

**SECTION 1****KRIBIOLISA® Anti-Pertuzumab (PERJETA™) ELISA****(CAT: KBI2086)****Use of the Product:**

For Research Use Only. The GENLISA® / KRIBIOLISA® ELISA kit is used as an analytical tool for quantitative/qualitative determination of antibody / antigen biomarker in samples.

**Company / Undertaking:**

Identification:

KRISHGEN BIOSYSTEMS PRIVATE LIMITED

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**Kit Components:**

- A) Microtitre Plate
- B) Standard (concentrated, lyophilized)
- C) HRP Conjugate(Concentrated)
- D) Detection Diluent
- E) Sample Diluent
- F) Standard Diluent
- G) Wash Buffer
- H) TMB Substrate
- I) Stop Solution

- (20X) Wash Buffer (Component G) containing 0.01% Thiomersal (CAS No-54-64-8) (EC) No.200-210-4. The classification of (0.01%) according to regulation (EC) no 1272/2008 is H317, H413. Safety Data sheet for Thiomersal according to actual Regulations (EC/EU) is attached.
- Components B, D, E and F containing 0.02% bromonitrodioxane is a hazardous mixture according to CLP Regulation (EC) as amended. Safety Data Sheet for bromonitrodioxane according to actual Regulations (EC/EU) is attached
- Components B, D, E and F containing Methylisothiazolinone is a hazardous mixture according to CLP Regulation (EC) as amended. Safety Data Sheet for Methylisothiazolinone according to actual Regulations (EC/EU) is attached
- Stop Solution (Component I) containing Phosphoric Acid is a hazardous mixture according to CLP Regulation (EC) as amended. Safety Data Sheet for Phosphoric Acid according to actual Regulations (EC/EU) is attached.
- TMB Substrate (Component H) containing Stabilized Chromogen
- The other components do not contain any hazardous mixture according to CLP Regulation (EC) as amended.

**SECTION 2****HAZARDS IDENTIFICATION****2.1 Classification of the substance or mixture****Classification according to Regulation 1272/2008/EC:**

Mixtures containing Thiomersal are considered hazardous according to Regulation (EC) No. 1272/2008.

**2.2 Label elements****Labeling according to Regulation (EC) No 1272/2008**

Pictogram:



Signal word:	Warning
Hazard statements:	300, 310, 330, 373, 400, 410
Precautionary statements:	P280, P302 + P352, P305 + P351 + P338, P310

**For full text of H- and P-phrases see section 16.**

Supplemental hazards statements      None

**SECTION 3  
COMPOSITION/INFORMATION ON INGREDIENTS**

**3.1 Mixtures**

Description: Wash Buffer as a mixture containing Thiomersal as preservative.

Ingredient	Conc. %	CAS-Nr.	Index-Nr.
Thiomersal	0.01%	54-64-8	200-210-4

**Classification according to regulation 1272/2008/EC:** Skin Sens. 1, H317  
Specific concentration limits: Skin Corr. 1B, H314: C20,6 %; Skin Irrit. 2, H315: 0,06 %:sC<0,6 %; Eye Irrit. 2, H319: 0,06 %:sC<0,6 %; Skin Sens. 1, H317: C20,0015 %., EUH208: C20,00015 %

**Description:** Detection Diluent/ Standard/Standard Diluent /Sample Diluent as a mixture containing Methylisothiazolinone and bromonitrodioxane as preservative.

Ingredient	Conc. %	CAS-Nr.
Methylisothiazolinone	0.02%	2682-20-4
Bromonitrodioxane	0.02%	30007-47-7

**Classification according to regulation 1272/2008/EC:** Skin Sens. 1, H317  
Specific concentration limits: Skin Corr. 1B, H314: C20,6 %; Skin Irrit. 2, H315: 0,06 %:sC<0,6 %; Eye Irrit. 2, H319: 0,06 %:sC<0,6 %; Skin Sens. 1, H317: C20,0015 %., EUH208: C20,00015 %

**Classification according to regulation 1272/2008/EC:** Skin Sens. 1, H317  
Specific concentration limits: Skin Corr. 1B, H314: C20,6 %; Skin Irrit. 2, H315: 0,06%:sC<0,6 %; Eye Irrit. 2, H319: 0,06 %:sC<0,6 %; Skin Sens. 1, H317: C20,0015 %., EUH208: C20,00015 %

**Description:** Stop Solution as a mixture containing Phosphoric Acid

Ingredient	Conc. %	CAS-Nr.	Index-Nr.
Phosphoric Acid	0.73M	7664-38-2	028-032-00-0

**Classification according to regulation 1272/2008/EC:** Carc. 1A, H350i STOT RE 1, H372\*\* Resp. Sens. 1, H334 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H

**For full text of H-phrases see section 16.**

**SECTION 4  
FIRST AID MEASURES****4.1 Description of first aid measures:**

**If in eyes:** Rinse thoroughly with water for at least 15 minutes and immediately consult a physician.

**If on skin (or hair):** Immediately take off contaminated clothing or shoes. Wash with plenty of soap and water. Consult a physician.

**If inhaled:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

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

**SECTION 5  
FIRE-FIGHTING MEASURES****5.1 Suitable extinguishing agents**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**5.2 Special precautions for fire-fighters**

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**SECTION 6  
ACCIDENTAL RELEASE MEASURES****6.1 Person-related safety precautions**

Use appropriate personal protective equipment to prevent contamination of skin, eyes and personal clothing. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

**6.2 Measures for environmental protection**

Keep away from drains.

**6.3 Measures for containment and cleaning**

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

**SECTION 7  
HANDLING AND STORAGE****7.1 Precautions for safe handling:**

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Use normal measures for preventive fire protection.

**7.2 Conditions for safe storage:**

Store in a cool and dry place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

**SECTION 8  
EXPOSURE CONTROLS / PERSONAL PROTECTION****8.1 Control parameters**

Contains no substances with occupational exposure limit values.

**8.2 Individual protection measures**

Wash hands thoroughly after handling chemical products and before eating, smoking or using the toilet. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.

**Eye/face protection:** Wear approved safety goggles.

**Skin/hand protection:** Handle with protective gloves, plastic or rubber. 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.

**Body protection:** Wear suitable protective clothing as protection against splashing or contamination.

**Other skin protection:** Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved.

**Respiratory protection:** In case of inadequate ventilation, use a suitable respirator. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Appearance:	Clear Liquid
Odor:	Not available
Odor Threshold:	Not available
pH:	Not available
Melting Point / Freezing Point:	Not available
Boiling Point / Boiling Range:	100°C

Flash Point:	No information available
Evaporation Rate:	No information available
Flammability (solid, gas):	No information available
Upper/Lower Flammability or Explosive Limit:	Not available
Vapor Pressure:	Not available
Relative Density:	1.06 g/cm <sup>3</sup>
Solubility in/Miscibility with Water:	Soluble
Partition Coefficient: octanol/water:	Not available
Auto Igniting:	Not available
Decomposition Temperature:	Not available
Viscosity:	Not available

## SECTION 10 STABILITY AND REACTIVITY

### 10.1 Chemical Stability

Stable under recommended storage conditions.

### 10.2 Conditions to avoid

Strong oxidizing agents, reducing agents, Amines, Mercaptans

### 10.3 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions - Carbon oxides, nitrogen oxides (NOx), Sulphur oxides, Hydrogen chloride gas.

## SECTION 11 TOXICOLOGICAL INFORMATION

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

LD50 Oral – rat – 75 mg/kg

Skin corrosion/irritation:	Slight irritation
Serious eye damage/irritation:	Slight irritation
Respiratory or skin sensitization:	May cause allergic skin reaction.
Germ cell mutagenicity:	No data available
Carcinogenicity:	No data available
Reproductive toxicity:	No data available
Specific target organ toxicity (STOT) -single exposure:	No data available
Specific target organ toxicity (STOT) -repeated exposure:	No data available
Aspiration hazard:	Can cause severe burns.
Information on likely routes of exposure:	Routes of entry anticipated; Oral; dermal; inhalation

**Symptoms related to the physical, chemical and toxicological characteristics:**

Inhalation:	Harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Ingestion:	Harmful if swallowed. Causes burns.
Skin contact:	Harmful if absorbed through skin. Causes burns.
Eye contact:	Causes eye burns.

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

**Short term exposure:** Potential immediate effects: Not available. Potential delayed effects: Not Available.

**Long term exposure:** Potential immediate effects: Not available. Potential delayed effects: Allergic contact dermatitis.

**Effects of chronic exposure:**

No information available

**Numerical measures of toxicity:**

Not available

**Other Information:**

Not available

**SECTION 12**

**ECOLOGICAL INFORMATION**

**12.1 Ecotoxicity**

No data available.

**12.2 Biodegradability**

No data available.

**12.3 Bioaccumulative potential**

No data available.

**12.4 Mobility in soil**

No data available.

**12.5 Other adverse effects**

Only relevant for the preservative Thiomersal.

Species	Type	Value	Exposition time (h)
Catfish	LC50 (mg/l)	7,5	24

**Persistence and degradability**

Substance	t1/2 anaerob (h)
Thiomersal	no information available

Bioaccumulative potential  
No information available

Substance      Log Pow  
Thiomersal      -1,88

Bioaccumulation is not expected because log Pow < 1

**SECTION 13  
DISPOSAL CONSIDERATIONS**

- 13.1** Disposal methods  
Dispose of waste in accordance to applicable national, regional, or local regulations.
- 13.2** Contaminated packaging  
Dispose in the same manner as unused product.
- 13.3** Special precautions  
Dispose of small amounts of spilled material as described in section 6. Large spills must be dealt with separately by qualified disposal personnel. Avoid dispersal of spilled material to soil, waterways, drains and sewers.

**SECTION 14  
TRANSPORT INFORMATION**

UN Number:	None
DOT regulations: Hazard class:	None
Land transport ADR/RID (cross-border):	Not regulated.
Maritime transport IMDG:	Not regulated.
Marine pollutant:	No
Air transport ICAO-TI and IATA-DGR:	Not regulated.
Transport/Additional information:	Not dangerous according to above

**SECTION 15  
REGULATORY INFORMATION**

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture  
Act No. 350/2011 Coll., to regulate chemical substances and chemical mixtures and to amend some statutes, as amended. Implemented regulations to Act No. 350/2011 Coll., as amended. The Waste Act as amended. Government Decree No. 361/2007 Coll., to regulate the conditions of occupational health and safety, as amended. Regulation of the European Parliament and the Council (EC) No. 1907/2006 (REACH). Regulation of the European Parliament and the Council (EC) No. 1272/2008 (CLP). Commission Regulation (EU) No. 830/2015.

**SECTION 16  
OTHER INFORMATION**

**Full text of H- and P-phrases:**

H300 Fatal when swallowed H310  
Fatal when skin contact H330  
Fatal if inhaled  
H373 May cause damage to organs through prolonged or repeated exposure H400  
Very toxic to aquatic life  
H410 Very toxic to aquatic life with long lasting effects  
Precautionary statements  
P280 Wear protective gloves, protective clothing, eye protection P302+P352

If on skin: Wash with plenty of soap and 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.  
 P310 Immediately call a POISON CENTER or doctor/physician

**Note:**

The safety data sheet contains data necessary for ensuring occupational health and safety and protection of the environment. The given data correspond to the current state of knowledge and experience and comply with valid legal regulations. The data cannot be considered a guarantee that the specific use of the product will be appropriate.

**SECTION 1  
IDENTIFICATION OF THE PREPARATION AND OF COMPANY/UNDERTAKING**

- 1.1 Product identifier**  
**Trade name: Methylisothiazolinone**  
**Additional identification:** solution with concentration 0.02%
- 1.2 Relevant identified uses of the substance or mixture and uses advised against**  
 Component in HRP conjugate
- 1.3 Details of the supplier of the safety data sheet**

**SECTION 2  
HAZARDS IDENTIFICATION**

- 2.1 Classification of the substance or mixture**  
**Classification according to Regulation 1272/2008/EC:**  
 Not a hazardous substance at concentration 0.02%

- 2.2 Label elements**  
**Labeling according Regulation (EC) No 1272/2008**  
 Acute toxicity, Oral 4  
 Pictograms: Skin corrosion, 1B  
 Serious eye damage, 1  
 Acute aquatic toxicity, 3 Chronic aquatic toxicity, 3



Hazard statements: Signal word: Warning  
 301, 311, 314, 317, 331, 410  
 Precautionary statements: P260, P264, P270, P273, P280:

**For full text of H- and P-phrases see section 16.**

**Responses:**

IF SWALLOWED: Rinse mouth, DO NOT induce vomiting. Call a Poison Center or doctor/physician if you feel unwell.  
 IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/physician if you feel unwell. See specific treatment in this MSDS. Remove/take off immediately all Contaminated clothing. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention.  
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
 IF IN EYES: Flush with water as a precaution.

- 2.3 Other hazards** None

**SECTION 3  
COMPOSITION / INFORMATION ON INGREDIENT**

3.1	Mixtures				
	Ingredient	Formula	Conc. %	EC-No.	CAS-Nr.
	Methylisothiazolinone	C4H5NO	0.02%	220-239-6	2682-20-4

**SECTION 4  
FIRST AID MEASURES****4.1 Description of first aid measures**

**After inhalation:** Move person into fresh air. If not breathing, give artificial respiration. Consult a physician. Show this MSDS.

**After skin contact:** Wash off with soap and plenty of water. Consult a physician. Show this MSDS.

**After eye contact:** Flush eyes with water as a precaution and consult a physician. Show this MSDS.

**After swallowing:** Never give anything by mouth to an unconscious person. Rinse mouth with water. Call a physician. Show this MSDS.

**4.2 Most important symptoms and effects, both acute and delayed**

Unknown

**4.3 Indication of any immediate medical attention and special treatment needed**

No data available.

**SECTION 5  
FIRE-FIGHTING MEASURES****5.1 Suitable extinguishing agents**

Dry chemical, carbon dioxide, water spray or alcohol-resistant foam.

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

Hazardous decomposition products formed under fire conditions. Carbon oxides and sodium Oxides

**5.3 Protective equipment**

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

**SECTION 6  
ACCIDENTAL RELEASE MEASURES****6.1 Personal precautions, protective equipment and emergency procedures**

Wear personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate all personnel to safe areas.

**6.2 Environmental precautions**

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

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

Contain spillage, and then soak up with an inert absorbent material. Dispose according to local regulations.

**SECTION 7  
HANDLING AND STORAGE****7.1 Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.

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

Keep container tightly closed in a dry and well ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

**SECTION 8  
EXPOSURE CONTROLS / PERSONAL PROTECTION**

**8.1 Control parameters**

**Component:** Contains no substances with occupational exposure limits.

**Appropriate engineering controls:** Wear protective gloves/protective clothing/eye protection/face protection. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling product.

**8.2 Personal protective equipment**

**Eye and face protection:** Safety glasses with side shields conforming to local safety standards. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN166 (EU).

**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.

**Body protection:** Complete suit protection against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection:** Where risk assessment shows nuisance exposure may be possible, use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection, use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143).

**SECTION 9**

**PHYSICAL AND CHEMICAL PROPERTIES**

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

Appearance:	Liquid
Odour:	Odorless
Odour threshold:	Not available
Melting point/freezing point:	Not available
pH:	3.6 - 3.8
Partition coefficient: noctanol/water:	Not available
Flash point:	Not available
Water solubility:	Not available
Evaporation rate:	Not available
Upper/lower flammability or explosive limits:	Not available
Vapor density:	Not available
Vapor pressure:	Not available
Relative density:	Not available
Boiling point/Boiling range:	100°C
Auto igniting:	Not available
Decomposition temperature:	Not available
Viscosity:	Not available
Flammability (solid, gas):	Not available

**SECTION 10**

**STABILITY AND REACTIVITY**

**10.1 Reactivity**

No known reactions under normal conditions of use.

**10.2 Chemical Stability**

Stable under normal recommended storage conditions.

**10.3 Possibility of hazardous reactions**

No data available.

**10.4 Conditions to avoid**

Direct sources of heat.

**10.5 Incompatible materials**

Strong oxidizers.

**10.6 Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions. Carbon oxides and sodium oxides.

**SECTION 11  
TOXICOLOGICAL INFORMATION**

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

Oral:	no data available
Inhalation:	no data available
Dermal:	no data available
Other:	LD50 Intraperitoneal – Rat – 550 mg/kg
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 component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed carcinogen by IARC,
Reproductive toxicity:	no data available.
Information on likely routes of exposure:	no data available
Aspiration hazard:	no data available
Specific target organ toxicity (STOT) - single exposure:	no data available.
Specific target organ toxicity (STOT) – repeated exposure:	no data available.
Inhalation:	May be harmful if inhaled. Causes respiratory tract irritation.
Ingestion:	Harmful if swallowed.
Skin contact:	Harmful if absorbed through skin. Causes skin irritation.
Eye Contact:	Causes eye irritation.

**SECTION 12  
ECOLOGICAL INFORMATION**

**12.1 Ecotoxicity**

Species	Type	Value	Exposition time (h)
Trout	LC50 (mg/l)	0,19	
Perch	LC50 (mg/l)	0,28	
Algae (Skeletonema costatum)	EC50 (mg/l)	0,003	
Algae (Selenastrum capricornutum)	EC50 (mg/l)	0,018	
Invertebrate (Daphnia magna)	EC50 (mg/l)	0,16	

**12.2 Biodegradability**

Substance	t1/2 anaerob (h)
Methylisothiazolinone	9,1

**12.3 Bioaccumulative potential**

No data available.

**12.4 Mobility in soil**

No data available.

**12.5 Other adverse effects**

No data available.

**SECTION 13****DISPOSAL CONSIDERATIONS****13.1 Disposal methods**

Dispose of waste in accordance to applicable national, regional, or local regulations. Contact a licensed professional waste disposal service to dispose of this material. Do not allow product to enter drains, water courses or the soil.

**13.2 Contaminated packaging**

Dispose in the same manner as unused product. Do not re-use empty containers.

**SECTION 14****TRANSPORT INFORMATION****ADR/RID ADN/ADNR IMDG IATA/DOT ADR/DOT/:**

Not classified to the transport regulation

**SECTION 15****REGULATORY INFORMATION****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

Act No. 350/2011 Coll., to regulate chemical substances and chemical mixtures and to amend some statutes, as amended. Implemented regulations to Act No. 350/2011 Coll., as amended The Waste Act as amended. Government Decree No. 361/2007 Coll., to regulate the conditions of occupational health and safety, as amended. Regulation of the European Parliament and the Council (EC) No. 1907/2006 (REACH). Regulation of the European Parliament and the Council (EC) No. 1272/2008 (CLP). Commission Regulation (EU) No. 830/2015.

**15.2 Chemical safety assessment**

Chemical safety assessment has not been carried out.

**SECTION 16****OTHER INFORMATION****Full text of H- and P-phrases: H302:**

Harmful if swallowed.

**H314:** Causes severe skin burns and eye damage.

**H412:** Harmful to aquatic life with long lasting effects.

**P260:** Do not breathe dust or mist.

**P264:** Wash hands thoroughly after handling.

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

**P273:** Avoid release to the environment.

**P280:** Wear protective gloves/protective clothing/eye protection/face protection.

**Note:**

The safety data sheet contains data necessary for ensuring occupational health and safety and protection of the environment. The given data correspond to the current state of knowledge and experience and comply with valid legal regulations. The data cannot be considered a guarantee that the specific use of the product will be appropriate.

**SECTION 1  
IDENTIFICATION OF THE PREPARATION AND OF COMPANY/UNDERTAKING**

- 1.1 Product identifier**  
**Trade name: Phosphoric Acid**  
**Additional identification:** solution with phosphoric acid concentration 0.73M  
**Relevant identified uses of the substance or mixture and uses advised against**  
 Stop Solution for the ELISA kit.
- 1.2 Details of the supplier of the safety data sheet**

**SECTION 2  
HAZARDS IDENTIFICATION**

- 2.1 Classification of the substance or mixture**  
**Classification according to Regulation (EC) No 1272/2008**  
 H290, H302, H314  
**For full text of H-phrases see section 16.**

- 2.2 Label elements**  
**Labeling according Regulation (EC) No 1272/2008 (CLP)**  
 Pictogram Signal Word Warning



GHS05, GHS07

Hazard statement(s) H290, H302, H314  
 Precautionary statement(s) none  
 Supplemental hazard statement none

- 2.3 Other hazards**  
 This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

**SECTION 3  
COMPOSITION/INFORMATION ON INGREDIENTS**

3.1	Mixtures	
	Chemical characterization: Formula: Molecular weight:	Product does not burn H3PO4 98 g/mol

Ingredient	Conc. %	EINECS	CAS-Nr.	Index-Nr.
Phosphoric Acid	0.73M	231-633-2	7664-38-2	017-002-01-X

**Classification according to regulation 1272/2008/EC:**  
 Met. Corr. 1; Acute Tox. 4; Skin Corr. 1B; Eye Dam. 1; H290, H302, H314, H318

**For full text of H-phrases see section 16.**

**SECTION 4  
FIRST AID MEASURES****4.1 Description of first aid measures****General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance.

**If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact**

Wash off 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**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**4.2 Most important symptoms and effects, both acute and delayed**

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

**4.3 Indication of any immediate medical attention and special treatment needed**

No data available

**SECTION 5  
FIRE-FIGHTING MEASURES****5.1 Extinguishing media****Suitable extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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

Hydrogen chloride gas

**5.3 Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

**5.4 Further information**

The product itself does not burn.

**SECTION 6  
ACCIDENTAL RELEASE MEASURES****6.1 Personal precautions, protective equipment and emergency procedures**

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.

**6.2 Environmental precautions**

Do not let product enter drains.

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

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

**6.4 Reference to other sections**

For disposal see section 13.

**SECTION 7  
HANDLING AND STORAGE****7.1 Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. For precautions see section 2.2.

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

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Storage class (TRGS 510): Non-combustible, corrosive hazardous materials

**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

**8.2 Exposure controls**

**Appropriate engineering controls**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**Personal protective equipment Eye/face protection**

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**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.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

**Body Protection**

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. 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**

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

Appearance	liquid form
Odour	No data available
Odour Threshold	No data available
pH	No data available
Melting point/freezing point	No data available
Initial boiling point and boiling range	No data available
Flash point	Not applicable
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	No data available
Water solubility	No data available
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available

Explosive properties	No data available
Oxidizing properties	No data available
Other safety information	No data available

**SECTION 10  
STABILITY AND REACTIVITY**

- 10.1 Reactivity**  
No data available
- 10.2 Chemical stability**  
Stable under recommended storage conditions.
- 10.3 Possibility of hazardous reactions**  
No data available
- 10.4 Conditions to avoid**  
No data available
- 10.5 Incompatible materials**  
Bases, Amines, Alkali metals, Metals, hexalithium disilicide, permanganates, e.g. potassium permanganate, Fluorine
- 10.6 Hazardous decomposition products**  
Other decomposition products - No data available

**SECTION 11  
TOXICOLOGICAL INFORMATION**

- 11.1 Information on toxicological effects**
  - Acute toxicity**  
No data available
  - Skin corrosion/irritation**  
No data available
  - Serious eye damage/eye irritation**  
No data available
  - Respiratory or skin sensitization**  
No data available
  - Germ cell mutagenicity** No data available
  - Carcinogenicity**  
  
**IARC: 3** - Group 3: Not classifiable as to its carcinogenicity to humans (Hydrochloric acid)
  - Reproductive toxicity**  
No data available
  - Specific target organ toxicity - single exposure**  
No data available
  - Specific target organ toxicity - repeated exposure**  
No data available
  - Aspiration hazard** No data available
  - Additional Information**  
RTECS: Not available  
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**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**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

**12.6 Other adverse effects**

No data available

**SECTION 13****DISPOSAL CONSIDERATIONS****13.1 Waste treatment methods****Product**

Offer surplus and non-recyclable solutions to a licensed disposal company.

**Contaminated packaging**

Dispose of as unused product

**SECTION 14****TRANSPORT INFORMATION****14.1 UN number**

ADR/RID: 1805 / IMDG: 1805 / IATA: 1805

**14.2 UN proper shipping name**

ADR/RID: PHOSPHORIC ACID / IMDG: PHOSPHORIC ACID / IATA: Phosphoric acid

**14.3 Transport hazard class(es)**

ADR/RID: 8 / IMDG: 8 / IATA: 8

**14.4 Packaging group**

ADR/RID: III / IMDG: III / IATA: III

**14.5 Environmental hazards**

ADR/RID: no / IMDG Marine pollutant: no / IATA: no

**14.6 Special precautions for user**

No data available

**SECTION 15****REGULATORY INFORMATION**

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

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

No data available

**15.2 Chemical Safety Assessment**

For this product a chemical safety assessment was not carried out

**SECTION 16****OTHER INFORMATION****Full text of H-Statements referred to under sections 2 and**

H290 May be corrosive to metals. H302

Harmful if swallowed.

H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage

**SECTION 1**

**IDENTIFICATION OF THE PREPARATION AND OF COMPANY/UNDERTAKING**

- 1.1 **Product identifier**  
Trade name: **Bromonitrodioxane**  
Additional identification: solution with concentration 0.02%
- 1.2 **Relevant identified uses of the substance or mixture and uses advised against**  
Component in HRP conjugate.
- 1.3 **Details of the supplier of the safety data sheet**

**SECTION 2**

**HAZARDS IDENTIFICATION**

- 2.1 **Classification of the substance or mixture Classification according to Regulation 1272/2008/EC:** Not a hazardous substance at concentration 0.02%
- 2.2 **Label elements**  
Signal word: Warning  
Hazard statements: 301, 311, 314, 317, 331, 410  
Precautionary statements: P260, P264, P270, P273, P280:

**For full text of H- and P-phrases see section 16.**

**Responses:**

IF SWALLOWED: Rinse mouth, DO NOT induce vomiting. Call a Poison Center or doctor/ physician if you feel unwell.  
IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/physician if you feel unwell. See specific treatment in this MSDS. Remove/take off immediately all contaminated clothing. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention.  
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Flush with water as a precaution.

- 2.3 **Other hazards** None

**SECTION 3**

**COMPOSITION / INFORMATION ON INGREDIENT**

3.1	Mixtures				
	Ingredient	Formula	Conc. %	EC-No.	CAS-Nr.
	Bromonitrodioxane	C4H6BrNO4	0.02%	250-001-7	30007-47-7

**SECTION 4**

**FIRST AID MEASURES**

- 4.1 **Description of first aid measures After inhalation:**  
Move person into fresh air. If not breathing, give artificial respiration. Consult a physician. Show this MSDS.  
**After skin contact:**  
Wash off with soap and plenty of water. Consult a physician. Show this MSDS.  
**After eye contact:**  
Flush eyes with water as a precaution and consult a physician. Show this MSDS.  
**After swallowing:**  
Never give anything by mouth to an unconscious person. Rinse mouth with water. Call a physician. Show this MSDS.
- 4.2 **Most important symptoms and effects, both acute and delayed**

Unknown

**4.3 Indication of any immediate medical attention and special treatment needed**

No data available.

**SECTION 5  
FIRE-FIGHTING MEASURES****5.1 Suitable extinguishing agents**

Dry chemical, carbon dioxide, water spray or alcohol-resistant foam.

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

Hazardous decomposition products formed under fire conditions. Carbon oxides and sodium oxides.

**5.3 Protective equipment**

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

**SECTION 6  
ACCIDENTAL RELEASE MEASURES****6.1 Personal precautions, protective equipment and emergency procedures**

Wear personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

**Labeling according to Regulation (EC) No 1272/2008**

Acute toxicity, Oral 4 Pictograms: Skin corrosion, 1A serious eye damage, 1

Evacuate all personnel to safe areas.

**6.2 Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water system. Do not let product enter drains.

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

Contain spillage, and then soak up with an inert absorbent material. Dispose according to local regulations.

**SECTION 7  
HANDLING AND STORAGE****7.1 Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.

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

Keep refrigerated. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

**SECTION 8  
EXPOSURE CONTROLS / PERSONAL PROTECTION****8.1 Control parameters****Component:** Contains no substances with occupational exposure limits.**Appropriate engineering controls:** Wear protective gloves/protective clothing/eye protection/face protection. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling product.**8.2 Personal protective equipment****Eye and face protection:** Safety glasses with side shields conforming to local safety standards. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN166 (EU).**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.

**Body protection:** Complete suit protection against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection:** Where risk assessment shows nuisance exposure may be possible, use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection, use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143).

**SECTION 9  
PHYSICAL AND CHEMICAL PROPERTIES**

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

Appearance:	Solid
Odour:	Odorless
Odour threshold:	Not available
Melting point/freezing point:	Not available
pH:	Not applicable
Partition coefficient: noctanol/water:	Not available
Flash point:	Not available
Water solubility:	Not available
Evaporation rate:	Not available
Upper/lower flammability or explosive limits:	Not available
Vapor density:	Not available
Vapor pressure:	Not available
Relative density:	Not available
Boiling point/Boiling range:	Not available
Auto igniting:	Not available
Decomposition temperature:	Not available
Viscosity:	Not available
Flammability (solid, gas):	Not available

**SECTION 10  
STABILITY AND REACTIVITY**

**10.1 Reactivity**

No known reactions under normal conditions of use.

**10.2 Chemical Stability**

Stable under normal recommended storage conditions.

**10.3 Possibility of hazardous reactions**

no data available.

**10.4 Conditions to avoid**

Direct sources of heat.

**10.5 Incompatible materials**

Strong oxidizers.

**10.6 Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions. Carbon oxides and sodium oxides.

**SECTION 11  
TOXICOLOGICAL INFORMATION**

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

Oral:	no data available
Inhalation:	no data available
Dermal:	no data available
Other:	LD50 Intraperitoneal – Rat – 455 mg/kg
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 component of this product present at levels greater than or equal to 0.1% is
Reproductive toxicity:	no data available.
Information on likely routes of exposure:	no data available
Aspiration hazard:	no data available
Specific target organ toxicity (STOT) -single exposure:	Respiratory system
Specific target organ toxicity (STOT) - repeated exposure:	no data available.

**Symptoms related to the physical, chemical and toxicological characteristics:**

Inhalation:	May be harmful if inhaled. Causes respiratory tract irritation.
Ingestion:	Harmful if swallowed.
Skin contact:	Harmful if absorbed through skin. Causes skin irritation.
Eye Contact:	Causes eye irritation.

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

To the best of our knowledge, the chemical, physical, and toxicological properties and affects have not been thoroughly investigated.

**SECTION 12  
ECOLOGICAL INFORMATION**

**12.1 Ecotoxicity**

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous

**12.2 Biodegradability**

No data available.

**12.3 Bioaccumulative potential**

No data available.

**12.4 Mobility in soil**

No data available.

**12.5 Other adverse effects**

No data available.

**SECTION 13  
DISPOSAL CONSIDERATIONS**

**13.1 Disposal methods**

Dispose of waste in accordance to applicable national, regional, or local regulations. Contact a licensed professional waste disposal service to dispose of this material. Do not allow product to enter drains, water courses or the soil.

**13.2 Contaminated packaging**

Dispose in the same manner as unused product. Do not re-use empty containers.

**SECTION 14  
TRANSPORT INFORMATION**

**ADR/RID ADN/ADNR IMDG IATA/DOT      ADR/DOT/:**  
Not classified to the transport regulation

**SECTION 15  
REGULATORY INFORMATION**

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**  
Act No. 350/2011 Coll., to regulate chemical substances and chemical mixtures and to amend some statutes, as amended. Implemented regulations to Act No. 350/2011 Coll., as amended  
The Waste Act as amended. Government Decree No. 361/2007 Coll., to regulate the conditions of occupational health and safety, as amended. Regulation of the European Parliament and the Council (EC) No. 1907/2006 (REACH). Regulation of the European Parliament and the Council (EC) No. 1272/2008 (CLP). Commission Regulation (EU) No. 830/2015.
- 15.2 Chemical safety assessment**  
Chemical safety assessment has not been carried out.

**SECTION 16  
OTHER INFORMATION****Full text of H- and P-phrases:**

**H302:** Harmful if swallowed.

**H314:** Causes severe skin burns and eye damage.

**H412:** Harmful to aquatic life with long lasting effects.

**P260:** Do not breathe dust or mist.

**P264:** Wash hands thoroughly after handling.

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

**P273:** Avoid release to the environment.

**P280:** Wear protective gloves/protective clothing/eye protection/face protection

**Note:**

The safety data sheet contains data necessary for ensuring occupational health and safety and protection of the environment. The given data correspond to the current state of knowledge and experience and comply with valid legal regulations. The data cannot be considered a guarantee that the specific use of the product will be appropriate.