

Safety data sheet
 according to 1907/2006/EC, Article 31

Page 1/10

Printing date 06.06.2023

Revision: 27.05.2023

Version number 6.03 (replaces version 6.02)

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** Multielement standard solution 1000 mg/l (23)
- **Article number:** 6332
- **Application of the substance / the mixture** Laboratory chemicals
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
 PANREAC QUIMICA S.L.U.
 C/Garraf 2
 Polígono Pla de la Bruguera
 E-08211 Castellar del Vallès (Barcelona)
 Tel. (+34) 937 489 400
 Fax. (+34) 937 489 401
 e-mail: product.safety@itwreagents.com
- **Further information obtainable from:** email: product.safety@panreac.com
- **1.4 Emergency telephone number:**
 Single telephone number for emergency calls: 112 (EU)
 Tel.: (+34) 937 489 499

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
 Skin Irrit. 2 H315 Causes skin irritation.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
 The product is classified and labelled according to the GB CLP regulation.
- **Hazard pictograms**



GHS07

- **Signal word** Warning
- **Hazard-determining components of labelling:**
 nitric acid
 cobalt dinitrate
 Nickel(II) nitrate hexahydrate

(Contd. on page 2)

GB

Trade name: Multielement standard solution 1000 mg/l (23)

(Contd. of page 1)

- **Hazard statements**
H315 Causes skin irritation.
- **Precautionary statements**
P264 Wash thoroughly after handling.
P302+P352 IF ON SKIN: Wash with plenty of water.
P321 Specific treatment (see on this label).
P332+P313 If skin irritation occurs: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
- **Additional information:**
EUH208 Contains Nickel(II) nitrate hexahydrate, cobalt dinitrate. May produce an allergic reaction.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.2 Mixtures**
- **Description:** aqueous solution

· **Dangerous components:**

CAS: 7784-27-2 EINECS: 236-751-8	aluminium nitrate Ox. Sol. 2, H272	>1-≤2.5%
CAS: 7697-37-2 EINECS: 231-714-2 Reg.nr.: 01-2119487297-23-XXXX	nitric acid Ox. Liq. 2, H272; Acute Tox. 1, H330; Met. Corr.1, H290; Skin Corr. 1A, H314, EUH071 Specific concentration limits: Ox. Liq. 2; H272: C ≥ 99% Ox. Liq. 3; H272: 70 % ≤ C < 99 %	>1-≤2.5%
CAS: 13446-18-9 EINECS: 233-826-7	Magnesium nitrate hexahydrate Ox. Sol. 2, H272	>1-≤2.5%
CAS: 13478-00-7 EINECS: 236-068-5 Reg.nr.: 01-2119492333-38-XXXX	Nickel(II) nitrate hexahydrate Ox. Sol. 2, H272; Resp. Sens. 1, H334; Muta. 2, H341; Repr. 1A, H360D; STOT RE 1, H372; Eye Dam. 1, H318; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302; Acute Tox. 4, H332; Skin Irrit. 2, H315; Skin Sens. 1, H317	≥0.3-<1%
CAS: 10196-18-6 EINECS: 231-943-8	Zinc nitrate hexahydrate Ox. Sol. 2, H272; Aquatic Chronic 1, H410; Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	≥0.25-≤1%
CAS: 10031-43-3 EINECS: 221-838-5 Reg.nr.: 01-2119969290-34-XXXX	Copper(II) nitrate trihydrate Ox. Sol. 2, H272; Skin Corr. 1A, H314; Aquatic Acute 1, H400; Aquatic Chronic 2, H411	≥0.25-<1%
CAS: 10141-05-6 EINECS: 233-402-1	cobalt dinitrate Resp. Sens. 1, H334; Muta. 2, H341; Carc. 1B, H350i; Repr. 1B, H360F; Aquatic Acute 1, H400 (M=10); Aquatic Chronic 1, H410 (M=10); Skin Sens. 1, H317 Specific concentration limit: Carc. 1B; H350i: C ≥ 0.01%	≥0.3-<1%
CAS: 10022-68-1 EINECS: 233-710-6	Nitric acid, cadmium salt, tetrahydrate Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332	≥0.25-≤1%

(Contd. on page 3)

Trade name: Multielement standard solution 1000 mg/l (23)

(Contd. of page 2)

CAS: 13453-38-8	Thallium(III)-nitrat-Trihydrat Acute Tox. 2, H300; Acute Tox. 2, H330; STOT RE 2, H373; Aquatic Chronic 2, H411	>0.1-<0.25%
CAS: 10022-31-8 EINECS: 233-020-5	barium nitrate Acute Tox. 3, H301; Acute Tox. 4, H332	>0.1-≤1%
CAS: 10099-74-8 EINECS: 233-245-9	lead dinitrate Repr. 1A, H360Df; STOT RE 2, H373; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302; Acute Tox. 4, H332, EUH201 Specific concentration limits: Repr. 2; H361f: C ≥ 2.5 % STOT RE 2; H373: C ≥ 0.5 %	>0.1-<0.25%
CAS: 7761-88-8 EINECS: 231-853-9 Reg.nr.: 01-2119513705-43-XXXX	silver nitrate Ox. Sol. 2, H272; Skin Corr. 1B, H314; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302	>0.1-<0.25%

· **SVHC**

10141-05-6	cobalt dinitrate
10022-68-1	Nitric acid, cadmium salt, tetrahydrate
10099-74-8	lead dinitrate

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

SECTION 4: First aid measures

· **4.1 Description of first aid measures**

· **General information:** Seek medical treatment.

· **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:**

Immediately wash with water and soap and rinse thoroughly.

Immediately remove any clothing soiled by the product.

· **After eye contact:**

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

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

No further relevant information available.

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

No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**

· **Suitable extinguishing agents:**

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

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

In case of fire, the following can be released:

Nitrogen oxides (NO_x)

Nickel oxide (NiO_x)

Non-combustible.

· **5.3 Advice for firefighters**

· **Protective equipment:** Wear self-contained respiratory protective device.

· **Additional information**

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

(Contd. on page 4)

Trade name: Multielement standard solution 1000 mg/l (23)

Contain escaping vapours with water.

(Contd. of page 3)

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Avoid substance contact.
Do not inhale steams/aerosols.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
Clean up affected area.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:** The product is not flammable.
- **7.2 Conditions for safe storage, including any incompatibilities**
 - **Storage:**
 - **Requirements to be met by storerooms and receptacles:** Provide acid-resistant floor.
 - **Information about storage in one common storage facility:** Not required.
 - **Further information about storage conditions:**
Open receptacle only under localised extractor facilities.
Keep container sealed.
 - **Recommended storage temperature:** Room Temperature
 - **Storage class:** 8 B
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**

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

7697-37-2 nitric acid

WEL Short-term value: 2.6 mg/m³, 1 ppm

10141-05-6 cobalt dinitrate

WEL Long-term value: 0.1 mg/m³
as Co; Carc, Sen

10022-68-1 Nitric acid, cadmium salt, tetrahydrate

WEL Long-term value: 0.025 mg/m³
as Cd, Carc

10022-31-8 barium nitrate

WEL Long-term value: 0.5 mg/m³
as Ba

(Contd. on page 5)

GB

Trade name: Multielement standard solution 1000 mg/l (23)

(Contd. of page 4)

- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Appropriate engineering controls** No further data; see section 7.
- **Individual protection measures, such as 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.
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.
Use suitable respiratory protective device only when aerosol or mist is formed.
- **Hand protection**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **For the permanent contact gloves made of the following materials are suitable:**
Recommended thickness of the material: ≥ 0.11 mm
Value for the permeation: Level ≥ 480 min
- **As protection from splashes gloves made of the following materials are suitable:**
Recommended thickness of the material: ≥ 0.11 mm
Value for the permeation: Level ≥ 480 min
- **Eye/face protection** Safety glasses
- **Body protection:** Acid resistant protective clothing

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **General Information**
- **Physical state** Fluid
- **Colour:** Green
- **Odour:** Odourless
- **Odour threshold:** Not determined.
- **Melting point/freezing point:** Undetermined.
- **Boiling point or initial boiling point and boiling range** 100 °C (7732-18-5 water)
- **Lower and upper explosion limit**
- **Lower:** Not determined.
- **Upper:** Not determined.

(Contd. on page 6)

Trade name: Multielement standard solution 1000 mg/l (23)

(Contd. of page 5)

· Flash point:	Not applicable.
· Decomposition temperature:	Not determined.
· pH at 20 °C	<1
· Viscosity:	
· Kinematic viscosity	Not determined.
· Dynamic:	Not determined.
· Solubility	
· water:	Fully miscible.
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure at 20 °C:	23 hPa (7732-18-5 water)
· Density and/or relative density	
· Density at 20 °C:	1.09 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
9.2 Other information	
· Appearance:	
· Form:	Liquid
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product does not present an explosion hazard.
· Solvent content:	
· Water:	88.5 %
· Solids content:	2.0 %
· Change in condition	
· Evaporation rate	Not determined.
Information with regard to physical hazard classes	
· Explosives	Void
· Flammable gases	Void
· Aerosols	Void
· Oxidising gases	Void
· Gases under pressure	Void
· Flammable liquids	Void
· Flammable solids	Void
· Self-reactive substances and mixtures	Void
· Pyrophoric liquids	Void
· Pyrophoric solids	Void
· Self-heating substances and mixtures	Void
· Substances and mixtures, which emit flammable gases in contact with water	Void
· Oxidising liquids	Void
· Oxidising solids	Void
· Organic peroxides	Void
· Corrosive to metals	Void
· Desensitised explosives	Void

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.

(Contd. on page 7)

Trade name: Multielement standard solution 1000 mg/l (23)

(Contd. of page 6)

- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** In the event of fire: See chapter 5

SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **LD/LC50 values relevant for classification:**
Quantitative data on the toxicological effect of this product are not available.

Components	Type	Value	Species
ATE (Acute Toxicity Estimates)			
Oral	LD50	2,272 mg/kg	
Inhalative	LC50/4 h	23 mg/l	

- **Skin corrosion/irritation** Causes skin irritation.
- **Serious eye damage/irritation**
- **After inhalation:** Irritant to skin and mucous membranes.
- **11.2 Information on other hazards**

· Endocrine disrupting properties
None of the ingredients is listed.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties**
The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**
- **Additional ecological information:**
- **General notes:**
Do not allow product to reach ground water, water course or sewage system.
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, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.
Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

GB
(Contd. on page 8)

Trade name: Multielement standard solution 1000 mg/l (23)

(Contd. of page 7)

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Chemicals must be disposed of in compliance with the respective national regulations.
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.
Packagings that may not be cleansed are to be disposed of in the same manner as the product.

SECTION 14: Transport information

- | | |
|---|---|
| · 14.1 UN number or ID number | UN3264 |
| · ADR, IMDG, IATA | |
| · 14.2 UN proper shipping name | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID, RED FUMING) |
| · ADR, IATA | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID, RED FUMING, Cobalt nitrate), MARINE POLLUTANT |
| · IMDG | |
| · 14.3 Transport hazard class(es) | |
| · ADR | |
|  | |
| · Class | 8 (C1) Corrosive substances. |
| · Label | 8 |
| · IMDG | |
|   | |
| · Class | 8 Corrosive substances. |
| · Label | 8 |
| · IATA | |
|  | |
| · Class | 8 Corrosive substances. |
| · Label | 8 |
| · 14.4 Packing group | II |
| · ADR, IMDG, IATA | |
| · 14.5 Environmental hazards: | Product contains environmentally hazardous substances: Nickel(II) nitrate hexahydrate |

(Contd. on page 9)

Trade name: Multielement standard solution 1000 mg/l (23)

(Contd. of page 8)

· Marine pollutant:	Symbol (fish and tree)
· 14.6 Special precautions for user	Warning: Corrosive substances.
· Hazard identification number (Kemler code):	80
· EMS Number:	F-A,S-B
· Segregation groups	(SGG1) Acids
· Stowage Category	A
· Stowage Code	SW2 Clear of living quarters.
· 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category	2
· Tunnel restriction code	E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID, RED FUMING), 8, II

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **National regulations:**

· **Substances of very high concern (SVHC) according to UK REACH**

10141-05-6	cobalt dinitrate
10022-68-1	Nitric acid, cadmium salt, tetrahydrate
10099-74-8	lead dinitrate

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

SECTION 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.

· **Relevant phrases**

- H272 May intensify fire; oxidiser.
- H290 May be corrosive to metals.
- H300 Fatal if swallowed.
- H301 Toxic if swallowed.

(Contd. on page 10)

Trade name: Multielement standard solution 1000 mg/l (23)

(Contd. of page 9)

H302 Harmful if swallowed.
 H312 Harmful in contact with skin.
 H314 Causes severe skin burns and eye damage.
 H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.
 H318 Causes serious eye damage.
 H319 Causes serious eye irritation.
 H330 Fatal if inhaled.
 H332 Harmful if inhaled.
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 H335 May cause respiratory irritation.
 H341 Suspected of causing genetic defects.
 H350i May cause cancer by inhalation.
 H360D May damage the unborn child.
 H360Df May damage the unborn child. Suspected of damaging fertility.
 H360F May damage fertility.
 H372 Causes damage to organs through prolonged or repeated exposure.
 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.
 H411 Toxic to aquatic life with long lasting effects.
 EUH071 Corrosive to the respiratory tract.
 EUH201 Contains lead. Should not be used on surfaces liable to be chewed or sucked by children.

• **Department issuing SDS:** Dept. Compliance

• **Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 Ox. Liq. 2: Oxidizing liquids – Category 2
 Ox. Sol. 2: Oxidizing solids – Category 2
 Met. Corr. 1: Corrosive to metals – Category 1
 Acute Tox. 2: Acute toxicity – Category 2
 Acute Tox. 3: Acute toxicity – Category 3
 Acute Tox. 4: Acute toxicity – Category 4
 Acute Tox. 1: Acute toxicity – Category 1
 Skin Corr. 1A: Skin corrosion/irritation – Category 1A
 Skin Corr. 1B: Skin corrosion/irritation – Category 1B
 Skin Irrit. 2: Skin corrosion/irritation – Category 2
 Eye Dam. 1: Serious eye damage/eye irritation – Category 1
 Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
 Resp. Sens. 1: Respiratory sensitisation – Category 1
 Skin Sens. 1: Skin sensitisation – Category 1
 Muta. 2: Germ cell mutagenicity – Category 2
 Carc. 1B: Carcinogenicity – Category 1B
 Repr. 1A: Reproductive toxicity – Category 1A
 Repr. 1A: Reproductive toxicity – Category 1A
 Repr. 1B: Reproductive toxicity – Category 1B
 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
 STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
 STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
 Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
 Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
 Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

• *** Data compared to the previous version altered.**