



## MATERIAL SAFETY DATA SHEET

Reference  
MSDS-RBC/2

Revision Number  
2

Last Revision date:  
23/03/2020

Page number:  
Page 1 of 10

### SECTION 1: Identification of the substance/mixture

#### 1.1 product identifiers

**Product Name:** RED BLOOD CELLS LYSIS SOLUTION 10X

**REARCH No.:** A registration number is not available for this substance as the substance or its uses are exempted from registration

#### 1.2 relevant identified uses of the substance or mixture and uses advised against

**Recommended use:** Scientific and industrial laboratory use. For Research Use.

#### 1.3 Details of the suppliers of the Material Safety Data Sheet

**IMMUNOSTEP, S.L.**

Avd. Universidad de Coimbra, s/n.  
Centro de Investigación del Cáncer (CIC)  
Campus Miguel de Unamuno 37007 Salamanca-Spain  
**Tfn/Fax:** +34 923294827

**Information relative to Technical Services:** tech@immunostep.com

#### 1.4 Emergency telephone number

+34917 68 98 00 // Instituto Nacional de Toxicología. Madrid

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

**Product Description:** Mixture

Classification according to EC 1272/2008 (CLP/GHS): The product is classified as hazardous according to Regulation EC 1272/2008 (CLP/GHS)

Aquatic Acute 1, H400

Aquatic Chronic 2, H411

## 2.2 Label elements

- Hazard Symbol:



- Signal Word: Warning
- Hazard Statement:  
H400 - Very toxic to aquatic life.  
H411 - Toxic to aquatic life with long lasting effects.
- Precautionary Statements:
  - Prevention : P273 - Avoid release to the environment.
  - Response : P391 - Collect spillage.
  - Storage : Not applicable.
  - Disposal: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Other hazards which do not result in GHS classification: None.

## 2.3 Other hazards

This product contains concentrations of azide below the hazardous level which with repeated contact with lead and copper commonly found in plumbing drains may result in the build up of shock sensitive compounds. Sodium azide forms explosive compounds with heavy metals.

## SECTION 3: Composition/ information on ingredients

Mixtures			
Hazardous Ingredients		Hazard Classification of Pure Ingredients	
Chemical Name	% by wt	EU 1272/2008 CLP/GHS	Note
Sodium Azide CAS 26628-22-8	<0.1	Acute Tox. Oral 2, H300 Aquatic Acute 1, H400 Aquatic Longterm 1, H410	2,8
Ammonium chloride CAS: 12125-02-9	< 10	Acute Tox. 4, H302 Eye Irrit. 2, H319 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=1)	

2 - Substance with Community workplace exposure limits

8 - Present at concentration below the cut-off limits.

## SECTION 4: First aid measures

**General information:** Get medical attention if symptoms occur.

- **Ingestion:** Call a physician or poison control center immediately. Only induce vomiting at the instruction of medical personnel. Never give anything by mouth to an unconscious person.
- **Inhalation:** If product is inhaled, move exposed individual to fresh air. If individual is not breathing, begin artificial respiration by trained personnel and obtain medical attention immediately.
- **Skin Contact:** Wash contact areas with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse.
- **Eye contact:** Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses.

### Most important symptoms and effects, both acute and delayed:

No adverse symptoms or effects have been identified.

### Indication of any immediate medical attention and special treatment needed:

No data available

## SECTION 5: Firefighting measures

### General Fire Hazards:

Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Use water spray to keep fire-exposed containers cool.

### Extinguishing Media In case of fire:

Use carbon dioxide (CO<sub>2</sub>), dry chemical, water spray or appropriate foam. For large fires use fire-extinguishing media appropriate for surrounding materials.

### Special hazards arising from the substance or mixture Special Fire and Explosion

#### Hazards:

No special hazards determined. Fire or excessive heat may produce hazardous decomposition products.

### Hazardous Combustion Products:

No combustion products posing significant hazards are expected from this product (an aqueous solution).

### Advice for fire fighters (Protective Equipment):

Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces.

**Additional information:**

No data available.

**SECTION 6: Accidental release measures**

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

Contact local authorities in case of spillage to drain/aquatic environment. Ensure suitable personal protection (including respiratory protection) during removal of spillages in a confined area.

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

Absorb spillage with suitable absorbent material. Prevent runoff from entering drains, sewers, or streams.

**Environmental Precautions:**

Do not allow the undiluted product to enter sewers/surface or ground water. As a precautionary measure, treat spilled material with a 1:10 bleach/water solution. Absorb liquid and place in container suitable for disposal. Avoid generation of aerosols during clean up. Dispose of contents/container in accordance with local regulations.

**SECTION 7: Handling and storage**

**7.1 Precautions for safe handling**

Use personal protective equipment as required. Universal precautions should be followed when using this product.

- Avoid inhaling, ingestion and contact with eyes and skin.
- Do not pipette by mouth.
- Do not eat, drink or smoke in areas where kit reagents or samples are handled.
- Rubber or disposable latex gloves and protective clothing should be worn while handling kit reagents or specimens.
- Avoid splashing or generation of aerosols.

**7.2 Conditions for sale storage, including any incompatibilities**

To maintain product quality, store according to the instructions in the product labeling. Store in a cool, dry place. Keep container closed.

**7.3 Specific end use (s)**

No further relevant information available.

**SECTION 8: Exposure controls/ personal protection****Components with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of material with critical values that have to be monitored at the workplace.

**Engineering Controls:**

No special engineering controls are required. Use with good general ventilation.

- Eye Protection. Safety glasses should be worn to prevent eye contact. Refer to European Standard EN166 or appropriate government standards.
- Skin Protection Wear protective clothing and impervious gloves, as appropriate. Wash hands after contact.
- Respiratory Protection Under normal conditions, the use of this product should not require respiratory protection. Use in well ventilated area.

**SECTION 9: Physical and chemical properties****Appearance**

- Physical state: liquid
- Color: Colorless.
- Odor: Odorless

**pH:** No data available.

**Melting point/freezing point:** No data available.

**Initial boiling point and boiling range:** No data available.

**Flash Point:** No data available.

**Evaporation rate:** No data available.

**Flammability (Solid, Gas):** Not applicable

**Flammability Limits:** Not applicable

**Vapor pressure:** No data available.



## MATERIAL SAFETY DATA SHEET

Reference  
MSDS-RBC/2

Revision Number  
2

Last Revision date:  
23/03/2020

Page number:  
Page 6 of 10

**Vapor density:** Not determined

**Decomposition temperature:** not applicable

**Solubility (ies):** No data available.

**Viscosity:** Not determined

**Oxidizing Properties:** Not applicable

**Auto-ignition temperature:** No data available.

### SECTION 10: Stability and reactivity

#### Reactivity:

Stable under normal temperature conditions and recommended use. No further relevant information available.

#### Chemical Stability:

The product is stable in accordance with recommended storage conditions.

#### Possibility of hazardous reactions:

Sodium azide forms explosive compounds with heavy metals. Repeated contact of low concentrations of azide with lead and copper commonly found in plumbing drains may result in the build up of shock sensitive compounds.

#### Conditions to avoid:

Avoid exposure to high temperatures or direct sunlight.

#### Incompatible Materials:

Metals and metallic compounds.

#### Hazardous Decomposition Products:

No decomposition products posing significant hazards would be expected from this product (an aqueous solution).

### SECTION 11: Toxicological information

#### Toxicity Data for Hazardous Ingredients

##### Sodium Azide

CAS 26628-22-8: Oral LD50 Rat: 27 mg/Kg. Dermal LD50 Rabbit 20 mg/kg.



## MATERIAL SAFETY DATA SHEET

Reference  
MSDS-RBC/2

Revision Number  
2

Last Revision date:  
23/03/2020

Page number:  
Page 7 of 10

### Primary Routes of Exposure:

Common routes of entry include inhalation, ingestion and eye/skin contact. Specific paths of concern for potentially infectious materials are skin puncture, contact with broken skin, contact with mucous membranes and inhalation of aerosolized material.

### Delayed and immediate effects and also chronic effects from short and long term exposure:

#### Short term exposure

- Potential delayed effects: Not available.
- Potential immediate effects: Not available.

#### Potential immediate effects

- Long term exposure: Not available.
- Potential delayed effects: Not available.

#### Potential chronic health effects

- **General:** No known significant effects or critical hazards.
- **Skin Corrosion/Irritation:** No known significant effects or critical hazards.
- **Serious eye damage/eye irritation:** No known significant effects or critical hazards.
- **Respiratory/skin sensitization:** No known significant effects or critical hazards.
- **Carcinogenicity:** No ingredients in this product are listed as carcinogens
- **Germ cell mutagenicity:** No data available.
- **Reproductive Toxicity:** No data available.
- **Specific target organ toxicity – single exposure:** Not classified based on available data.
- **Specific target organ toxicity – repeated exposure:** Not classified based on available data.
- **Other Information:** None known.

### Numerical measures of toxicity:

**Acute toxicity estimates:** Not available.

#### Ammonium Chloride

CAS: 12125-02-9: LD50 Oral Rat 1650 mg/kg

### Primary Routes of Exposure:

Common routes of entry include inhalation, ingestion and eye/skin contact. Specific paths of concern for potentially infectious materials are skin puncture, contact with broken skin, contact with mucous membranes and inhalation of aerosolized material.

**Short term exposure**

- Potential delayed effects: Not available.
- Potential immediate effects: Not available.

**Potential immediate effects**

- Long term exposure: Not available.
- Potential delayed effects: Not available.

**Potential chronic health effects**

- **General:** No known significant effects or critical hazards.
- **Skin Corrosion/Irritation:** No known significant effects or critical hazards.
- **Serious eye damage/eye irritation:** Eyes - Severe irritant Rabbit – 100 milligrams
- **Respiratory/skin sensitization:** No known significant effects or critical hazards.
- **Carcinogenicity:** No ingredients in this product are listed as carcinogens
- **Germ cell mutagenicity:** No data available.
- **Reproductive Toxicity:** No data available.
- **Specific target organ toxicity – single exposure:** Not classified based on available data.
- **Specific target organ toxicity – repeated exposure:** Not classified based on available data.
- **Other Information:** None known.

**Numerical measures of toxicity:**

**Acute toxicity estimates:** Not available.





## MATERIAL SAFETY DATA SHEET

Reference  
MSDS-RBC/2

Revision Number  
2

Last Revision date:  
23/03/2020

Page number:  
Page 9 of 10

### SECTION 12: Ecological information

#### Acute hazards to the aquatic environment:

Product/ingredient	Result	Species	Exposure
ammonium chloride	Acute EC50 0.07 mg/l Marine water	Algae - Hormosira banksii - Gamete	72 hours
	Acute LC50 20 µg/l Fresh water	Crustaceans – Macrobrachium rosenbergii - Post-larvae	48 hours
	Acute LC50 390 µg/l Fresh water	Daphnia - Daphnia magna -Young	48 hours
	Acute LC50 80 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Chronic EC10 0.03 mg/l Fresh water	Daphnia - Daphnia obtusa	21 Days
	Chronic NOEC 0.6 mg/l Marine water	Algae - Entomoneis punctulata - Exponential growth phase	72 hours
	Chronic NOEC 330 µg/l Fresh water	Crustaceans - Crangonyx sp. -Juvenile (Fledgling, Hatchling, Weanling)	21 days
	Chronic NOEC 0.006 mg/l Fresh water	Fish - Ictalurus punctatus - Fry	30 days

#### Persistence and Degradability:

Expected to be biodegradable

#### Bioaccumulative potential:

Low

#### Mobility in soil:

No data available

#### Other adverse effects:

No data available

### SECTION 13: Disposal considerations

#### General information:

Must be specially treated adhering to official regulations. This material must be disposed in accordance with all local, state and provincial regulations. Do not allow product to reach sewage system.

#### Uncleaned packaging:

Disposal must be according to state and local regulations.

Recommended cleaning agent: Water, if necessary with cleaning agents.



## MATERIAL SAFETY DATA SHEET

Reference  
MSDS-RBC/2

Revision Number  
2

Last Revision date:  
23/03/2020

Page number:  
Page 10 of 10

### SECTION 14: Transport information

Transportation of this product is not regulated under ICAO, IATA DGR, IMDG, US DOT, European ADR and RID or Canadian TDG...

- Non-hazardous for road transport.
- Non-hazardous for sea transport.
- Non-hazardous for air transport.

### SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006 (REACH) - Annex XIV.

**List of substances subject to authorization:** No ingredients listed.

**Chemical safety assessment:** For this product a chemical safety assessment was not carried out.

### SECTION 16: Other information

The above information represents the best information currently available for us. However this reagent may present unknown hazards and should be used with caution. Independent professional opinions regarding the risk or exposure to this solution are the responsibility of the user.