

Material Safety Data Sheet According to 91/155 EEC

Printing date 02.04.2007

version number 6

Reviewed on 11.01.2007

1 Identification of the substance/preparation and of the company/undertaking

***Trade name:** BERYLLIUM ICP STANDARD SOLUTION

***Article number:** PBE4B2

***Application of the substance / the preparation** Laboratory chemicals

***Manufacturer/Supplier:**

Reagecon Diagnostics Ltd.
Shannon Free Zone,
Shannon,
Co. Clare,
IRL.

Tel +353 61 472622

Fax +353 61 472642

***Further information obtainable from:** EMERGENCY CONTACT NUMBER :- 353-87-7828692

2 Composition/information on ingredients

***Chemical characterization**

***Description:** Mixture of substances listed below with nonhazardous additions.

***Dangerous components:**

CAS: 7697-37-2 EINECS: 231-714-2	nitric acid	 C, O; R 8-35	2.5-10%
CAS: 7440-41-7 EINECS: 231-150-7	beryllium	 T+, Xi; R 49-25-26-36/37/38-43-48/23	≤ 2.5%

***Additional information:** For the wording of the listed risk phrases refer to section 16.

3 Hazards identification

***Hazard description:**



T Toxic

***Information concerning to particular hazards to man and environment:**

The product has been classified and labelled in accordance with EU Directive 99/45/EC and all other EU Directives referred to therein.

R 49 May cause cancer by inhalation.

R 23 Toxic by inhalation.

R 34 Causes burns.

R 43 May cause sensitisation by skin contact.

R 48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

***Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

IRL

(Contd. on page 2)

Material Safety Data Sheet According to 91/155 EEC

Printing date 02.04.2007

version number 6

Reviewed on 11.01.2007

Trade name: BERYLLIUM ICP STANDARD SOLUTION

(Contd. of page 1)

4 First-aid measures

***General information:**

Immediately remove any clothing soiled by the product.

Remove breathing equipment 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:** Drink plenty of water and provide fresh air. Call for a doctor immediately.

5 Fire-fighting measures

***Suitable extinguishing agents:**

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

***Protective equipment:** Mount respiratory protective device.

6 Accidental release measures

***Person-related safety precautions:** Wear protective equipment. Keep unprotected persons away.

***Measures for environmental protection:**

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

***Measures for cleaning/collecting:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Use neutralizing agent.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

7 Handling and storage

***Handling:PPE to be worn. See section 8**

***Information for safe handling:**

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

***Information about fire - and explosion protection:** Keep respiratory protective device available.

***Storage:**

***Requirements to be met by storerooms and receptacles:** No special requirements.

***Information about storage in one common storage facility:** Not required.

***Further information about storage conditions:** Keep receptacle tightly sealed.

IRL

(Contd. on page 3)

Material Safety Data Sheet According to 91/155 EEC

Printing date 02.04.2007

version number 6

Reviewed on 11.01.2007

Trade name: BERYLLIUM ICP STANDARD SOLUTION

(Contd. of page 2)

8 Exposure controls/personal protection

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

***Ingredients with limit values that require monitoring at the workplace:**

7697-37-2 nitric acid

OELV (Ireland)	Short-term value: 10 mg/m ³ , 4 ppm Long-term value: 5 mg/m ³ , 2 ppm
PEL (USA)	5 mg/m ³ , 2 ppm
REL (USA)	Short-term value: 10 mg/m ³ , 4 ppm Long-term value: 5 mg/m ³ , 2 ppm
TLV (USA)	Short-term value: 10 mg/m ³ , 4 ppm Long-term value: 5.2 mg/m ³ , 2 ppm
IOELV (European Union)	Short-term value: 2.6 mg/m ³ , 1 ppm

7440-41-7 beryllium

OELV (Ireland)	0.002 mg/m ³ C2
PEL (USA)	Short-term value: C 0.005; 0.025* mg/m ³ Long-term value: 0.002 mg/m ³ as Be; *30 min peak per 8-hr shift
REL (USA)	Short-term value: C 0.0005 mg/m ³ as Be
TLV (USA)	Short-term value: (0.01) NIC-0.0002 I mg/m ³ Long-term value: (0.002) NIC-0.00005 I mg/m ³ as Be; NIC-SEN; Skin

***Additional information:** The lists valid during the making were used as basis.

***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.
- Do not inhale gases / fumes / aerosols.
- Avoid contact with the eyes and skin.

***Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

***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

(Contd. on page 4)

Material Safety Data Sheet According to 91/155 EEC

Printing date 02.04.2007

version number 6

Reviewed on 11.01.2007

Trade name: BERYLLIUM ICP STANDARD SOLUTION

(Contd. of page 3)

***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:**



Tightly sealed goggles

9 Physical and chemical properties

***General Information**

Form:	Liquid
Colour:	According to product specification
Odour:	Characteristic

***Change in condition**

Melting point/Melting range: Undetermined.
Boiling point/Boiling range: 100°C

***Flash point:** Not applicable.

***Self-igniting:** Product is not selfigniting.

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

***Density at 20°C:** 1.03365 g/cm³

***Solubility/ miscibility with water:** Fully miscible.

***Solvent content:**
Organic solvents: 0.0 %

10 Stability and reactivity

***Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

***Dangerous reactions** No dangerous reactions known.

***Dangerous decomposition products:** No dangerous decomposition products known.

IRL

(Contd. on page 5)

Material Safety Data Sheet According to 91/155 EEC

Printing date 02.04.2007

version number 6

Reviewed on 11.01.2007

Trade name: BERYLLIUM ICP STANDARD SOLUTION

(Contd. of page 4)

11 Toxicological information

***Acute toxicity:**

***Primary irritant effect:**

***on the skin:** Caustic effect on skin and mucous membranes.

***on the eye:** Strong caustic effect.

***Sensitization:** Sensitization possible through skin contact.

***Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Toxic

Corrosive

Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

Carcinogenic if inhaled.

12 Ecological information

***General notes:**

Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Must not reach sewage water or drainage ditch undiluted or unneutralized.

Danger to drinking water if even small quantities leak into the ground.

13 Disposal considerations

***Product:**

***Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

***Uncleaned packaging:**

***Recommendation:** Disposal must be made according to official regulations.

***Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information

***Land transport ADR/RID (cross-border)**



***ADR/RID class:** 8 Corrosive substances.

***Danger code (Kemler):** 80

***UN-Number:** 1760

***Packaging group:** II

(Contd. on page 6)

Material Safety Data Sheet According to 91/155 EEC

Printing date 02.04.2007

version number 6

Reviewed on 11.01.2007

Trade name: BERYLLIUM ICP STANDARD SOLUTION

(Contd. of page 5)

***Hazard label** 8
***Description of goods:** 1760 CORROSIVE LIQUID, N.O.S. (NITRIC ACID)

***Maritime transport IMDG:**



***IMDG Class:** 8
***UN Number:** 1760
***Label** 8
***Packaging group:** II
***EMS Number:** F-A,S-B
***Marine pollutant:** No
***Proper shipping name:** CORROSIVE LIQUID, N.O.S. (NITRIC ACID)

***Air transport ICAO-TI and IATA-DGR:**



***ICAO/IATA Class:** 8
***UN/ID Number:** 1760
***Label** 8
***Packaging group:** II
***Proper shipping name:** CORROSIVE LIQUID, N.O.S. (NITRIC ACID)

15 Regulatory information

***Labelling according to EU guidelines:**

The product has been classified and marked in accordance with EU Directive 99/45/EC and all other EU Directives referred to therein.

***Code letter and hazard designation of product:**



T Toxic

***Hazard-determining components of labelling:**

beryllium
nitric acid

***Risk phrases:**

- 49 May cause cancer by inhalation.
- 23 Toxic by inhalation.
- 34 Causes burns.
- 43 May cause sensitisation by skin contact.

(Contd. on page 7)

Material Safety Data Sheet
According to 91/155 EEC

Printing date 02.04.2007

version number 6

Reviewed on 11.01.2007

Trade name: BERYLLIUM ICP STANDARD SOLUTION

(Contd. of page 6)

48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

***Safety phrases:**

- 53 Avoid exposure - obtain special instructions before use.
- 4 Keep away from living quarters.
- 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
- 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
- 60 This material and its container must be disposed of as hazardous waste.

***National regulations:**

***Waterhazard class:** Water hazard class 3 (Self-assessment): extremely hazardous for water.

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 MSDS:** Safety Officer

***Contact:** Mr. Sean Murphy