

28.12.2017

### Kit Components

Product code	Description
<b>20410100</b>	<b>EZ-RNA II Total RNA Isolation Kit with BCP, no Chloroform</b>

Components:

20400A	EZ-RNA II sol.A
20410B	EZ-RNA II Sol.B
20410C	EZ-RNA II Sol.C

## 1 Identification

- **Product identifier**
- **Trade name:** EZ-RNA II sol.A
- **Article number:** 20400A
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
 Biological Industries Israel Beit Haemek Ltd.  
 BEIT HAEMEK 25115  
 ISRAEL  
 michalb@bioind.com
- **Information department:** Product safety department.
- **Emergency telephone number:** During normal opening times: +972/4/9962467

## 2 Hazard(s) identification

- **Classification of the substance or mixture**  
 The product is not classified according to the Globally Harmonized System (GHS).

- **Label elements**
- **GHS label elements** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**



- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

## 3 Composition/information on ingredients

- **Chemical characterization:** Mixtures
- **Description:** Mixture of the substances listed below with nonhazardous additions.

### · **Dangerous components:**

593-84-0	guanidinium thiocyanate	<1.5%
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## 4 First-aid measures

- **Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.

(Contd. on page 2)

**Trade name: EZ-RNA II sol.A**

(Contd. of page 1)

- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:**  
Not required.  
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:** No special measures required.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special measures required.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** 2-8 °C
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

### 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** Not required.

(Contd. on page 3)

**Trade name: EZ-RNA II sol.A**

(Contd. of page 2)

**· Protection of hands:**

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

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

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

**· Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

**· Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**· Eye protection:** Not required.

## 9 Physical and chemical properties

**· Information on basic physical and chemical properties**
**· General Information**
**· Appearance:**

**Form:** Liquid

**Color:** According to product specification

**· Odor:** Characteristic

**· Odour threshold:** Not determined.

**· pH-value:** Not applicable.

**· Change in condition**

**Melting point/Melting range:** Undetermined.

**Boiling point/Boiling range:** Undetermined.

**· Flash point:** Not applicable.

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

**· Ignition temperature:**

**Decomposition temperature:** Not determined.

**· Auto igniting:** Product is not selfigniting.

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

**· Explosion limits:**

**Lower:** Not determined.

**Upper:** Not determined.

**· Vapor pressure at 20 °C (68 °F):** 23 hPa (17 mm Hg)

**· Density:** Not determined.

**· Relative density** Not determined.

**· Vapour density** Not determined.

**· Evaporation rate** Not determined.

**· Solubility in / Miscibility with**

**Water:** Fully miscible.

**· Partition coefficient (n-octanol/water):** Not determined.

**· Viscosity:**

**Dynamic:** Not determined.

**Kinematic:** Not determined.

(Contd. on page 4)

**Trade name: EZ-RNA II sol.A**

(Contd. of page 3)

- **Solvent content:**
- Organic solvents:** 0.0 %
- Water:** >98.0 %
- **Other information** No further relevant information available.

## 10 Stability and reactivity

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

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- on the skin:** No irritant effect.
- on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
 The product is not subject to classification according to internally approved calculation methods for preparations.  
 When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
 Water hazard class 1 (Self-assessment): slightly hazardous for water  
 Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

(Contd. on page 5)

**Trade name: EZ-RNA II sol.A**

(Contd. of page 4)

 · **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:** Smaller quantities can be disposed of with household waste.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

### 14 Transport information

- |  |                 |
|--|-----------------|
| · <b>UN-Number</b>   |                 |
| · <b>DOT, ADN, IMDG, IATA</b>  | not regulated   |
| · <b>UN proper shipping name</b>   |                 |
| · <b>DOT, ADN, IMDG, IATA</b>  | not regulated   |
| · <b>Transport hazard class(es)</b>  |                 |
| · <b>DOT, ADN, IMDG, IATA</b>  |                 |
| · <b>Class</b>   | not regulated   |
| · <b>Packing group</b>   |                 |
| · <b>DOT, IMDG, IATA</b>   | not regulated   |
| · <b>Environmental hazards:</b>  |                 |
| · <b>Marine pollutant:</b>   | No              |
| · <b>Special precautions for user</b>  | Not applicable. |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable. |
| · <b>UN "Model Regulation":</b>  | -               |

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**

 · **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

 · **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

 · **TSCA (Toxic Substances Control Act):**

593-84-0 guanidinium thiocyanate

1762-95-4 ammonium thiocyanate

137-16-6 Sarkosyl

7732-18-5 water, distilled, conductivity or of similar purity

 · **Proposition 65**

 · **Chemicals known to cause cancer:**

None of the ingredients is listed.

 · **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

(Contd. on page 6)

**Trade name: EZ-RNA II sol.A**

(Contd. of page 5)

 · **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

 · **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

 · **Carcinogenic categories**

 · **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

 · **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

 · **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

 · **GHS label elements** Void

 · **Hazard pictograms** Void

 · **Signal word** Void

 · **Hazard statements** Void

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

## 16 Other information

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

 · **Department issuing SDS:** Product safety department.

 · **Contact:** Ms. BADICHI GITLIN

 · **Date of preparation / last revision** 12/28/2017 / -

 · **Abbreviations and acronyms:**

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

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

## 1 Identification

- **Product identifier**
- **Trade name:** EZ-RNA II Sol.B
- **Article number:** 20410B
- **CAS Number:**  
108-95-2
- **EC number:**  
203-632-7
- **Index number:**  
604-001-00-2
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Biological Industries Israel Beit Haemek Ltd.  
BEIT HAEMEK 25115  
ISRAEL  
michalb@bioind.com
- **Information department:** Product safety department.
- **Emergency telephone number:** During normal opening times: +972/4/9962467

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS06 Skull and crossbones

- Acute Tox. 3 H301 Toxic if swallowed.  
 Acute Tox. 3 H311 Toxic in contact with skin.  
 Acute Tox. 3 H331 Toxic if inhaled.



GHS08 Health hazard

- Muta. 2 H341 Suspected of causing genetic defects.  
 STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.



GHS05 Corrosion

- Skin Corr. 1B H314 Causes severe skin burns and eye damage.

- **Label elements**

- **GHS label elements**

The substance is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS05 GHS06 GHS08

- **Signal word** Danger

- **Hazard-determining components of labeling:**

phenol

- **Hazard statements**

Toxic if swallowed, in contact with skin or if inhaled.  
 Causes severe skin burns and eye damage.



**Trade name: EZ-RNA II Sol.B**

(Contd. of page 1)

Suspected of causing genetic defects.

May cause damage to organs through prolonged or repeated exposure.

· **Precautionary statements**

Do not breathe dusts or mists.

Wear protective gloves / protective clothing.

Wash thoroughly after handling.

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

Use only outdoors or in a well-ventilated area.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

If swallowed: Immediately call a poison center/doctor.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Specific treatment (see on this label).

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF exposed or concerned: Get medical advice/attention.

If swallowed: Rinse mouth. Do NOT induce vomiting.

Get medical advice/attention if you feel unwell.

Take off immediately all contaminated clothing and wash it before reuse.

Store locked up.

Store in a well-ventilated place. Keep container tightly closed.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 3

Fire = 0

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = \*3

Fire = 0

Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

### 3 Composition/information on ingredients

· **Chemical characterization: Substances**

· **CAS No. Description**

108-95-2 phenol

· **Identification number(s)**

· **EC number:** 203-632-7

· **Index number:** 604-001-00-2

### 4 First-aid measures

· **Description of first aid measures**

· **General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

(Contd. on page 3)

**Trade name: EZ-RNA II Sol.B**

(Contd. of page 2)

- Remove breathing apparatus only after contaminated clothing have been completely removed.
- In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:**  
Supply fresh air or oxygen; call for doctor.  
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**  
Do not induce vomiting; immediately call for medical help.  
Drink copious amounts of water and provide fresh air. Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**  
Not required.  
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
No special measures required.  
Use neutralizing agent.  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.
- **Information about protection against explosions and fires:** Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** 2-8 °C
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Store in the dark.

(Contd. on page 4)

**Trade name: EZ-RNA II Sol.B**

(Contd. of page 3)

· **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

### 108-95-2 phenol

PEL Long-term value: 19 mg/m<sup>3</sup>, 5 ppm  
Skin

REL Long-term value: 19 mg/m<sup>3</sup>, 5 ppm  
Ceiling limit value: 60\* mg/m<sup>3</sup>, 15.6\* ppm  
\*15-min; Skin

TLV Long-term value: 19 mg/m<sup>3</sup>, 5 ppm  
Skin; BEI

· **Ingredients with biological limit values:**

### 108-95-2 phenol

BEI 250 mg/g creatinine  
Medium: urine  
Time: end of shift  
Parameter: Phenol with hydrolysis (background, nonspecific)

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.  
Store protective clothing separately.  
Avoid contact with the eyes and skin.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**



Protective gloves

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

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

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

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 5)

**Trade name: EZ-RNA II Sol.B**

(Contd. of page 4)

 · **Eye protection:**


Tightly sealed goggles

## 9 Physical and chemical properties

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

 · **General Information**

 · **Appearance:**

· <b>Form:</b>	Liquid
· <b>Color:</b>	Not determined.
· <b>Odor:</b>	Characteristic
· <b>Odour threshold:</b>	Not determined.

 · **pH-value:** Not applicable.

 · **Change in condition**

· <b>Melting point/Melting range:</b>	40.8 °C (105 °F)
· <b>Boiling point/Boiling range:</b>	181.8 °C (359 °F)

 · **Flash point:** 82 °C (180 °F)

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

 · **Ignition temperature:** 595 °C (1103 °F)

 · **Decomposition temperature:** Not determined.

 · **Auto igniting:** Not determined.

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

 · **Explosion limits:**

· <b>Lower:</b>	1.3 Vol %
· <b>Upper:</b>	9.5 Vol %

 · **Vapor pressure at 20 °C (68 °F):** 0.3 hPa

 · **Density at 20 °C (68 °F):** 1.0576 g/cm<sup>3</sup> (8.826 lbs/gal)

 · **Relative density** Not determined.

 · **Vapour density** Not determined.

 · **Evaporation rate** Not determined.

 · **Solubility in / Miscibility with**

Water at 20 °C (68 °F): 82 g/l

 · **Partition coefficient (n-octanol/water):** Not determined.

 · **Viscosity:**

· <b>Dynamic:</b>	Not determined.
· <b>Kinematic:</b>	Not determined.
· <b>Organic solvents:</b>	60.0%-100.0 %
· <b>VOC content:</b>	60.0%-100.0 %
	600.0g/l-1000.0 g/l (5.01lb/gal-8.35 lb/gal)

 · **Other information**

No further relevant information available.

US

(Contd. on page 6)

**Trade name: EZ-RNA II Sol.B**

(Contd. of page 5)

### 10 Stability and reactivity

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

### 11 Toxicological information

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

 · **LD/LC50 values that are relevant for classification:**
**108-95-2 phenol**

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

- **Primary irritant effect:**
- **on the skin:** Caustic effect on skin and mucous membranes.
- **on the eye:** Strong caustic effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
- **Carcinogenic categories**

 · **IARC (International Agency for Research on Cancer)**

108-95-2	phenol	3
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 · **NTP (National Toxicology Program)**

Substance is not listed.

 · **OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

### 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 2 (Assessment by list): hazardous for water  
Do not allow product to reach ground water, water course or sewage system.  
Must not reach bodies of water or drainage ditch undiluted or unneutralized.  
Danger to drinking water if even small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

(Contd. on page 7)

**Trade name: EZ-RNA II Sol.B**



(Contd. of page 6)

· **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

### 14 Transport information

- **UN-Number**
- **DOT, IMDG, IATA** UN1671
- **UN proper shipping name**
- **DOT** Phenol, solid
- **IMDG, IATA** PHENOL, SOLID
- **Transport hazard class(es)**
- **DOT**
- 
- **Class** 6.1 Toxic substances
- **Label** 6.1
- **IMDG, IATA**
- 
- **Class** 6.1 Toxic substances
- **Label** 6.1
- **Packing group**
- **DOT, IMDG, IATA** II
- **Environmental hazards:**
- **Marine pollutant:** No
- **Special precautions for user** Warning: Toxic substances
- **Danger code (Kemler):** 60
- **EMS Number:** F-A,S-A
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
- **Transport/Additional information:**
- **DOT**
- **Quantity limitations** On passenger aircraft/rail: 25 kg  
On cargo aircraft only: 100 kg
- **Hazardous substance:** 1000 lbs, 454 kg

(Contd. on page 8)

**Trade name: EZ-RNA II Sol.B**

(Contd. of page 7)

- **IMDG**
- **Limited quantities (LQ)** 500 g
- **Excepted quantities (EQ)** Code: E4  
Maximum net quantity per inner packaging: 1 ml  
Maximum net quantity per outer packaging: 500 ml
- **UN "Model Regulation":** UN1671, Phenol, solid, 6.1, II

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**

- **Section 355 (extremely hazardous substances):**

Substance is listed.

- **Section 313 (Specific toxic chemical listings):**

Substance is listed.

- **TSCA (Toxic Substances Control Act):**

Substance is listed.

- **Proposition 65**

- **Chemicals known to cause cancer:**

Substance is not listed.

- **Chemicals known to cause reproductive toxicity for females:**

Substance is not listed.

- **Chemicals known to cause reproductive toxicity for males:**

Substance is not listed.

- **Chemicals known to cause developmental toxicity:**

Substance is not listed.

- **Carcinogenic categories**

- **EPA (Environmental Protection Agency)**

108-95-2 phenol

D, I

- **TLV (Threshold Limit Value established by ACGIH)**

108-95-2 phenol

A4

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**

Substance is not listed.

- **GHS label elements**

The substance is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS05

GHS06

GHS08

- **Signal word** Danger

- **Hazard-determining components of labeling:**

phenol

- **Hazard statements**

Toxic if swallowed, in contact with skin or if inhaled.

Causes severe skin burns and eye damage.

Suspected of causing genetic defects.

(Contd. on page 9)

**Trade name: EZ-RNA II Sol.B**

(Contd. of page 8)

*May cause damage to organs through prolonged or repeated exposure.*

· **Precautionary statements**

*Do not breathe dusts or mists.*

*Wear protective gloves / protective clothing.*

*Wash thoroughly after handling.*

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

*Use only outdoors or in a well-ventilated area.*

*Obtain special instructions before use.*

*Do not handle until all safety precautions have been read and understood.*

*If swallowed: Immediately call a poison center/doctor.*

*IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.*

*If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*

*Specific treatment (see on this label).*

*IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.*

*IF exposed or concerned: Get medical advice/attention.*

*If swallowed: Rinse mouth. Do NOT induce vomiting.*

*Get medical advice/attention if you feel unwell.*

*Take off immediately all contaminated clothing and wash it before reuse.*

*Store locked up.*

*Store in a well-ventilated place. Keep container tightly closed.*

*Dispose of contents/container in accordance with local/regional/national/international regulations.*

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

## 16 Other information

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

· **Department issuing SDS:** Product safety department.

· **Contact:** Ms. BADICHI GITLIN

· **Date of preparation / last revision** 12/28/2017 / -

· **Abbreviations and acronyms:**

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

*IMDG: International Maritime Code for Dangerous Goods*

*DOT: US Department of Transportation*

*IATA: International Air Transport Association*

*ACGIH: American Conference of Governmental Industrial Hygienists*

*EINECS: European Inventory of Existing Commercial Chemical Substances*

*CAS: Chemical Abstracts Service (division of the American Chemical Society)*

*NFPA: National Fire Protection Association (USA)*

*HMIS: Hazardous Materials Identification System (USA)*

*VOC: Volatile Organic Compounds (USA, EU)*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

*Acute Tox. 3: Acute toxicity, Hazard Category 3*

*Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B*

*Muta. 2: Germ cell mutagenicity, Hazard Category 2*

*STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2*



## 1 Identification

- **Product identifier**
- **Trade name:** EZ-RNA II Sol.C
- **Article number:** 20410C
- **CAS Number:**  
109-70-6
- **EC number:**  
203-697-1
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Biological Industries Israel Beit Haemek Ltd.  
BEIT HAEMEK 25115  
ISRAEL  
michalb@bioind.com
- **Information department:** Product safety department.
- **Emergency telephone number:** During normal opening times: +972/4/9962467

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS06 Skull and crossbones

Acute Tox. 3 H331 Toxic if inhaled.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

STOT SE 3 H335 May cause respiratory irritation.

- **Label elements**

- **GHS label elements**

The substance is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS06 GHS07

- **Signal word** Danger

- **Hazard-determining components of labeling:**

1-bromo-3-chloropropane

- **Hazard statements**

Harmful if swallowed.

Toxic if inhaled.

Causes skin irritation.

Causes serious eye irritation.

May cause respiratory irritation.

- **Precautionary statements**

Avoid breathing dust/fume/gas/mist/vapors/spray

Wear protective gloves.

Wear eye protection / face protection.

**Trade name: EZ-RNA II Sol.C**

(Contd. of page 1)

Wash thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Use only outdoors or in a well-ventilated area.  
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Specific treatment (see on this label).  
Call a poison center/doctor.  
If swallowed: Call a poison center/doctor if you feel unwell.  
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
If skin irritation occurs: Get medical advice/attention.  
If eye irritation persists: Get medical advice/attention.  
Rinse mouth.  
If on skin: Wash with plenty of water.  
Take off contaminated clothing and wash it before reuse.  
Store locked up.  
Store in a well-ventilated place. Keep container tightly closed.  
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 1  
Fire = 0  
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



HEALTH 1 Health = 1  
FIRE 0 Fire = 0  
REACTIVITY 0 Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

**3 Composition/information on ingredients**

· **Chemical characterization: Substances**

· **CAS No. Description**

109-70-6 1-bromo-3-chloropropane

· **Identification number(s)**

· **EC number:** 203-697-1

**4 First-aid measures**

· **Description of first aid measures**

· **General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· **After inhalation:**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

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

· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

· **After eye contact:**

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

· **After swallowing:** Immediately call a doctor.

(Contd. on page 3)

**Trade name: EZ-RNA II Sol.C**

(Contd. of page 2)

- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:**  
Not required.  
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
No special measures required.  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** 2-8 °C
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Store in the dark.
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.

(Contd. on page 4)

**Trade name: EZ-RNA II Sol.C**

(Contd. of page 3)

*Immediately remove all soiled and contaminated clothing.*

*Wash hands before breaks and at the end of work.*

*Avoid contact with the eyes and skin.*

· **Breathing equipment:**

*In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.*

· **Protection of hands:**



Protective gloves

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

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

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

· **Material of gloves**

*The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.*

· **Penetration time of glove material**

*The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.*

· **Eye protection:**



Tightly sealed goggles

## 9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

<b>Form:</b>	Liquid
<b>Color:</b>	Not determined.
· <b>Odor:</b>	Characteristic
· <b>Odour threshold:</b>	Not determined.

· **pH-value:** Not applicable.

· **Change in condition**

<b>Melting point/Melting range:</b>	-58.87 °C (-74 °F)
<b>Boiling point/Boiling range:</b>	142 °C (288 °F)

· **Flash point:** Not applicable.

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

· **Ignition temperature:**

**Decomposition temperature:** Not determined.

· **Auto igniting:** Not determined.

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

· **Explosion limits:**

<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.

(Contd. on page 5)

**Trade name: EZ-RNA II Sol.C**

(Contd. of page 4)

- |   |  |
|---|--|
| · <b>Vapor pressure at 20 °C (68 °F):</b>         | 7.5 hPa (6 mm Hg)                          |
| · <b>Density at 20 °C (68 °F):</b>                | 1.6 g/cm <sup>3</sup> (13.352 lbs/gal)     |
| · <b>Relative density</b>                         | Not determined.                            |
| · <b>Vapour density</b>                           | Not determined.                            |
| · <b>Evaporation rate</b>                         | Not determined.                            |
| · <b>Solubility in / Miscibility with Water:</b>  | Fully miscible.                            |
| · <b>Partition coefficient (n-octanol/water):</b> | Not determined.                            |
| · <b>Viscosity:</b>                               |  |
| <b>Dynamic:</b>                                   | Not determined.                            |
| <b>Kinematic:</b>                                 | Not determined.                            |
| <b>Organic solvents:</b>                          | >98.0 %                                    |
| <b>VOC content:</b>                               | >98.0 %                                    |
|   | >980.0 g/l / 8.18 lb/gl                    |
| · <b>Other information</b>                        | No further relevant information available. |

## 10 Stability and reactivity

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

## 11 Toxicological information

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

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

### 109-70-6 1-bromo-3-chloropropane

Oral	LD50	930 mg/kg (rat)
Inhalative	LC50/4 h	5.66 mg/l (rat)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

85-86-9	1-(4-(phenylazo)phenylazo)-2-naphthol	3
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- **NTP (National Toxicology Program)**

Substance is not listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

US

(Contd. on page 6)

**Trade name: EZ-RNA II Sol.C**

(Contd. of page 5)

### 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
 Water hazard class 3 (Assessment by list): extremely hazardous for water  
 Do not allow product to reach ground water, water course or sewage system, even in small quantities.  
 Danger to drinking water if even extremely small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
 Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

### 14 Transport information

- |  |                 |
|--|-----------------|
| · <b>UN-Number</b>   |                 |
| · <b>DOT, ADN, IMDG, IATA</b>  | not regulated   |
| · <b>UN proper shipping name</b>   |                 |
| · <b>DOT, ADN, IMDG, IATA</b>  | not regulated   |
| · <b>Transport hazard class(es)</b>  |                 |
| · <b>DOT, ADN, IMDG, IATA</b>  |                 |
| · <b>Class</b>   | not regulated   |
| · <b>Packing group</b>   |                 |
| · <b>DOT, IMDG, IATA</b>   | not regulated   |
| · <b>Environmental hazards:</b>  |                 |
| · <b>Marine pollutant:</b>   | No              |
| · <b>Special precautions for user</b>  | Not applicable. |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable. |
| · <b>UN "Model Regulation":</b>  | -               |

US

(Contd. on page 7)

**Trade name: EZ-RNA II Sol.C**

(Contd. of page 6)

### 15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

· **Section 355 (extremely hazardous substances):**

Substance is not listed.

· **Section 313 (Specific toxic chemical listings):**

Substance is not listed.

· **TSCA (Toxic Substances Control Act):**

Substance is listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

Substance is not listed.

· **Chemicals known to cause reproductive toxicity for females:**

Substance is not listed.

· **Chemicals known to cause reproductive toxicity for males:**

Substance is not listed.

· **Chemicals known to cause developmental toxicity:**

Substance is not listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

Substance is not listed.

· **TLV (Threshold Limit Value established by ACGIH)**

Substance is not listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

Substance is not listed.

· **GHS label elements**

The substance is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS06 GHS07

· **Signal word Danger**

· **Hazard-determining components of labeling:**

1-bromo-3-chloropropane

· **Hazard statements**

Harmful if swallowed.

Toxic if inhaled.

Causes skin irritation.

Causes serious eye irritation.

May cause respiratory irritation.

· **Precautionary statements**

Avoid breathing dust/fume/gas/mist/vapors/spray

Wear protective gloves.

Wear eye protection / face protection.

Wash thoroughly after handling.

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

(Contd. on page 8)

**Trade name: EZ-RNA II Sol.C**

(Contd. of page 7)

*Use only outdoors or in a well-ventilated area.*

*If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*

*Specific treatment (see on this label).*

*Call a poison center/doctor.*

*If swallowed: Call a poison center/doctor if you feel unwell.*

*IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.*

*If skin irritation occurs: Get medical advice/attention.*

*If eye irritation persists: Get medical advice/attention.*

*Rinse mouth.*

*If on skin: Wash with plenty of water.*

*Take off contaminated clothing and wash it before reuse.*

*Store locked up.*

*Store in a well-ventilated place. Keep container tightly closed.*

*Dispose of contents/container in accordance with local/regional/national/international regulations.*

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

## 16 Other information

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

· **Department issuing SDS:** Product safety department.

· **Contact:** Ms. BADICHI GITLIN

· **Date of preparation / last revision** 12/28/2017 / -

· **Abbreviations and acronyms:**

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

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*VOC: Volatile Organic Compounds (USA, EU)*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

*Acute Tox. 4: Acute toxicity, Hazard Category 4*

*Acute Tox. 3: Acute toxicity, Hazard Category 3*

*Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2*

*Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A*

*STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3*