic Category 2

## Physical hazards

Not hazardous

## Hazard statements:

H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.  
H314 Causes severe skin burns and eye damage.  
H341 Suspected of causing genetic defects.  
H373 May cause damage to organs through prolonged or repeated exposure

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H412

Harmful to aquatic life with long lasting effects

## Precautionary statements:

### Response:

- P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.  
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P303+P361+ P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P309+P311 IF exposed or if you feel unwell: call a POISON CENTER or doctor/physician.

### Prevention:

- P280 Wear protective gloves / protective clothing / eye protection / face protection  
P281 Use personal protective equipment as required  
P284 Wear respiratory protection  
P271 Use only outdoors or in a well-ventilated area.  
P260 Do not breath dust/ fume / gas / mist / vapours / spray  
P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
P264 Wash hands thoroughly after handling  
P273 Avoid release to the environment

**Hazard-determining components of the labelling:** phenol

**Additional labelling:** EUH032 Contact with acids liberates very toxic gas.

### Other hazards

### Results of PBT and vPvB assessment

**PBT:** Not applicable

**vPvB:** Not applicable

## 4. FIRST – AID MEASURES

**Inhalation:** Toxic by inhalation. Supply fresh air. Call a doctor/physician immediately. If not breathing, give artificial respiration. In case of unconsciousness, place patient stably in side position for transportation.

**Skin Contact:** Immediately wash skin with soap and flush with large amounts of water. Remove all contaminated clothes. Call a doctor/physician immediately.

**Eye Contact:** Immediately rinse opened eyes with large amounts of water during at least 15 minutes. Remove contact lenses. Get medical attention in case eye(s) remain irritated

**Ingestion:** Call a doctor/physician or Poison Control Centre immediately. Rinse mouth with water, repeatedly. Drink large amounts of water. Do not induce vomiting without medical advice.

## 5. FIRE FIGHTING MEASURES

**Extinguishing media:** CO<sub>2</sub>, powder or water spray or alcohol resistant foam.

**Fire Fighting Protective Equipment:** Wear suitable respiratory equipment and protective clothes.

## 6. ACCIDENTAL RELEASE MEASURES

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**Personal precautions:** Avoid contact with skin, eyes and clothing. Use personal protective equipment. Ensure adequate ventilation. Eliminate all ignition sources.

**Environmental precautions:** Prevent product from entering drains. Prevent further leakage or spillage if safe to do so.

**Method for cleaning up:** Absorb with appropriate absorbent material and place in closed adequate containers for proper disposal.

## 7. HANDLING AND STORAGE

**Handling:** Avoid exposure. Prevent contact with skin, eyes and clothing. Remove all sources of ignition.

**Storage:** Store at 2°C-25°C. Protect from light. Keep away from open flames and hot surfaces. Keep containers tightly closed in a well-ventilated place.

## 8. EXPOSURE CONTROL / PERSONAL PROTECTION

This product is for research only and has not been intended/approved for any other commercial, drug, medicinal, household or other consumer purposes. Wear tightly fitting safety goggles, impervious clothing, and impervious gloves (e.g. neoprene rubber). Do not wear contact lenses. In case of insufficient ventilation wear suitable respiratory equipment. Contaminated work clothing should not be allowed to leave the workplace. Handle in accordance with good industrial hygiene and safety practice.



Protective gloves



Tightly sealed goggles



Protective work clothing

### 8.1 Control Parameters

Ingredients with limit values that require monitoring at the workplace:

Phenol (CAS: 108-95-2): Long-term value: 2 ppm

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical State:** Liquid

**Appearance:** Slightly Red

**Odour:** Characteristic (phenol, sweet, tarry, pungent)

**pH (20°C):** -

**Flash Point:** Undetermined

**Melting point:** Undetermined

**Boiling point:** Undetermined

**Self-ignition:** Undetermined

**Danger of explosion:** Does not present an explosion hazard

**Solubility in water:** Miscible

## 10. STABILITY AND REACTIVITY

**Reactivity:** No dangerous reactions known.

**Chemical Stability:** Stable

**Conditions to avoid:** Flames, high temperatures.

**Materials to avoid:** Avoid contact with strong oxidizing agents, strong acids, isocyanates, heat nitriles, nitrides, alkali metals, alkaline earth metals, butadiene.

**Hazardous decomposition products:** Not expected to occur.

**Hazardous products of thermal decomposition:** Toxic vapors, Caustic vapors, carbon/sulfur/nitrogen oxides, Hydrogen cyanide

**Hazardous polymerization:** Will not occur.

## 11. TOXICOLOGY INFORMATION

**Principle Routes of Exposure:** adsorbed through skin; dermal contact; Eye Contact; Inhalation; Ingestion.

**Acute toxicity (phenol):**

Acute oral toxicity (LD50): 270mg/kg (Mouse)

Acute dermal toxicity (LD50): 630mg/kg (Rabbit)

Lowest published lethal dose: LDL (Human) Oral route: 140mg/kg

**Acute toxicity (guanidine thiocyanate):**

Acute oral toxicity (LD50): 571mg/kg (Rat)

Acute dermal toxicity (LD50): 2000mg/kg (Rat/Rabbit)

Lowest published lethal dose: LDL (Human) Oral route: no data available

**Potential Health effects:**

**Eyes:** Corrosive. Causes burns. Risk of serious damage to the eyes including blindness.

**Skin:** Toxic. Corrosive. Causes burns. Components of this product maybe adsorbed though the skin and cause irreversible effects on target organs.

**Inhalation:** Toxic. Corrosive. Causes burns.

**Ingestion:** Toxic. Corrosive. Causes burns. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Target Organs:** Skin. Lungs. Liver. Spleen. Kidney.

**Carcinogenic effects:** according to IARC, none of the components of this product present at a concentration of at least 0,1% or above has been identified as a possible carcinogenic compound for human (Group 3).

## 12. ECOLOGICAL INFORMATION

**Toxicity**

**Aquatic Toxicity:** Short-term toxicity may be seen. Toxic effects expected to be limited to immediate area of environmental release. Any effects expected to be most pronounced in microorganisms.

**Persistence and degradability:** Inherently biodegradable.

Anaerobic Biodegradation Index (BOD20/Th OD): 93% (2.22/2.38 p/p); phenol

Aerobic Biodegradation Index (BOD20 /Th OD): >40%, phenol

**Behaviour in environmental systems**

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**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. Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

## Results of PBT and vPvB assessment

**PBT:** Not applicable

**vPvB:** Not applicable

**Other adverse effects:** No further relevant information available

## 13. DISPOSAL CONSIDERATIONS

**EPA Waste Number (RCRA Hazard Class):** U188

Dispose in accordance to all National and local environmental regulations. This product is sold in an amber glass bottle. Dispose the empty bottle as unused product. May be incinerated in a hazardous waste incinerator. Product should be removed to a hazardous waste landfill only if no other disposal method is available.

**S29** Do not empty in drains.

**S57** Use appropriate containment to avoid environmental contamination.

## 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

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 MARPOL 73/78 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

Risk phrases:

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- 51 Use only in well-ventilated areas.
- 53 Avoid exposure – obtain special instructions before use.
- 61 Avoid release in the environment. Refer to special instructions/safety data sheets.

## 16. OTHER INFORMATION

The information mentioned above is based on our present knowledge and is believed to be correct. However, it shall only be used as a guide and shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. **Canvax Biotech SL** shall not be held liable for any damage resulting from the handling or from contact with the above product. This MSDS has been prepared in accordance with EU directives 67/548/EEC, 91/155/EEC and other EU legislation in force.