

IMMAGINA BIOTECHNOLOGY srl  
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RiboLace Ribo-Seq kit (#RL001) Module 1 consist of 11 tubes containing aqueous solutions, salts enzymes, magnetic beads, glycerol and detergents. Components list:

- SDS 10%
- B-buffer (BB)
- W-buffer (WB)
- RiboLace magnetic beads (RmB)
- OH-buffer (OH)
- Proteinase K (K)
- Lysis buffer (LB)
- RiboLace smart probe (RsP)
- Nuclease (Nux)
- mPEG
- Stabilizing Nux Solution (SS)
- M25-35

A Safety Data Sheet is provided for sodium dodecyl sulfate (SDS), 10% Triton X-100, Sodium Hydroxide, Cycloheximide. Nuclease (Nux) and Proteinase K (K) are enzymes present below 0.1% and are supplied in 50% glycerol. M25-35 is present at concentrations <0.1% and is not known to be hazardous. A SDS is provided for glycerol. A Safety Data Sheet is provided for RiboLace magnetic beads (RmB) and RiboLace smart probe (RsP). Stabilizing Nux Solution (SS) is present at concentrations <0.1% and is not known to be hazardous.

**RiboLace Ribo-Seq kit (#RL001)\_Mod. 1\_12 doesn't contain any animal or biological material.**

*IMMAGINA BIOTECHNOLOGY srl recommends all normal precautions. We recommend always wearing gloves and avoiding direct contact with skin and eyes when handling biochemical and chemical reagents and solutions. Information in this MSDS is from available published sources and is believed to be accurate. No warranty, express or implied, is made and IMMAGINA BIOTECHNOLOGY srl assumes no liability resulting from the use of this MSDS. The user must determine suitability of this information for his application.*

## Section 1: Company and Chemical Identification

IMMAGINA BIOTECHNOLOGY srl, Via Sommarive 18, 38123 Trento, Italy, Tel: +390461312018,  
info@immaginabiotech.com

**Chemical Name:** Glycerol

This MSDS contains information about glycerol and applies to *IMMAGINA BIOTECHNOLOGY* products supplied as aqueous solutions containing 50% glycerol including Nuclease (Nux) (#RL001-7) and Proteinase K (K) (#RL001-17).

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## Section 2: Composition and Information on Hazardous Ingredients

Component **Glycerol**

CAS No 56-81-5 % Wt 50

Synonyms Glycerin, glyceritol, glycol alcohol, 1,2,3-Propanetriol, Trihydroxypropane, 1,2,3-trihydroxypropane

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## Section 3: Hazards Identification



### Hazard statements

H319 Causes serious eye irritation

### Precautionary statements

P305+P351+P338 IF IN EYES Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

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## Section 4: First Aid Measures

Emergency and first aid information:

Ingestion: Wash mouth with water and seek medical advice immediately. Do not induce vomiting.

Inhalation: Remove to fresh air. Give artificial respiration if not breathing. Call a physician if breathing becomes difficult and give oxygen.

Contact: Flush with copious amounts of water for at least 15 minutes while removing clothing and shoes. Consult a physician if persistent rash develops.

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## **Section 5: Fire Fighting Measures**

Extinguishing Media: Water spray, carbon dioxide, dry chemical powder or appropriate foam. Special Fire Fighting Procedures: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Unusual Fire and explosions hazards: Emits toxic fumes under fire conditions.

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## **Section 6: Accidental Release Measures**

Wear appropriate protective clothing and respirator. Dike and absorb with a suitable inert absorbent (e.g., sand or vermiculite). Place in closed waste container for disposal. Avoid contact with skin and eyes. Ventilate area and wash spill site after material clean-up is complete.

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## **Section 7: Handling and Storage**

**Respiratory protection**: if needed, use appropriate respiratory protection approved by NIOSH/MSHA or appropriate agency. Ventilation: Mechanical (general) or local exhaust as needed. Keep mist levels low. Personal Protective Equipment: Protective, chemical-resistant gloves, safety glasses or goggles, and lab coat are recommended. Access to safety shower and eyewash. Work/Hygienic practices: Avoid contact with eyes, skin and clothes. Wash thoroughly after handling.

Additional Information: Violent or explosive reactions can occur upon direct contact with sodium hydride, phosphorous trioxide, perchloric acid, chlorine, calcium hypochlorite, nitric acid and hydrofluoric acid, nitric acid and sulfuric acid, sodium peroxide, hydrogen peroxide or potassium permanganate.

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## **Section 8: Exposure Controls/Personal Protection**

Wear appropriate NIOSH/MSHA- approved respirator, chemical-resistant gloves, safety goggles, and other protective equipment and clothing. Mechanical exhaust required. Safety shower and eye bath. Do not breathe vapor. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure. Wash thoroughly after handling. Keep in a cool dry place.

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## **Section 9: Physical and Chemical Properties**

**Appearance and odor**: viscous, colorless, odorless liquid

**Boiling Point**: 182°C @ 20 mm

**Solubility in H<sub>2</sub>O**: Miscible (>10%)

**Vapor Density**: 3.1

**Freezing Pt** (50% aqueous sol'n): -23°C

**Melting Pt**: 20°C

**Specific Gravity**: 1.261

**Vapor Pressure:** 3 mm @ 20°C

**Flash Point:** 176°C

**Extinguishing Media:** Water, CO<sub>2</sub>, Dry chemicals

**Fire fighting Procedures:** Wear self-contained breathing apparatus and protective clothing.

**Unusual fire or explosion hazards:** Contact with strong oxidizers may cause fire or explosion. May emit toxic fumes.

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## Section 10: Stability and Reactivity

**Stability:** Stable

**Incompatibility:** Strong oxidizing agents, Strong bases

**Hazardous decomposition products:** Carbon monoxide, carbon dioxide

**Hazardous polymerization:** Does not occur

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## Section 11: Toxicological Information

**Acute Effects:** May be harmful by inhalation, ingestion, or absorption through skin. Causes eye & skin irritation. May be irritating to mucous membranes and upper respiratory tract. Prolonged exposure can cause nausea, headache and vomiting. **Chronic Effects:** Target organ: kidneys. To best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated. RTECS: MA8050000 Glycerol

### Irritation Data:

Skin rabbit: 500 MG/24H MLD

Eye rabbit: 126 MG MLD

Eye rabbit: 500 MG/24H MLD

### Toxicity Data:

Oral rat: LD<sub>50</sub>:12600 MG/KG

Inhalation rat: LC<sub>50</sub>:>570 MG/M<sup>3</sup>/1H

IPR rat: LD<sub>50</sub>: 4420 MG/KG

SCU rat: LD<sub>50</sub>:100 MG/KG

IVN rat: LD<sub>50</sub>:5566 MG/KG

Oral mouse: LD<sub>50</sub>: 4090 MG/KG

IPR mouse: LD<sub>50</sub>: 8700 MG/KG

SCU mouse: LD<sub>50</sub>:91 MG/KG

IVN mouse: LD<sub>50</sub>: 4250 MG/KG

Oral rabbit: LD<sub>50</sub>: 27 GM/KG

Skin rabbit: LD<sub>50</sub>:>10 GM/KG

IVN rabbit: LD<sub>50</sub>:53 GM/KG

Oral guinea pig: LD<sub>50</sub>:7750 MG/KG

### Target Organ Data

Behavioral (headache) Gastrointestinal (nausea and vomiting) paternal effects (spermatogenesis, testes, epididymis, sperm count) Effects of fertility (male fertility index) effects of fertility (post implantation mortality) only selected registry of toxic effects of chemical substances (RTECS) Data is presented here. See actual entry in RTECS for complete information.

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## Section 12: Ecological Information

No data available.

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## Section 13: Disposal Considerations

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

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## **Section 14: Transport Information**

No special considerations are known.

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## **Section 15: Regulatory Information**

European Information: irritant R36/38 Irritating to eyes and skin. S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S36 Wear suitable protective clothing.

Reviews, standards and regulations:

OEL=MAK

ACGIH TLV-TWA 10 MG/M3, Inhalable particulate DTLVS\* TLV/BEI, 1997 EPA FIFRA 1988 Pesticide subject to registration or re-registration

MSHA standard: nuisance particulates (mist)

DTLWS\* 3,20,1973

OSHA PEL (GEN INDU): 8H TWA 15 MG/M3, Total dust CFRGBR 29,1910.1000,1994

OSH PEL (GEN INDU): 8H TWA 5 MG/M3, Respirable fraction CFRGBR 29,1910.1000,1994 OSHA

PEL (construction) :8H TWA 15 MG/M3, total dust CFRGBR 29,1926.55, 1994

OSHA PEL (construction): 8H TWA 5 MG/M3 total dust CFRGBR 29, 1926.55,1994

OSH PEL (shipyard): 8H TWA 5 MG/M3, Respirable fraction CFRGBR 29,1915.1000,1993 OSH PEL

(shipyard): 8H TWA 15 MG/M3, total dust CFRGBR 29,1915.1000,1993 OEL-Australia: TWA 10 MG/M3 Jan 1993

OEL-Belgium: TWA 20 MG/M3 Jan 1993

OEL-Finland: TWA 10 MG/M3 Jan 1993

OEL-France: TWA 10 MG/M3 Jan 1993

OEL-The Netherlands: TWA 10 MG/M3 Jan 1993

OEL-United Kingdom: TWA 10 KG/M3 Jan 1993 OEL-

Bulgaria, Colombia, Jordan, Korea, check ACGIH TLV

OEL-New Zealand, Singapore, Vietnam check ACGIH TLV

NOHS 1974: HZD 35085; NIS 358, TNF 86657; NOW 198: TNE 1085329 NOES 1983: HZD 35085; NIS

310; TNF 67054; NOS 215; TNE 2135546; TFE 1346631 EPA TSCA Section 8 (B) Chemical Inventory

EPA TSCA Section 8 (D) Unpublished health/safety studies EPA TSCA Test submission (TSCATS)

Data base June 1998.

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## **Section 16: Other Information**

The above information is offered in good faith as accurate, but without guarantee, and should be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It doesn't represent any guarantee of the properties of the product. IMMAGINA BIOTECHNOLOGY srl shall not be held liable for any damage resulting from handling of from contact with the above product. All risks of use of the product should be assumed by the user.

## Section 1: Company and Chemical Identification

IMMAGINA BIOTECHNOLOGY srl, Via Sommarive 18, 38123 Trento, Italy, Tel: +390461312018, info@immaginabiotech.com

**Chemical Name:** Dodecyl Sulfate (SDS). SDS is provided as a component of a aqueous solution (10%) (#RL001-9) and is contained also in IMMAGINA BIOTECHNOLOGY product RNA Extraction Buffer (REB) (#KGE002-2).

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## Section 2: Composition and Information on Hazardous Ingredients

### Component

Sodium Dodecyl Sulfate (SDS)

**CAS No** 151-21-3

**% Wt** 0.5 -10%

**Hazardous** Yes **Chemical Formula:**  $C_{12}H_{25}NaO_4S$

**Molecular Weight** 288,4 g/mol **Appearance:** SDS is provided as a component of a solution.

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## Section 3: Hazards Identification



### Hazard statements

H228 Flammable solid

H302+H332 Harmful if swallowed or if inhaled

H315 Causes skin irritation

H318 Causes serious eye damage

H335 May cause respiratory irritation

H412 Harmful to aquatic life with long lasting effects

### Precautionary statements - prevention

P210 Keep away from heat, sparks, open flames, hot surfaces. No smoking

P261 Avoid breathing dust

P280 Wear protective clothing/eye protection

### Precautionary statements - response

P302+P352 IF ON SKIN: Wash with plenty of water

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P312 Call a POISON CENTRE/doctor if you feel unwell

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## Section 4: First Aid Measures

**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Ingestion:** Give large amounts of water to drink. Never give anything by mouth to an unconscious person. Get medical attention.

**Skin contact:** Immediately flush skin with copious amounts of soap and water. Remove contaminated clothing and shoes. Get medical attention. Wash and clean clothing and shoes before reuse.

**Eye contact:** Immediately flush eyes with copious amounts of water for 15 minutes, lifting lower and upper eyelids occasionally. Get medical immediate medical attention.

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## Section 5: Fire Fighting Measures

**Fire:** Solid SDS is categorized as a flammable solid.

**Explosion:** Solid SDS is a fine dust and may be an ignition source.

**Flash Point:** The flash point of this solution has not been tested but should be greater than 100°C.

**Extinguishing Media:** water, alcohol foam, carbon dioxide, dry chemical

**Special fighting Procedures:** Wear full protective equipment, including an approved, self-contained breathing apparatus.

**Unusual fire or explosion hazards:** Emits toxic fumes when heated to decomposition. Can react with oxidizing agents.

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## Section 6: Accidental Release Measures

### Spill/Release Information:

Wear appropriate protective clothing such as gloves. Dike material with a suitable inert absorbent. Place in a suitable waste container. Avoid contact with skin and eyes.

### Waste Disposal Method:

Depending on size of spill and degree of hazard it may be possible to dispose in drain with excess water. Scrub area of spill thoroughly with soap and water, rinse with plenty of water to drain.-----  
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## Section 7: Handling and Storage

### Precautions to be taken in handling and storing:

For protection of material, store away from oxidizing materials.

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## Section 8: Exposure Controls/Personal Protection

**Airborne Exposure Limits:** Not established

**Respiratory Protection:** Use appropriate respiratory protection approved by NIOSH or appropriate organization.

**Ventilation:** Mechanical (general) or local exhaust as needed.

**Protective gloves:** Yes

**Eye protection:** Yes

**Other protective clothing or Equipment:** Wear a lab coat. Have access to safety shower and eye wash.

**Work/Hygienic practices:** Avoid contact with eyes skin and clothing. Wash thoroughly after handling. Avoid prolonged or repeated exposure.

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## Section 9: Physical and Chemical Properties

Appearance: clear or white cloudy liquid  
Odor: slight fatty odor.  
Solid SDS is soluble in water at 10 g/100 g water.  
Specific gravity of solid: 0.4 @15°C/4°C  
Percent volatiles by volume @21°C 0  
No information of boiling point, melting point, vapor density, vapor pressure and evaporation rate.

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## Section 10: Stability and Reactivity

**Stability:** stable under normal conditions

**Conditions to avoid:** Strong oxidants, heat flames, ignition sources

**Incompatibility (materials to avoid):** Can react with oxidizing agents and acids.

**Hazardous decomposition products:** Emits toxic fumes when heated to decomposition including carbon monoxide, carbon dioxide and sulfur oxides.

**Hazardous polymerization:** Will not occur under normal conditions

**Routes of entry:** Ingestion.

Most of the hazards (such as irritation of lungs) associated with SDS are related to its powder form.

**Health hazards:** May cause irritation of skin or eyes. To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

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## Section 11: Toxicological Information

**Toxicity Data:** Oral rat LD50: 1288 mg/kg; Inhalation rat LC50: > 3900 mg/kg; IPR-RAT LD50: 210 gm/kg, IVN-RAT LD50: 118 mg/kg; IPR-MUS LD50: 250 mg/kg; IVN-MUS LD50: 118 mg/kg

**Irritation Data:** skin human, Standard Draize, 25 mg/24-hour, mild; eye rabbit, standard Draize, 250 µg, mild. Investigated as a mutagen, reproductive effector.

**Reproductive Toxicity:** Has caused mutagenic and teratogenic effects on laboratory animals.

**Threshold limit value (TLV):** not available

**Carcinogenicity:** None known or anticipated **IARC Category:** None

**Signs and symptoms of overexposure:** Systemic symptoms: nausea, vomiting, chills, cramps and lethargy.

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## Section 12: Ecological Information

Environmental Fate: No information available.

Environmental toxicity: 96 hr LC50 fathead minnow (fry): 10.2 mg/L; (juvenile): 17 mg/L; (adult): 22.5 mg/L; 96 hour LC50 rainbow trout: 4.6 mg/L (Static)

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## Section 13: Disposal Considerations

Dispose of material and container in accordance with appropriate federal, state and local laws. Recover and recycle if possible. Processed material may require different disposal methods.

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## Section 14: Transport Information

Domestic (Land, D.O.T)

No special precautions required for this solution.

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## Section 15: Regulatory Information

Inventory Status: TSCA: Yes EC: Yes Japan: Yes Australia: Yes

Canada Korea: Yes DSL: Yes NDSL No Phil. Yes

SARA 302: RQ: No TPCQ: No Sara 313: List: No Chemical Category:

No CERCLA No RCRA261.33 No TSCA8(d) No

Chemical weapons convention: No TSCA 12(b): No CDTA: No SARA 311/312: Acute Yes chronic: Yes Fire: Yes

Pressure: No Reactivity: No

Australian Hazchem code: None allocated.

Poison schedule: None allocated.

WHMIS: This MSDS contains the information required by the Controlled Products Regulations.



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## **Section 16: Other Information**

Label hazard warning: WARNING! harmful if swallowed or inhaled. Causes irritation to skin, eyes and respiratory tract. May caused allergic skin or respiratory reaction. Flammable solid.

Label Precautions: Do not breathe dust. Avoid contract with skin and clothing. Wash thoroughly and handling. Use only in well ventilated area. Keep container closed. Keep away from heat, sparks and flame. Product Use: Laboratory reagent

The above information is offered in good faith as accurate, but without guarantee, and should be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It doesn't represent any guarantee of the properties of the product. IMMAGINA BIOTECHNOLOGY srl shall not be held liable for any damage resulting from handling of from contact with the above product. All risks of use of the product should be assumed by the user.

## Section 1: Company and Chemical Identification

IMMAGINA BIOTECHNOLOGY srl, Via Sommarive 18, 38123 Trento, Italy, Tel: +390461312018,  
[info@immaginabiotech.com](mailto:info@immaginabiotech.com)

This MSDS contains information about 10% Triton X-100 and applies to *IMMAGINA BIOTECHNOLOGY* products supplied as aqueous solutions B-buffer (BB, #RL001-3), Lysis buffer (LB, #RL001-1) and W-buffer (WB, #RL001-4).

**Chemical Name:** 10% Triton X-100

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## Section 2: Composition and Information on Hazardous Ingredients

Component	CAS No	%Wt
<b>Triton X-100</b>	9002-93-1	10%
Synonyms	Polyoxyethylene(10) glycol octylphenyl ether	
<b>Water</b>		90%

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## Section 3: Hazards Identification



### Hazard statements

H302 Harmful if swallowed.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H410 Very toxic to aquatic life with long lasting effects.

### Precautionary statements

P264 Wash skin thoroughly after handling.

P273 Avoid release to the environment.

P280 Wear protective gloves/ eye protection/ face protection.

P301 + P312 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.

P302 + P352 IF ON SKIN: Wash with plenty of water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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## Section 4: First Aid Measures

**Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Obtain medical assistance.

**Ingestion:** Obtain medical assistance if ingested. Medical supervision for at least 48 hours if ingested.

**Skin contact:** Immediately flush skin with plenty of water. Cover irritated skin with an emollient. Remove contaminated clothing and shoes. Wash skin with cold water. Wash and/or clean clothing and shoes before reuse. Obtain medical assistance.

**Eye contact:** Check for and remove contact lenses. Immediately flush eyes with plenty of water (may be cold) for at least 15-20 minutes. Obtain medical assistance.

**Health Effects and Symptoms**

**Inhalation:** May be an irritant. Provide with fresh air. Monitor for symptoms if exposed.

**Skin contact:** May be a skin irritant.

**Eye contact:** Eye irritant, rinse with running water.

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## Section 5: Fire Fighting Measures

**Fire:** May be combustible at high temperature; slight fire hazard when solid form is exposed to flame.

**Extinguishing media:** water spray, dry chemical, alcohol foam, or carbon dioxide. Do not use water jet.

**Explosion:** Not considered an explosion hazard.

**Hazardous decomposition:** Carbon monoxide, carbon dioxide

**Special fire fighting procedures:** Fire fighters should wear NIOSH or equivalent approved positive pressure self-contained breathing apparatus and full protective gear. NFPA Ratings: Health 2 Flammability: 0 Reactivity: 0

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## Section 6: Accidental Release Measures

Remove all ignition sources. Ventilate area of leak or spill. Wear appropriate personal protective equipment.

Place in a suitable container for reclamation or disposal, using a method that does not generate dust. **Personal**

**Protection:** Wear splash goggles or safety glasses. Wear lab coat or protective suit, dust respirator, boots, gloves.

If large spill and material has dried use self-contained breathing apparatus and avoid inhalation.

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## Section 7: Handling and Storage

**Handling:** Avoid heat and sources of ignition. Thoroughly clean used containers before disposal. Do not ingest. Do not breathe

dust. Wear suitable protective laboratory clothing/equipment. If ingested Obtain medical assistance. Avoid contact with skin, eyes and clothing. Avoid incompatibles such as oxidizing agents. **Storage:** No special requirements

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## Section 8: Exposure Controls/Personal Protection

**Airborne exposure limits:** None established

**Respiratory protection:** dust respirator.

**Ventilation:** use process enclosures, local exhaust ventilation, or engineering controls if material solidifies.

**Personal Protective Equipment:** Labcoat, gloves, safety glasses or goggles.

**Hygiene:** Wash hands before eating or drinking. Avoid contact with eyes.

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## Section 9: Physical and Chemical Properties

Clear to hazy liquid. Mild odor.

Flash point greater than 100°C.

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## Section 10: Stability and Reactivity

**Stability:** Stable

**Incompatibility:** unknown

**Hazardous decomposition products:** carbon oxides

**Hazardous polymerization:** Will not occur

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## Section 11: Toxicological Information

**Chronic Effects:** Repeated or prolonged exposure is not known to aggravate medical condition **Irritation Data:** Skin, lung and eye irritant. No data available.

**Toxicity Data:** Toxic for fish

**Carcinogenic, mutagenic, reproductive and teratogenic effects:** Unknown.

Draize test, rabbit, eye: 10 µl of 100%/24H moderate

Draize test, rabbit, skin: 500 µl of 100%/24H mild.

Oral, rat: LD50 for 100%: 1800 mg/kg; 1900 or 3800 mg/kg

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## Section 12: Ecological Information

**Ecotoxicity:** Not available; Fish toxicity: bluegill TL (96 hour) Dynamic bioassay: > 10 mg/l Static bioassay: 12 mg/l

**Toxicity of biodegradation:** The product and degradation products are not toxic.

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## Section 13: Disposal Considerations

Dispose material and container in accordance with appropriate federal, state and local laws and regulations. Recover and recycle if possible. Processed material may require different disposal methods.

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## Section 14: Transport Information

No special considerations are known. No UN number. Not controlled under ADR (land, road/railway, IMDG (sea) or IATA (air) or ADN. No transport class or packaging group.

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## Section 15: Regulatory Information

Not listed under SARA 302/304 RQ, TPQ 311/312 or 313 list or category. Listed in inventory of TSCA, EC, Japan and Australia

Listed on Canada's DSL. WHMIS classification of D2B.

Not listed under Clean Water Act (CWA) parts 307, 311

No present on state lists for CA, PA, MN, MA, NJ or FL

Not listed under Clean air act (CAA) part 112 (toxic, flammable or release prevention not found) Not listed as class 1 or class 2 ozone depletory.

Water hazard class: Class 1; slightly hazardous for water.

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## Section 16: Other Information

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## Section 1: Company and Chemical Identification

IMMAGINA BIOTECHNOLOGY srl, Via Sommarive 18, 38123 Trento, Italy, Tel: +390461312018, info@immaginabiotech.com

**Chemical Name:** Sodium Hydroxide

This MSDS contains information about Sodium Hydroxide and applies to *IMMAGINA BIOTECHNOLOGY* products OH-buffer (OH) (#RL001-14).

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## Section 2: Composition and Information on Hazardous Ingredients

Component	CAS No	Concentration
<b>Sodium Hydroxide</b>	1310-73-2	0.1-1M

Synonyms Caustic Soda; Soda Lye; White Caustic.

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## Section 3: Hazards Identification



### Hazard statements

H314 Causes severe skin burns and eye damage.

### Precautionary statements

P260 Do not breathe dusts or mists.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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## Section 4: First Aid Measures

**Eyes:** In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid immediately.

**Skin:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse.

**Ingestion:** If swallowed, do NOT induce vomiting. Get medical aid immediately. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person.

**Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult,

give oxygen. Get medical aid.

**Notes to Physician:** Treat symptomatically and supportively.

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### Section 5: Fire Fighting Measures

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Use water spray to keep fire-exposed containers cool. Contact with metals may evolve flammable hydrogen gas.

**Extinguishing Media:** Use water spray to cool fire-exposed containers. Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.

**Flash Point:** Not applicable.

**Autoignition Temperature:** Not applicable.

**Explosion Limits, Lower:** Not available.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 3; Flammability: 0; Instability: 1

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### Section 6: Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8. **Spills/Leaks:** Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation.

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### Section 7: Handling and Storage

**Handling:** Wash thoroughly after handling. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Discard contaminated shoes. Use only with adequate ventilation. Do not breathe spray or mist.

**Storage:** Keep container closed when not in use. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from strong acids. Keep away from metals. Keep away from flammable liquids. Keep away from organic halogens.

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### Section 8: Exposure Controls/Personal Protection

**Engineering Controls:** Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

#### Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Sodium hydroxide	2 mg/m <sup>3</sup> Ceiling	10 mg/m <sup>3</sup> IDLH	2 mg/m <sup>3</sup> TWA

**OSHA Vacated PELs:** Water: No OSHA Vacated PELs are listed for this chemical. Sodium hydroxide: No OSHA Vacated PELs are listed for this chemical.

#### Personal Protective Equipment

**Eyes:** Wear chemical goggles.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

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## Section 9: Physical and Chemical Properties

**Physical State:** Liquid

**Appearance:** clear

**Odor:** none reported

**pH:** Alkaline

**Vapor Pressure:** 14 mm Hg

**Vapor Density:** >1.0

**Evaporation Rate:** Not available.

**Viscosity:** >1 (ether=1)

**Boiling Point:** 212 deg F

**Freezing/Melting Point:** 32 deg F

**Decomposition Temperature:** Not available.

**Solubility:** Soluble.

**Specific Gravity/Density:** 1.0

**Molecular Formula:** NaOH

**Molecular Weight:** Not available.

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## Section 10: Stability and Reactivity

**Chemical Stability:** Stable at room temperature in closed containers under normal storage and handling conditions.

**Conditions to Avoid:** Acids.

**Incompatibilities with Other Materials:** Metals, acids, aluminum, tin, zinc.

**Hazardous Decomposition Products:** Toxic fumes of sodium oxide.

**Hazardous Polymerization:** Will not occur.

---

## Section 11: Toxicological Information

### LD50/LC50:

Draize test, rabbit, eye: 400 ug Mild; Draize test, rabbit, eye: 1% Severe; Draize test, rabbit, eye: 50 ug/24H Severe; Draize test, rabbit, eye: 1 mg/24H Severe; Draize test, rabbit, skin: 500 mg/24H Severe;

### Carcinogenicity:

Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

**Epidemiology:** No information found.

**Teratogenicity:** No information found.

**Reproductive Effects:** No information found.

**Neurotoxicity:** No information found.

**Mutagenicity:** No information found.

**Other Studies:** See actual entry in RTECS for complete information.

---

## Section 12: Ecological Information

No data available.

---

## Section 13: Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3.

Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**RCRA P-Series:** None listed.

**RCRA U-Series:** None listed.

---

## Section 14: Transport Information

US DOT Information: Proper shipping name: Sodium Hydroxide, Solid Hazard Class: 8

Packaging group: II

UN Number: UN1823

IATA: Proper shipping name: Sodium Hydroxide, Solid Hazard Class: 8

Packing group: II

UN Number: UN1823

IMO: Proper shipping name: Sodium Hydroxide, Solid Class: 8

UN Number: UN1823

Packing group: II

Marine Pollutant: No

Canadian TDG: Proper shipping name: Sodium Hydroxide, Solid

---

## Section 15: Regulatory Information

### US FEDERAL

#### TSCA

CAS# 1310-73-2 is listed on the TSCA inventory.

#### Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

#### Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

#### Section 12b

None of the chemicals are listed under TSCA Section 12b.

#### TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

#### SARA

### CERCLA Hazardous Substances and corresponding RQs

CAS# 1310-73-2: 1000 lb final RQ; 454 kg final RQ

#### SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

#### SARA Codes

CAS # 1310-73-2: acute, reactive.

#### Section 313

No chemicals are reportable under Section 313.

#### Clean Air Act:

This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depleters. This material does not contain any Class 2 Ozone depleters.

#### Clean Water Act:

CAS# 1310-73-2 is listed as a Hazardous Substance under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

#### OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

#### STATE

CAS# 1310-73-2 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

California No Significant Risk Level: None of the chemicals in this product are listed.

### European/International Regulations

#### European Labeling in Accordance with EC Directives

#### Hazard Symbols:

#### C Risk Phrases:

R 34 Causes burns.



**Safety Phrases:**

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

S 37/39 Wear suitable gloves and eye/face protection.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**WGK (Water Danger/Protection)**

CAS# 1310-73-2: 1

**Canada - DSL/NDSL**

CAS# 1310-73-2 is listed on Canada's DSL List.

**Canada - WHMIS**

This product has a WHMIS classification of E.

**Canadian Ingredient Disclosure List**

CAS# 1310-73-2 is listed on the Canadian Ingredient Disclosure List.

**Exposure Limits**

CAS# 1310-73-2: OEL -AUSTRALIA:TWA 2 mg/m<sup>3</sup> OEL-BELGIUM:STEL 2 mg/m<sup>3</sup> OEL-DENMARK:TWA 2 mg/m<sup>3</sup> OEL-FINLAND:TWA 2 mg/m<sup>3</sup> OEL-FRANCE:TWA 2 mg /m<sup>3</sup> OEL-GERMANY:TWA 2 mg/m<sup>3</sup> OEL-JAPAN:STEL 2 mg/m<sup>3</sup> OEL-THE NETHERLANDS:TWA 2 mg/m<sup>3</sup> OEL-THE PHILIPPINES:TWA 2 mg/m<sup>3</sup> OEL-SWEDEN:TWA 2 mg/ m<sup>3</sup> OEL-SWITZERLAND:TWA 2 mg/m<sup>3</sup>;STEL 4 mg/m<sup>3</sup> OEL -THAILAND:TWA 2 mg/m<sup>3</sup> OEL -TURKEY:TWA 2 mg/m<sup>3</sup> OEL-UNITED KINGDOM:TWA 2 mg/m<sup>3</sup>;STEL 2 mg/m<sup>3</sup> OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

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**Section 16: Other Information**

The above information is offered in good faith as accurate, but without guarantee, and should be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It doesn't represent any guarantee of the properties of the product. IMMAGINA BIOTECHNOLOGY srl shall not be held liable for any damage resulting from handling of from contact with the above product. All risks of use of the product should be assumed by the user.

## Section 1: Company and Chemical Identification

IMMAGINA BIOTECHNOLOGY srl, Via Sommarive 18, 38123 Trento, Italy, Tel: +390461312018,  
info@immaginabiotech.com

**Chemical Name:** Cycloheximide

This MSDS contains information about Cycloheximide and applies to *IMMAGINA BIOTECHNOLOGY* products supplied as aqueous solutions containing 20 µg/mL Cycloheximide as Lysis Buffer (LB) (#RL001-1) and W-Buffer (WB) (#RL001-4).

---

## Section 2: Composition and Information on Hazardous Ingredients

Component	CAS No
Cycloheximide	66-81-9

---

## Section 3: Hazards Identification



### Hazard statement(s)

H300 Fatal if swallowed.  
H341 Suspected of causing genetic defects.  
H360D May damage the unborn child.  
H411 Toxic to aquatic life with long lasting effects.

### Precautionary statement(s)

P201 Obtain special instructions before use.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P301 + P330 + P331 + P310 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
Immediately call a POISON CENTER/ doctor.  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.

---

## Section 4: First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin: Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion: POISON material. If swallowed, get medical aid immediately. Only induce vomiting if directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Notes to Physician: Treat symptomatically and supportively.

---

## Section 5: Fire Fighting Measures

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. This material in sufficient quantity and reduced particle size is capable of creating a dust explosion.

**Extinguishing Media:** Use water spray, dry chemical, carbon dioxide, or chemical foam.

**Flash Point:** Not applicable.

**Autoignition Temperature:** Not applicable.

**Explosion Limits, Lower:**Not available.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 4; Flammability: 1; Instability: 0

---

## Section 6: Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Vacuum or sweep up material and place into a suitable disposal container. Wear a self contained breathing apparatus and appropriate personal protection. (See Exposure Controls, Personal Protection section). Avoid generating dusty conditions. Provide ventilation. Do not let this chemical enter the environment.

---

## Section 7: Handling and Storage

**Handling:** Minimize dust generation and accumulation. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale. Use only in a chemical fume hood.

**Storage:** Store in a cool, dry place. Store in a tightly closed container.

---

## Section 8: Exposure Controls/Personal Protection

**Engineering Controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use only under a chemical fume hood.

**OSHA Vacated PELs:** Cycloheximide: No OSHA Vacated PELs are listed for this chemical.

**Personal Protective Equipment**

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

---

## Section 9: Physical and Chemical Properties

**Physical State:** Powder

**Appearance:** white to beige

**Odor:** none reported

**pH:** Not available.

**Vapor Pressure:** Not available.

**Vapor Density:** Not available.

**Evaporation Rate:**Not available.

**Viscosity:** Not available.

**Boiling Point:** Not available.

**Freezing/Melting Point:**107 - 114 deg C

**Decomposition Temperature:**Not available.

**Solubility:** Soluble.

**Specific Gravity/Density:**Not available.

**Molecular Formula:**C<sub>15</sub>H<sub>23</sub>NO<sub>4</sub>

**Molecular Weight:**281.35

---

## Section 10: Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures.

**Conditions to Avoid:** Incompatible materials, dust generation, excess heat.

**Incompatibilities with Other Materials:** Strong oxidizing agents, strong bases, acid chlorides, acid anhydrides.

**Hazardous Decomposition Products:** Nitrogen oxides, carbon monoxide, carbon dioxide.

**Hazardous Polymerization:** Will not occur.

---

## Section 11: Toxicological Information

RTECS#:

CAS# 66-81-9: MA4375000

LD50/LC50:

CAS# 66-81-9:

Draize test, rabbit, skin: 1 pph/24H Moderate;

Oral, mouse: LD50 = 133 mg/kg;

Oral, rat: LD50 = 2 mg/kg;

**Carcinogenicity:**

CAS# 66-81-9: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**Epidemiology:** No information available.

**Teratogenicity:** Teratogenic effects have occurred in experimental animals.

**Reproductive Effects:** Adverse reproductive effects have occurred in experimental animals.

**Mutagenicity:** See actual entry in RTECS for complete information.

**Neurotoxicity:** No information available.

**Other Studies:**

---

## Section 12: Ecological Information

Ecotoxicity: No data available. No information available.

Environmental: No information available.

Physical: No information available.

Other: Do not empty into drains.

---

### Section 13: Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

---

### Section 14: Transport Information

	US DOT	Canada TDG
Shipping Name:	TOXIC SOLID, ORGANIC, N.O.S.	TOXIC SOLID, ORGANIC, N.O.S.
Hazard Class:	6.1	6.1
UN Number:	UN2811	UN2811
Packing Group:	I	I

---

### Section 15: Regulatory Information

US FEDERAL

TSCA

CAS# 66-81-9 is not listed on the TSCA inventory. It is for research and development use only.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

CAS# 66-81-9: 100 lb lower threshold TPQ; 10000 lb upper threshold TPQ

SARA Codes

CAS # 66-81-9: immediate, delayed.

Section 313 No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depletors.

This material does not contain any Class 2 Ozone depletors.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

## STATE

CAS# 66-81-9 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Massachusetts.

### California Prop 65

WARNING: This product contains Cycloheximide, a chemical known to the state of California to cause developmental reproductive toxicity.

California No Significant Risk Level: None of the chemicals in this product are listed.

### European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

T+ N

Risk Phrases:

R 28 Very toxic if swallowed.

R 61 May cause harm to the unborn child.

R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R 68 Possible risk of irreversible effects.

Safety Phrases:

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 53 Avoid exposure - obtain special instructions before use.

S 61 Avoid release to the environment. Refer to special instructions /safety data sheets.

### WGK (Water Danger/Protection)

CAS# 66-81-9: 3

Canada - DSL/NDSL

None of the chemicals in this product are listed on the DSL or NDSL list.

Canada - WHMIS

This product has a WHMIS classification of D1A, D2A.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

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## Section 16: Other Information

The above information is offered in good faith as accurate, but without guarantee, and should be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It doesn't represent any guarantee of the properties of the product. IMMAGINA BIOTECHNOLOGY srl shall not be held liable for any damage resulting from handling of from contact with the above product. All risks of use of the product should be assumed by the user.

## Section 1: Company and Chemical Identification

IMMAGINA BIOTECHNOLOGY srl, Via Sommarive 18, 38123 Trento, Italy, Tel: +390461312018,  
info@immaginabiotech.com

**Chemical Name:** Smart Probe

This MSDS contains information about RiboLace Smart Probe and applies to  
*IMMAGINA BIOTECHNOLOGY* products RiboLace Smart Probe (RsP) (#RL001-5).

---

## Section 2: Composition and Information on Hazardous Ingredients

Component	CAS No	Concentration
<b>RiboLace Smart Probe</b>		10 mM

---

## Section 3: Hazards Identification

**Classification of the substance or mixture**



### Hazard statement

H302 Harmful if swallowed.

### Precautionary statements

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

P330 Rinse mouth

P501 Dispose of contents/container to an approved waste disposal plant.

---

## Section 4: First Aid Measures

### Description of first aid measures

**General advice:** Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled:** If breathed in, remove to fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact:** Wash skin with soap and plenty of water. Consult a physician.

**In case of eye contact:** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed:** Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

---

## **Section 5: Fire Fighting Measures**

### **5.1 Extinguishing media**

Suitable extinguishing media: Use water spray, carbon dioxide, dry chemical powder or appropriate foam.

### **5.2 Specific hazards arising from the chemical**

No data available

### **5.3 Special Firefighting Procedures**

Wear self-contained breathing apparatus for firefighting if necessary

---

## **Section 6: Accidental Release Measures**

### **6.1 Personal precautions, protective equipment and emergency**

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. For personal protection see section 8.

### **6.2 Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

### **6.3 Methods and materials for containment and cleaning up**

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations

---

## **Section 7: Handling and Storage**

### **7.1 Precautions for safe handling**

Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

### **7.2 Conditions for safe storage, including any incompatibilities**

Keep container tightly closed in a dry and well-ventilated place.  
Recommended storage temperature: 2-8°C or -20°C.

### **7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

---

## **Section 8: Exposure Controls/Personal Protection**

### **8.1 Control parameters**

Components with workplace control parameters  
Contains no substances with occupational exposure limit values.

### **8.2 Exposure controls**

Appropriate engineering controls  
General industrial hygiene practice.



### **Personal protective equipment**

**Eye/face protection:** Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Body Protection:** Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific workplace. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Skin protection:** Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Respiratory protection:** Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Control of environmental exposure:** Do not let product enter drains.

---

## **Section 9: Physical and Chemical Properties**

**Physical State:** Liquid

**Appearance:** Colorless

**Odor:** none reported

**pH:** Not available

**Vapor Pressure:** Not available.

**Vapor Density:** Not available.

**Evaporation Rate:** Not available.

**Viscosity:** Not available.

**Boiling Point:** Not available

**Freezing/Melting Point:** Not available

**Decomposition Temperature** Not available

**Specific Gravity/Density:** Not available.

**Molecular Formula:** C<sub>47</sub>H<sub>71</sub>N<sub>11</sub>O<sub>14</sub>S

**Molecular Weight:** 1046.20

---

## **Section 10: Stability and Reactivity**

no data available

---

## **Section 11: Toxicological Information**

### **Acute toxicity:**

Oral LD50: No data available Inhalation

LC50: No data available

Dermal LD50: No data available

Other information on acute toxicity: No data available

Skin corrosion/irritation: No data available

Serious eye damage/irritation: No data available

Respiratory or skin sensitization: No data available

Germ cell mutagenicity: No data available

Carcinogenicity: No data available

Reproductive toxicity: No data available

Additional information: No data available

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## **Section 12: Ecological Information**

12.1 Toxicity: No data available

12.2 Persistence and degradability: No data available

12.3 Bioaccumulative potential: No data available

12.4 Mobility in soil: No data available

12.5 Results of PBT and vPvB assessment: PBT/vPvB assessment not available as chemical safety assessment not required or not conducted.

12.6 Other adverse effects: No data available

---

### **Section 13: Disposal Considerations**

13.1 Waste treatment methods Product: Observe all federal, state and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Must not be disposed of together with household garbage.

Contaminated Packaging: Dispose of as unused product.

---

### **Section 14: Transport Information**

No information available.

---

### **Section 15: Regulatory Information**

No information available.

---

### **Section 16: Other Information**

The above information is offered in good faith as accurate, but without guarantee, and should be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It doesn't represent any guarantee of the properties of the product. IMMAGINA BIOTECHNOLOGY srl shall not be held liable for any damage resulting from handling of from contact with the above product. All risks of use of the product should be assumed by the user.

## Section 1: Company and Chemical Identification

IMMAGINA BIOTECHNOLOGY srl, Via Sommarive 18, 38123 Trento, Italy, Tel: +390461312018, info@immaginabiotech.com

**Chemical Name:** RiboLace Magnetic beads

This MSDS contains information about RiboLace magnetic beads and applies to *IMMAGINA BIOTECHNOLOGY* products RiboLace magnetic beads (#RL001-6).

---

## Section 2: Composition and Information on Hazardous Ingredients

Component	CAS No
<b>Agarose</b>	9012-36-6
<b>Maghemite</b>	1332-37-2
<b>Ethanol</b>	64-17-5
<b>Water</b>	231-791-2

---

## Section 3: Hazards Identification

Not classified as hazardous according to GHS

**Classification of the substance or mixture** Product definition: mixture.

### Primary Routes of Exposure

Dermal contact, Ingestion.

**Potential Health Effects Ingestion** Might be harmful if ingested.

**Skin:** Might be harmful if absorbed through skin. Might cause skin irritation.

**Eyes:** Might cause eye irritation. Prolonged exposure might cause eye damage.

**Inhalation:** Might be harmful if inhaled.

**Chronic Exposures:** Not determined

**Target Organs:** Not determined

### Label elements

**Hazard statements** Flammable liquid and vapor.

### Precautionary statements

**Prevention:** Wear security gloves: 1-4 hours (breakthrough time): butyl rubber, neoprene.

Wear protection for eye or face: Recommended: safety goggles with side-shields. Keep away from heat, sparks, open flames and hot surfaces. - Not smoking. Use explosion-proof electrical, ventilating, and lighting and all material handling equipment.

**Response:** IF ON HAIR (or skin): Immediately take off all contaminated clothing. Wash skin with shower or water. Keep cool.

**Storage Disposal:** Dispose of contents and container in accordance with all international, national, regional,

local regulations.

**Other hazards:** no data available

---

## Section 4: First Aid Measures

### Description of first aid measures

**Skin contact:** Clean the affected area with large amounts of water. Remove contaminated clothes if indispensable. Search medical assistance if irritation persists.

**Eye contact:** immediately wash your eyes with water, occasionally lifting the upper and lower eyelids. Check for and remove contact lenses. Continue to wash for at least 11 minutes. Get medical attention if irritation occurs.

**Oral exposure:** Wash out mouth with fresh water. Remove dentures. Remove victim to fresh air and keep at rest in a comfortable position for breathing. If material had been swallowed and the exposed guy is conscious, give water to drink. Stop if the exposed person feels sick as vomiting, it may be dangerous. Don't induce vomiting unless directed to do so by medical personnel. If vomiting occurs, head should be kept low so that vomit doesn't enter the lungs. Get medical attention if adverse health effects persist.

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

**Potential acute health effects Inhalation** No known significant effects or critical hazards

**Ingestion** No known significant effects or critical hazards

**Skin contact** No known significant effects or critical hazards

**Eye contact** No known significant effects or critical hazards

### Over-exposure signs/symptoms

**Skin contact** No specific data

**Ingestion** No specific data

**Inhalation** No specific data

**Eye contact** No specific data

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

Notes to physician Treat symptomatically. Contact poison treatment specialist immediately if huge quantities had been ingested or inhaled.

**Specific treatments** No specific treatment.

---

## Section 5: Fire Fighting Measures

**Extinguishing media:** Use foam (fog), dry chemical, CO<sub>2</sub> or water spray.

### Special hazards arising from the substance or mixture:

**Hazards from the substance or mixture:** Flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container might burst, with the risk of a subsequent huge explosion. Runoff to sewer might create fire or explosion hazard.

**Hazardous combustion products:** Decomposition products might include materials like: Carbon dioxide Carbon monoxide Metal oxide/oxides

**Advice for fire-fighters :** Promptly isolate the scene by removing all persons from the nearness of the incident if there is a fire. No action should be taken involving any personal risk or without suitable training. Move containers from fire area if those can be done without risk. Use water spray for keep fire-exposed containers cool.

---

## Section 6: Accidental Release Measures

### Personal precautions, protective equipment and emergency procedures

Throughout wear protective clothing, approved safety glasses and gloves when handling this chemical substance.

**Environmental precautions:** Avoid dispersal of material spilt and runoff and contact with soil, drains, waterways and sewers. Inform the major authorities if the product have caused environmental pollution (waterways, sewers soil or air).

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

Small spills of material might be gathered with a wet wipe or swept up with water into a suitable container for disposal.

**Reference to other sections:** no data available

---

## Section 7: Handling and Storage

**Precautions for safe handling**

Always wear protective clothing, approved safety glasses and gloves when handling this chemical substance.

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

Store between 4 to 30°C

**Specific end use(s):** no data available

---

## Section 8: Exposure Controls/Personal Protection

**Control parameters:**

Ethanol: Exposure limit values: TWA: 1920 mg/m 8 hours. TWA: 1000 ppm 8 hours.

**Exposure controls:** Use only with an adequate ventilation

---

## Section 9: Physical and Chemical Properties

- a) **Appearance:** Liquid with precipitate, solution: uncolored, Suspension: orange b) **Odour:** no data available
  - c) **Odour Threshold:** no data available
  - d) **pH:** 7-9
  - e) **Melting point/freezing point:** no data available
  - f) **Initial boiling point and boiling range:** no data available
  - g) **Flash point:** no data available
  - h) **Evaporation rate:** no data available
  - i) **Flammability (solid, gas):** Not applicable.
  - j) **Upper/lower flammability or explosive limits:** no data available
  - k) **Vapour pressure:** no data available
  - l) **Vapour density:** no data available
  - m) **Relative density:** no data available
  - n) **Water solubility:** soluble
  - o) **Partition coefficient (n-octanol/water):** no data available
  - p) **Auto-ignition temperature:** not applicable
  - q) **Decomposition temperature:** no data available
  - r) **Viscosity:** no data available
  - s) **Explosive properties:** No fire or explosion hazard known
  - t) **Oxidizing properties:** no data available
- 

## Section 10: Stability and Reactivity

**Reactivity:** no data available

**Chemical stability:** no data available

**Possibility of hazardous reactions:** no data available

**Conditions to avoid:** no data available

**Incompatible materials:** no data available

**Hazardous decomposition products:** Dangerous decomposition products might be formed under fire conditions but no data available.

---

## **Section 11: Toxicological Information**

No information available

---

## **Section 12: Ecological Information**

No information available.

---

## **Section 13: Disposal Considerations**

No information available.

---

## **Section 14: Transport Information**

No information available.

---

## **Section 15: Regulatory Information**

### **Safety, health and environmental regulations/legislation specific for the substance or mixture Approved Code of Practice**

Safety Data Sheets for Substances and Preparations.

### **EU Legislation**

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/105/EC and 2000/21/EC, including amendments Regulation (EC) No 1272/2008 of the European

Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments.

### **15.2. Chemical Safety Assessment**

No chemical safety assessment has been carried out

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## **Section 16: Other Information**

The above information is offered in good faith as accurate, but without guarantee, and should be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It doesn't represent any guarantee of the properties of the product. IMMAGINA BIOTECHNOLOGY srl shall not be held liable for any damage resulting from handling of from contact with the above product. All risks of use of the product should be assumed by the user.