

**PlasmaCAL ICP/ICPMS Standard –Beryllium 1000 µg/ml (Be)**

Revision: 07.08.2025

Product code: AC18.01267

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**1. Identification**

**Product identifier**

PlasmaCAL ICP/ICPMS Standard –Beryllium 1000 µg/ml (Be)

**Relevant identified uses of the substance or mixture and uses advised against**

**Use of the substance/mixture**

Reagents and laboratory chemicals  
Only for laboratory and analysis purposes.

**Uses advised against**

Do not use for private purposes (household).

**Details of the supplier of the safety data sheet**

**Details of the supplier of the safety data sheet**

Company name: AnalytiChem Services, Unipessoal, Lda  
Street: Rua de Júlio Dinis 676 7º  
Place: P-4050-320 Porto  
Telephone: +351 226002917  
E-mail: info@analytichem.com  
Contact person: SDS service department  
E-mail: SDS@analytichem.com  
Internet: www.analytichem.com  
Responsible Department: SDS service department

**Supplier or manufacturer details**

Company name: AnalytiChem Canada Inc.  
Street: Québec, CANADA  
Place: 21800 Clark Graham Ave  
CDN-H9X 4B6 Baie-D'Urfé  
Telephone: +1 (800) 361-6820 Telefax: +1 (800) 253-5549  
E-mail: info@analytichem.com  
Contact person: SDS service department  
E-mail: SDS@analytichem.com  
Internet: www.analytichem.com  
Responsible Department: AnalytiChem:  
EU-Belgium: AnalytiChem Belgium, Industriezone "De Arend" 2, 8210 Zedelgem, Belgium, +32 50 28 83 20  
EU-Germany: AnalytiChem Germany, Stempelstrasse 6, 47167 Duisburg, Germany, +49 203 51 94 – 200  
EU-Netherlands: AnalytiChem Netherlands, Communicatieweg 7, 3641 SG Mijdrecht, The Netherlands, +31 297 286848  
UK: AnalytiChem UK, Unit 7 Launton Business Center, Murdock Road, Bicester, OX26 4XB, England, +44 1869 355 500  
USA: AnalytiChem USA, 227 China Road, Winslow, Maine, 04901, United States, +1 800-244-8378  
Canada: AnalytiChem Canada, 21800 Clark Graham Avenue, Baie d'Urfe, H9X 4B6, Canada, +1 514-457-0701  
Australia: ORE Research & Exploration Pty Ltd, 37A Hosie Street, Bayswater North, 3153, Australia, +61 3 9729 0333  
**Emergency telephone number:** +1 703-741-5970 (CHEMTREC)

**Further Information**

No data available

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**2. Hazard identification****Classification of the substance or mixture****WHMIS 2015**

Corrosive to metals: Met. Corr. 1  
Carcinogenicity: Carc. 1B  
Acute toxicity: Acute Tox. 4 (inhalation)  
Skin corrosion/irritation: Skin Irrit. 2  
Serious eye damage/eye irritation: Eye Dam. 1  
Respiratory or skin sensitization: Skin Sens. 1  
Specific target organ toxicity - repeated exposure: STOT RE 1

**Label elements****WHMIS 2015****Signal word:**

Danger

**Pictograms:****Hazard statements**

May be corrosive to metals.  
Causes skin irritation.  
May cause an allergic skin reaction.  
Causes serious eye damage.  
Harmful if inhaled.  
May cause cancer.  
Causes damage to organs through prolonged or repeated exposure.

**Precautionary statements**

Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Keep only in original packaging.  
Do not breathe dust/fume/gas/mist/vapours/spray.  
Wash hands and face thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Use only outdoors or in a well-ventilated area.  
Contaminated work clothing should not be allowed out of the workplace.  
Wear protective gloves/protective clothing and eye protection/face protection.  
IF ON SKIN: Wash with plenty of water.  
Take off contaminated clothing and wash it before reuse.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
Call a POISON CENTER/doctor if you feel unwell.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.  
Continue rinsing.  
Immediately call a POISON CENTER/doctor.  
IF exposed or concerned: Get medical advice/attention.  
Absorb spillage to prevent material damage.  
Store locked up.  
Store in a corrosion resistant container with a resistant inner liner.  
Dispose of contents/container to an appropriate recycling or disposal facility.

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**Other hazards**

No data available

**3. Composition/information on ingredients****Mixtures****Chemical characterization**

Mixtures in aqueous solution

**Relevant ingredients**

| CAS No     | Chemical name     | Quantity          |
|------------|-------------------|-------------------|
| 7697-37-2  | nitric acid       | 1 - < 5 % (*)     |
| 19049-40-2 | Beryllium acetate | 0.5 - < 1.5 % (*) |

(\*) The actual concentration is withheld as a trade secret.

**Further Information**

No data available

**4. First-aid measures****Description of first aid measures****General information**

Self-protection of the first aider

**After inhalation**

Provide fresh air.

If breathing is irregular or stopped, administer artificial respiration.

Call a physician immediately.

**After contact with skin**

Wash immediately with: Water

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

Call a physician immediately.

**After contact with eyes**

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

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

**After ingestion**

Rinse mouth immediately and drink plenty of water.

Call a physician immediately.

**Most important symptoms and effects, whether acute or delayed**

corrosive

Irritant

Methaemoglobinaemia

Allergic reactions

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

No data available

**5. Fire-fighting measures****Extinguishing media****Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings.

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**Unsuitable extinguishing media**

No data available

**Specific hazards arising from the hazardous product**

Non-combustible liquids

Hazardous combustion products

In case of fire may be liberated:

Nitrogen oxides (NO<sub>x</sub>)

Metal oxide smoke, toxic

**Special protective equipment and precautions for fire-fighters**

In case of fire: Wear self-contained breathing apparatus.

In case of fire and/or explosion do not breathe fumes.

Avoid contact with skin, eyes and clothes.

**Additional information**

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

Move undamaged containers from immediate hazard area if it can be done safely.

Use water spray jet to protect personnel and to cool endangered containers.

**6. Accidental release measures****Personal precautions, protective equipment and emergency procedures****General advice**

Corrosive to metals.

Do not breathe vapour/aerosol.

**For non-emergency personnel**

Provide adequate ventilation.

Use personal protection equipment.

Avoid contact with skin, eyes and clothes.

Remove persons to safety.

Emergency procedures

Consult an expert

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

**For emergency responders**

Precautionary statements For emergency responders : Personal protection equipment: see section 8

**Environmental precautions**

Do not allow to enter into surface water or drains.

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

Cover drains.

Prevent spread over a wide area (e.g. by containment or oil barriers).

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

Collect in closed and suitable containers for disposal.

**For cleaning up**

Clean contaminated articles and floor according to the environmental legislation.

**Other information**

Provide adequate ventilation.

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

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

**Reference to other sections**

Safe handling: see section 7

Personal protection equipment: see section 8

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Disposal: see section 13

## 7. Handling and storage

Precautions for safe handling**Advice on safe handling**

Read label before use. Handle and open container with care.  
When using do not eat, drink, smoke, sniff. Use personal protection equipment.  
Provide adequate ventilation. Avoid contact with skin, eyes and clothes.  
Do not breathe vapour/aerosol. Use extractor hood (laboratory).

**Advice on protection against fire and explosion**

Usual measures for fire prevention.

**Advice on general occupational hygiene**

Keep away from food, drink and animal feedingstuffs. Remove contaminated, saturated clothing immediately.  
Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink. Avoid: aerosol or mist formation Do not breathe vapour/aerosol.

**Further information on handling**

Draw up and observe skin protection programme.  
Wash hands and face before breaks and after work and take a shower if necessary.  
Take off immediately all contaminated clothing and wash it before reuse.

Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Corrosive to metals.  
Unsuitable container/equipment material: Metal  
The product develops hydrogen in an aqueous solution in contact with metals.

**Hints on joint storage**

National regulations

**Further information on storage conditions**

Keep container tightly closed.

## 8. Exposure controls/Personal protection

Control parameters**Exposure limits (ACGIH)**

| CAS No    | Chemical name | ppm | mg/m <sup>3</sup> | Category      | Origin     |
|-----------|---------------|-----|-------------------|---------------|------------|
| 7697-37-2 | Nitric acid   | 2   | 5.2               | TWA (8 h)     | ACGIH-2025 |
|           |               | 4   | 10                | STEL (15 min) | ACGIH-2025 |

**Additional advice on limit values**

Observe in addition any national regulations!

Exposure controls**Appropriate engineering controls**

Technical measures and the application of suitable work processes have priority over personal protection equipment.  
If handled uncovered, arrangements with local exhaust ventilation have to be used.

**Individual protection measures, such as personal protective equipment****Eye/face protection**

goggles

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Wear eye/face protection.

Face protection umbrella

**Hand protection**

Wear suitable gloves.

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. Tested protective gloves must be worn. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

**Skin protection**

Wear suitable protective clothing. Take off immediately all contaminated clothing.

Wash hands before breaks and after work.

The choice of body protection depends on the concentration and quantity of hazardous substances. The chemical resistance of protective agents must be clarified with their suppliers.

**Respiratory protection**

Respiratory protection necessary at: aerosol or mist formation

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

**Thermal hazards**

No data available

**Environmental exposure controls**

Do not allow to enter into surface water or drains.

**9. Physical and chemical properties**

**Information on basic physical and chemical properties**

|                                                           |                   |                          |
|-----------------------------------------------------------|-------------------|--------------------------|
| Physical state:                                           | Liquid            |                          |
| Colour:                                                   | colourless        |                          |
| Odour:                                                    | odourless         |                          |
| Odour threshold:                                          | No data available |                          |
| Melting point/freezing point:                             |                   | No data available        |
| Boiling point or initial boiling point and boiling range: |                   | No data available        |
| Flammability:                                             |                   | No data available        |
| Lower explosive limits:                                   |                   | No data available        |
| Upper explosive limits:                                   |                   | No data available        |
| Flash point:                                              |                   | No data available        |
| Auto-ignition temperature:                                |                   | No data available        |
| Decomposition temperature:                                |                   | No data available        |
| pH-Value:                                                 |                   | No data available        |
| Viscosity / kinematic:                                    |                   | No data available        |
| Water solubility:                                         |                   | completely miscible      |
| Solubility in other solvents                              |                   |                          |
| No data available                                         |                   |                          |
| Dissolution rate:                                         |                   | No data available        |
| Partition coefficient n-octanol/water:                    |                   | No data available        |
| Dispersion stability:                                     |                   | No data available        |
| Vapour pressure:                                          |                   | No data available        |
| Vapour pressure:                                          |                   | No data available        |
| Density (at 21.7 °C):                                     |                   | ~1.022 g/cm <sup>3</sup> |
| Relative density:                                         |                   | No data available        |
| Bulk density:                                             |                   | No data available        |
| Relative vapour density:                                  |                   | No data available        |

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Particle characteristics:

No data available

**Other information****Information with regard to physical hazard classes**

Explosive properties

No data available

Sustained combustibility:

No data available

Self-ignition temperature

Solid:

No data available

Gas:

No data available

Oxidizing properties

No data available

**Other safety characteristics**

Evaporation rate:

No data available

Solvent separation test:

No data available

Solvent content:

No data available

Solid content:

No data available

Sublimation point:

No data available

Softening point:

No data available

Pour point:

No data available

No data available:

Viscosity / dynamic:

No data available

Flow time:

No data available

**Further Information**

Corrosive to metals.

**10. Stability and reactivity****Reactivity**

Corrosive to metals.

**Chemical stability**

The product is stable under storage at normal ambient temperatures.

**Possibility of hazardous reactions**

Alkali (lye)

**Conditions to avoid**

No data available

**Incompatible materials**

Cellulose

Metal

The product develops hydrogen in an aqueous solution in contact with metals.

**Hazardous decomposition products**

In case of fire may be liberated:

SECTION 5: Firefighting measures

**Further information**

No data available

**11. Toxicological information****Information on toxicological effects**

Toxicokinetics, metabolism and distribution

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There are no data available on the mixture itself.

**Acute toxicity**

Harmful if inhaled.

**ATEmix calculated**

ATE (oral) > 5000 mg/kg; ATE (dermal) > 2000 mg/kg

| CAS No     | Chemical name        |               |         |        |        |
|------------|----------------------|---------------|---------|--------|--------|
|            | Route of exposure    | Dose          | Species | Source | Method |
| 7697-37-2  | nitric acid          |               |         |        |        |
|            | inhalation vapour    | ATE 2,65 mg/l |         |        |        |
| 19049-40-2 | Beryllium acetate    |               |         |        |        |
|            | oral                 | ATE 100 mg/kg |         |        |        |
|            | inhalation vapour    | ATE 0,5 mg/l  |         |        |        |
|            | inhalation dust/mist | ATE 0,05 mg/l |         |        |        |

**Irritation and corrosivity**

Skin corrosion/irritation: Causes skin irritation.

Serious eye damage/eye irritation: Causes serious eye damage.

**Sensitizing effects**

May cause an allergic skin reaction. (Beryllium acetate)

**Carcinogenic/mutagenic/toxic effects for reproduction**

May cause cancer. (Beryllium acetate)

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met.

**STOT-single exposure**

Based on available data, the classification criteria are not met.

**STOT-repeated exposure**

Causes damage to organs through prolonged or repeated exposure. (Beryllium acetate)

**Aspiration hazard**

Based on available data, the classification criteria are not met.

**Information on likely routes of exposure**

There are no data available on the mixture itself.

**Specific effects in experiment on an animal**

There are no data available on the mixture itself.

**Additional information on tests**

There are no data available on the mixture itself.

**Practical experience**

There are no data available on the mixture itself.

**Information on other hazards****Endocrine disrupting properties**

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

**Other information**

There are no data available on the mixture itself.

**Further information**

There are no data available on the mixture itself.

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## 12. Ecological information

**Persistence and degradability**

There are no data available on the mixture itself.

**Bioaccumulative potential**

There are no data available on the mixture itself.

**Mobility in soil**

There are no data available on the mixture itself.

**Endocrine disrupting properties**

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

**Other adverse effects**

Discharge into the environment must be avoided.

**Further information**

Do not allow to enter into surface water or drains.

## 13. Disposal considerations

**Waste treatment methods****Disposal recommendations**

Send to a physico-chemical treatment facility under observation of official regulations.

Do not empty into drains.

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

**Contaminated packaging**

Handle contaminated packages in the same way as the substance itself.

Waste codes/waste designations according to EWC/AVV

## 14. Transport information

**Canadian TDG**

|                                     |                                                          |
|-------------------------------------|----------------------------------------------------------|
| <b><u>UN number:</u></b>            | UN 3264                                                  |
| <b><u>Proper shipping name:</u></b> | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.(nitric acid) |
| <b><u>Hazard classes:</u></b>       | 8                                                        |
| <b><u>Packing group:</u></b>        | III                                                      |
| Hazard label:                       | 8                                                        |
| Special Provisions:                 | 16                                                       |
| Limited quantity:                   | 5 L                                                      |

**Marine transport (IMDG)**

|                                                    |                                                          |
|----------------------------------------------------|----------------------------------------------------------|
| <b><u>UN number or ID number:</u></b>              | UN 3264                                                  |
| <b><u>United Nations proper shipping name:</u></b> | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.(nitric acid) |
| <b><u>name:</u></b>                                |                                                          |
| <b><u>Transport hazard class(es):</u></b>          | 8                                                        |
| <b><u>Packing group:</u></b>                       | III                                                      |
| Hazard label:                                      | 8                                                        |
| Special Provisions:                                | 223 274                                                  |
| Limited quantity:                                  | 5 L                                                      |
| Excepted quantity:                                 | E1                                                       |
| EmS:                                               | F-A, S-B                                                 |
| Segregation group:                                 | 1 - acids                                                |

**Air transport (ICAO-TI/IATA-DGR)**

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|                                             |                                                          |
|---------------------------------------------|----------------------------------------------------------|
| <b>UN number or ID number:</b>              | UN 3264                                                  |
| <b>United Nations proper shipping name:</b> | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.(nitric acid) |
| <b>Transport hazard class(es):</b>          | 8                                                        |
| <b>Packing group:</b>                       | III                                                      |
| Hazard label:                               | 8                                                        |
| Special Provisions:                         | A3 A803                                                  |
| Limited quantity Passenger:                 | 1 L                                                      |
| Passenger LQ:                               | Y841                                                     |
| Excepted quantity:                          | E1                                                       |
| IATA-packing instructions - Passenger:      | 852                                                      |
| IATA-max. quantity - Passenger:             | 5 L                                                      |
| IATA-packing instructions - Cargo:          | 856                                                      |
| IATA-max. quantity - Cargo:                 | 60 L                                                     |

**Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**15. Regulatory information****Canadian regulations****Provincial regulations**

Ingredients with workplace control parameters:

beryllium acetate , basic CAS-No 19049-40-2 TWA 0.002 mg/m<sup>3</sup>

Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)

Remarks Confirmed Human Carcinogen (means that the agent is carcinogenic to humans)

**16. Other information****Further Information**

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.

The receiver of our product is singularly responsible for adhering to existing laws and regulations.

Provide appropriate information, instructions and training to users

*(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*