



## 3173 Beryllium \*standard solution Be=1,000+-0,002 g/l

### 1. Identification of the substance/preparation and of the company or firm

#### 1.1 Identification of the substance or preparation

Name:

Beryllium \*standard solution Be=1,000+-0,002 g/l

**Synonym:**

**REACH Registration Number:** A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) N° 1907/2006, the annual tonnage does not require a registration, the registration is envisaged for a later registration deadline or it is a mixture.

#### 1.2 Use of the substance/preparation:

For laboratory utilisation, analysis, research and fine chemistry.

#### 1.3 Identification of the company or firm:

PANREAC QUIMICA S.L.U.

C/Garraf 2

Polígono Pla de la Bruguera

E-08211 Castellar del Vallès

(Barcelona) Spain

Tel. (+34) 937 489 400

e-mail: [product.safety@panreac.com](mailto:product.safety@panreac.com)

#### 1.4 Emergency telephone:

Single telephone number for emergency calls: 112 (EU)

Tel.: (+34) 937 489 499

### 2. Identification of dangers

Classification of the substance or the mixture.

**Classification Regulation (CE) n° 1272/2008.**

#### Hazard Pictograms



#### Signal word

Danger

### **Hazard statements**

H350i May cause cancer by inhalation.  
H332 Harmful if inhaled.  
H302 Harmful if swallowed.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.  
H315 Causes skin irritation.  
H373 May cause damage to organs <or state all organs affected, if known> through prolonged or repeated exposure <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.

### **Precautionary statements**

P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P264 Wash...thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.

### **Classification (67/548/CEE or 1999/45/CE).**

<b>Xi</b> Irritant	RE48/20
<b>T</b> Toxic	R36/37/38
	RE20/22
	R49

For the full text of the R-phrases mentioned in this section, see section 16.

### **3. Component Composition/Information**

Name: Beryllium \*standard solution Be=1,000+-0,002 g/l

#### **Composition:**

##### **0001: Nitric Acid 69%**

Formula: HNO<sub>3</sub> M.= 63,01 CAS [7697-37-2]  
EC number (EINECS): 231-714-2  
EC index number: 007-004-00-1  
REACH Registration Number: 01-2119487297-23-XXXX

**Content:** >= 2 % <= 5 %

#### **Classification Regulation (CE) n° 1272/2008.**

Skin Corr. 1A  
Ox. Sol. 3

## Hazard Pictograms



### Signal word

Danger

### Hazard statements

H314 Causes severe skin burns and eye damage.

H272 May intensify fire; oxidiser.

### Precautionary statements

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

P220 Keep/Store away from clothing/combustible materials.

P221 Take any precaution to avoid mixing with combustibles.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P264 Wash...thoroughly after handling.

P501 Dispose of contents/container according to Directive 94/62/CE or 2008/98/CE.

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

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

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

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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

P310 Immediately call a POISON CENTER or doctor/physician.

P321 Specific treatment (see on this label).

P338 Remove contact lenses, if present and easy to do. Continue rinsing.

P363 Wash contaminated clothing before reuse.

P370+P378 In case of fire: Use for extinction.

P405 Store locked up.

### Classification (67/548/CEE or 1999/45/CE).

**C** Corrosive

**R35** Causes severe burns.

### 0002: Beryllium Nitrate

CAS [13597-99-4]

EC number (EINECS): 237-062-5

EC index number: 004-002-00-2

**Content:**  $\geq 1\%$   $\leq 5\%$

## **Classification Regulation (CE) nº 1272/2008.**

Carc. 1B  
Acute Tox. 2  
Acute Tox. 3  
Eye Irrit. 2  
STOT SE 3  
Skin Irrit. 2  
Skin Sens. 1  
STOT RE 1  
Aquatic Chronic 2

### **Hazard Pictograms**



### **Signal word**

Danger

### **Hazard statements**

H350 May cause cancer <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.  
H330 Fatal if inhaled.  
H301 Toxic if swallowed.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H372 Causes damage to organs <or state all organs affected, if known> through prolonged or repeated exposure <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.  
H411 Toxic to aquatic life with long lasting effects.

### **Precautionary statements**

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
- P264 Wash...thoroughly after handling.
- P501 Dispose of contents/container according to Directive 94/62/CE or 2008/98/CE.
- P270 Do not eat, drink or smoke when using this product.
- P271 Use only outdoors or in a well-ventilated area.
- P272 Contaminated work clothing should not be allowed out of the workplace.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P281 Use personal protective equipment as required.
- P284 Wear respiratory protection.
- P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P302+P352 IF ON SKIN: Wash with plenty of soap and water.
- P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P308+P313 IF exposed or concerned: Get medical advice/attention.
- P310 Immediately call a POISON CENTER or doctor/physician.
- P312 Call a POISON CENTER or doctor/physician if you feel unwell.
- P314 Get medical advice/attention if you feel unwell.
- P320 Specific treatment is urgent (see on this label).
- P321 Specific treatment (see on this label).
- P330 Rinse mouth.
- P332+P313 If skin irritation occurs: Get medical advice/attention.
- P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P362 Take off contaminated clothing and wash before reuse.
- P363 Wash contaminated clothing before reuse.
- P391 Collect spillage.
- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
- P405 Store locked up.

### **Classification (67/548/CEE or 1999/45/CE).**

**N** Dangerous for the environment

**T+** Very toxic

**R36/37/38** Irritating to eyes, respiratory system and skin.

**R26** Very toxic by inhalation.

**R25** Toxic if swallowed.

**R49** May cause cancer by inhalation.

**R43** May cause sensitisation by skin contact.

**R48/23** Toxic: danger of serious damage to health by prolonged exposure through inhalation.

**R51/53** Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

## **4. First aid**

#### **4.1 General indications:**

Never provide drink or induce vomiting in the event of loss of consciousness.

#### **4.2 Inhaling:**

Take the person out into the fresh air. In the event of suffocation, proceed immediately to provide artificial respiration. Seek immediate medical assistance.

#### **4.3 Contact with the skin:**

Wash with plenty of soap and water. Remove contaminated clothing. Take the product out with cotton wool soaked in polyethylene-glycol 400. In the event of irritation, seek medical assistance.

#### **4.4 Eyes:**

Wash with plenty of water (for at least 15 minutes), keeping eyelids open. Seek medical assistance.

#### **4.5 Swallowing:**

Drink large amounts of water. Induce vomiting. Seek medical assistance.

### **5. Fire-fighting means**

#### **5.1 Suitable fire-extinguishing means:**

Water. Carbon dioxide (CO<sub>2</sub>). Foam. Dry powder.

#### **5.2 Fire-fighting means which must NOT be used:**

No specific data.

#### **5.3 Special risks:**

Incombustible. In the event of fire, toxic fumes may form: Do not allow extinguishing water into surface or underground water courses. Precipitate fumes formed with water.

#### **5.4 Protective equipment:**

Suitable clothing and footwear. Self-contained breathing equipment.

### **6. Measures to be taken in the event of accidental spillage**

#### **6.1 Individual precautions:**

Avoid contact with the skin, eyes or clothing. Ensure adequate ventilation. Do not inhale the fumes.

#### **6.2 Precautions for care of the environment:**

Do not allow it to enter the drainage system. Avoid pollution of the soil, water supplies and drains.

#### **6.3 Methods for collection/cleaning:**

Collect up with absorbent materials (Panreac General Absorbent, Kieselguhr, etc.) or, if none available, dry sand or earth, and deposit in waste containers for subsequent elimination in accordance with current legislation. Clean any remains with plenty of water. Neutralize with diluted sodium hydroxide.

### **7. Handling and storage**

#### **7.1 Handling:**

Ensure good ventilation and renewal of the air in the premises. Handle under an extractor fan.

## **7.2 Storage:**

Well sealed containers. In a cool, dry, well ventilated place. Room temperature. Restricted access, only authorized to technicians.

## **8. Staff exposure/protection controls**

### **8.1 Technical protective measures:**

Ensure good ventilation and renewal of the air in the premises.

### **8.2 Exposure limit control:**

VLA-EC(HNO<sub>3</sub>): 4 ppm - 10 mg/m<sup>3</sup>

VLA-ED(HNO<sub>3</sub>): 5,2 mg/m<sup>3</sup>

VLA-ED(HNO<sub>3</sub>): 2 ppm

VLA-ED(Be): 0,002 mg/m<sup>3</sup>

### **8.3 Respiratory protection:**

In the event of fumes forming/aerosols, use suitable respiratory protection. Filter NO.

### **8.4 Hand protection:**

Use suitable gloves neopren latex

### **8.5 Eye protection:**

Use suitable goggles.

### **8.6 Individual hygiene measures:**

Remove contaminated clothing. Wash hands and face before breaks and when the job is done. Use suitable work clothing. Do not eat, drink or smoke in the workplace. Do not inhale the substance.

### **8.7 Environmental exposure controls:**

Fulfill the commitments under local environmental protection legislation.

## **9. Physical and chemical properties**

Appearance: liquid

Colour: Colourless

Granulometry: N/A

Odour: Odourless.

pH: 0,5

Melting point/freezing point: -3 °C

Initial boiling point and boiling range: 101 °C

Flash point:

N/A

Flammability (solid, gas):

N/A

Upper/lower flammability or explosive limits:

N/A

Vapour pressure: N/A

Vapour density: N/A

Relative density: (20/4) 1,02

Solubility: Miscible with water

Partition coefficient: n-octanol/water:

N/A

Auto-ignition temperature:

N/A

Decomposition temperature: N/A

Viscosity: N/A

## **10. Stability and reactivity**

### **10.1 Conditions which should be avoided:**

High temperatures.

### **10.2 Matter which should be avoided:**

Metals and metal alloys. Alkaline metals. Alkali-earth metals. Formation of hydrogen (risk of explosion) Oxidizable compounds. Organic solvents. Alkaline hydroxides. Acids. Ammonia.

### **10.3 Hazardous decomposition products:**

Nitrogen oxides.

### **10.4 Complementary information:**

No specific data.

## **11. Toxicological information**

### **11.1 Acute toxicity:**

: Data not available.

### **11.2 Dangerous effects for health:**

Taking the preparation' components into account, the likely dangerous characteristics are as follows: If inhaled: Irritations to the mucosae coughing breathing difficulties Upon contact with the skin: irritations Risk of sensitization Through contact with the eyes: irritations If swallowed: Irritations of the mucosae in the mouth, throat, oesophagus and intestinal tract. (HNO<sub>3</sub>): If it is absorbed in large quantities: methemoglobinemia with headaches (Be): Carcinogenic in animal testing. Inhaling large quantities of metal fumes can cause fever. Other dangerous characteristics are not discarded. Take the usual precautions for handling chemical products.

## **12. Environmental information**

### **12.1 Toxicity:**

12.1.1 - EC50 test (mg/l):

Fish (*Leuciscus Idus*) LC50 87 mg/l (Be(NO<sub>3</sub>)<sub>2</sub>)

Protozoa (*E. sulcatum*) (Be(NO<sub>3</sub>)<sub>2</sub>) 0,004 mg/l

12.1.2. - Receptor medium:

Risk for the water environment

Risk for the land environment

12.1.3. - Observations:

Ecotoxic data not available.

### **12.2 Persistence and Degradability :**

12.2.1 - Test:

12.2.2. - Biotic degradation classification:

BOD<sub>5</sub>/COD

Biodegradability

12.2.3. - Abiotic degradation depending on pH:

12.2.4. - Observations:

Data not available.



### **12.3 Bioaccumulative potential:**

12.3.1. - Test:

12.3.2. - Bioaccumulation:

Risk

12.3.3. - Observations:

Data not available.

### **12.4 Mobility in soil :**

Data not available.

### **12.5 Assessment PBT and MPMB :**

Data not available.

### **12.6 Other possible effects on the environment:**

Do not allow it to enter soils or water channels.

Do not allow it to enter the sewage system.

Dangerous for drinking water.

Encourages eotrophy in rivers and water channels.

DATA BASED on the components of the preparation.

## **13. Considerations regarding elimination**

### **13.1 Substance or preparation:**

In the European Union, there are no homogeneous standards established for elimination of chemical waste, which is waste of a special nature, and treatment and elimination of same is subject to the domestic legislation in each country.

In view of this, in each case, you should contact the competent authority or those companies legally authorized for elimination of waste.

2001/573/EC: Council Decision of 23 July 2001 amending Commission Decision 2000/532/EC as regards the list of wastes. Council Directive 91/156/EEC of 18 March 1991 amending Directive 75/442/EEC on waste.

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### **13.2 Contaminated containers:**

Contaminated containers and packaging of dangerous substances or preparations must be treated in the same manner as the actual products contained in them.

European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste.

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## **14. Information concerning transport**

Overland (ADR):

Technical name: CORROSIVE LIQUID, TOXIC, N.O.S.

UN 2922 Class: 8 6.1 Packaging group: II (E)

By sea (IMDG):

Technical name: CORROSIVE LIQUID, TOXIC, N.O.S.

UN 2922 Class: 8 6.1 Packaging group: II

By air (ICAI-IATA):

Technical name: Corrosive liquid, toxic, n.o.s.

UN 2922 Class: 8 6.1 Packaging group: II

Packaging instructions: CAO 855 PAX 851

## **15. Regulatory information**

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

## 16. Other information

### Other precautionary statements

- P271 Use only outdoors or in a well-ventilated area.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P281 Use personal protective equipment as required.  
P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.  
P302+P352 IF ON SKIN: Wash with plenty of soap and water.  
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P308+P313 IF exposed or concerned: Get medical advice/attention.  
P312 Call a POISON CENTER or doctor/physician if you feel unwell.  
P314 Get medical advice/attention if you feel unwell.  
P321 Specific treatment (see on this label).  
P330 Rinse mouth.  
P332+P313 If skin irritation occurs: Get medical advice/attention.  
P337+P313 If eye irritation persists: Get medical advice/attention.  
P362 Take off contaminated clothing and wash before reuse.  
P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
P405 Store locked up.  
P501 Dispose of contents/container according to Directive 94/62/CE or 2008/98/CE.

### Labelling (65/548/CEE or 1999/45/CE)

- R-phrase(s):     **RE48/20** Also harmful: danger of serious damage to health by prolonged exposure through inhalation.  
                          **R36/37/38** Irritating to eyes, respiratory system and skin.  
                          **RE20/22** Also harmful by inhalation and if swallowed.  
                          **R49** May cause cancer by inhalation.
- S-phrase(s):     **S45** In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  
                          **S53** Avoid exposure - obtain special instructions before use.  
                          **S36/37/39** Wear suitable protective clothing, gloves and eye/face protection.  
                          **S26** In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

The information included in this Safety Data Sheet is based on our most up-to-date knowledge, and is solely intended to inform regarding aspects of safety; the properties and characteristics indicated herein are not guaranteed.

In respect of the previous review, changes have been made to the following sections: 2, 3, 15

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