

Safety Data Sheet Multi Elements 1000mg/L Al, As, Cd, Co, Cr, Cu, Fe, Mn, Ni, Pb, Se, V, Zn

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SECTION 1: Identification

GHS Product identifier

Product name	Multi Elements 1000mg/L Al, As, Cd, Co, Cr, Cu, Fe, Mn, Ni, Pb, Se, V, Zn
Product number	5222/
Brand	ACR

Recommended use of the chemical and restrictions on use

Laboratory and Analytical Reagent

Supplier's details

Name	ChemSupply Australia Pty Ltd
Address	38-50 Bedford Street 5013 Gillman South Australia Australia
Telephone	08 8440 2000
email	www.chemsupply.com

Emergency phone number

CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)

SECTION 2: Hazard identification

General hazard statement

Classified as dangerous goods according to the Australian Dangerous Goods Code (ADG).

Classified as Hazardous according to the Globally Harmonised System of classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

Classification of the substance or mixture

GHS classification in accordance with: UN GHS revision 7

- Corrosive to metals, Cat. 1
- Carcinogenicity, Cat. 1
- Serious eye damage/eye irritation, Cat. 1
- Skin corrosion/irritation, Cat. 1B
- Germ cell mutagenicity, Cat. 1B

GHS label elements, including precautionary statements

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Pictograms



Signal word

Danger

Hazard statement(s)

H290	May be corrosive to metals
H314	Causes severe skin burns and eye damage
H333	May be harmful if inhaled
H350	May cause cancer [route]

Precautionary statement(s)

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P234	Keep only in original packaging.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P264	Wash hands thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302+P352	IF ON SKIN: Wash with plenty of water/Soap.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304+P312	IF INHALED: Call a POISON CENTER/doctor/... if you feel unwell.
P304+P340	IF INHALED: Remove person to fresh air and keep 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/doctor/physician
P332+P313	If skin irritation occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P390	Absorb spillage to prevent material-damage.
P405	Store locked up.
P406	Store in a corrosive resistant/... container with a resistant inner liner.
P501	Dispose of contents/container to approved waste disposal facility

SECTION 3: Composition/information on ingredients

Mixtures

Other components either not classified as Hazardous under the GHS, or below cut-off concentrations to be classified as Hazardous.

Hazardous components

Component	Concentration
Nitric acid (70% to 80%) (CAS no.: 7697-37-2; EC no.: 231-714-2; Index no.: 007-030-00-3)	<= 3 % (volume)
CLASSIFICATIONS: Oxidizing liquids, Cat. 3; Acute toxicity, inhalation, Cat. 3; Skin corrosion/irritation, Cat. 1A. HAZARDS: H272 - May intensify fire; oxidizer; H314 - Causes severe skin burns and eye damage; H331 - Toxic if inhaled. [SCLs/M-factors/ATEs]: Inhalation: ATE = 2.65 mg/L (Vapours); Ox. Liq. 3; H272: C ≥ 65 %; Skin Corr. 1A; H314: C ≥ 20 %; Skin Corr. 1B; H314: 5 % ≤ C < 20 %	
Arsenic acid (CAS no.: 7778-39-4; EC no.: 231-901-9)	<= 0.2 % (weight)
CLASSIFICATIONS: Carcinogenicity, Cat. 1; Germ cell mutagenicity, Cat. 2; Specific target organ toxicity following repeated exposure, Cat. 2; Skin corrosion/irritation, Cat. 1; Acute toxicity, oral, Cat. 3; Acute toxicity, dermal, Cat. 4; Acute toxicity, inhalation, Cat. 3. HAZARDS: No data available.	
SELENIOS ACID (CAS no.: 7783-00-8; EC no.: 231-974-7)	<= 0.2 % (weight)
CLASSIFICATIONS: Acute toxicity, oral, Cat. 3; Acute toxicity, inhalation, Cat. 3; Hazardous to the aquatic environment, long-term (chronic), Cat. 1; Hazardous to the aquatic environment, short-term (acute), Cat. 1. HAZARDS: No data available.	
Cadmium nitrate (CAS no.: 10325-94-7; EC no.: 233-710-6; Index no.: 048-014-00-6)	<= 0.2 % (weight)

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CLASSIFICATIONS: Carcinogenicity, Cat. 1B; Germ cell mutagenicity, Cat. 1B; Acute toxicity, dermal, Cat. 4; Specific target organ toxicity following repeated exposure, Cat. 1; Toxic to reproduction, Cat. 1; Acute toxicity, oral, Cat. 3; Acute toxicity, inhalation, Cat. 1. HAZARDS: No data available. [SCLs/M-factors/ATEs]: Carc. 1B; H350: C ≥ 0,01 %	
Cobalt (II) Nitrate (CAS no.: 10141-05-6; EC no.: 233-402-1; Index no.: 027-009-00-2)	≤ 0.2 % (weight)
CLASSIFICATIONS: Carcinogenicity, Cat. 1B; Skin corrosion/irritation, Cat. 1B; Acute toxicity, oral, Cat. 4; Specific target organ toxicity following repeated exposure, Cat. 1; Toxic to reproduction, Cat. 1; Respiratory sensitizer, Cat. 1; Skin sensitizer, Cat. 1; Hazardous to the aquatic environment, long-term (chronic), Cat. 1; Hazardous to the aquatic environment, short-term (acute), Cat. 1; Serious eye damage/eye irritation, Cat. 1. HAZARDS: No data available. [SCLs/M-factors/ATEs]: Carc. 1B; H350i: C ≥ 0,01 %; M=10	
Chromium (III) Nitrate (CAS no.: 13548-38-4)	≤ 0.2 % (weight)
CLASSIFICATIONS: Oxidizing solids, Cat. 3; Skin corrosion/irritation, Cat. 2; Skin sensitizer, Cat. 1; Serious eye damage/eye irritation, Cat. 2A; Hazardous to the aquatic environment, long-term (chronic), Cat. 2. HAZARDS: No data available.	
Nickel nitrate (CAS no.: 14216-75-2; EC no.: 238-076-4; Index no.: 028-012-00-1)	≤ 0.2 % (weight)
CLASSIFICATIONS: Oxidizing solids, Cat. 2; Carcinogenicity, Cat. 1; Germ cell mutagenicity, Cat. 2; Toxic to reproduction, Cat. 1B; Acute toxicity, inhalation, Cat. 4; Acute toxicity, oral, Cat. 4; Specific target organ toxicity following repeated exposure, Cat. 1; Skin corrosion/irritation, Cat. 2; Serious eye damage/eye irritation, Cat. 1; Respiratory sensitizer, Cat. 1; Skin sensitizer, Cat. 1; Hazardous to the aquatic environment, short-term (acute), Cat. 1; Hazardous to the aquatic environment, long-term (chronic), Cat. 1. HAZARDS: H272 - May intensify fire; oxidizer; H302 - Harmful if swallowed; H315 - Causes skin irritation; H317 - May cause an allergic skin reaction; H318 - Causes serious eye damage; H332 - Harmful if inhaled; H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled; H341 - Suspected of causing genetic defects [route]; H350i - ; H360D - May damage the unborn child; H372 - Causes damage to organs [organs] through prolonged or repeated exposure [route]; H400 - Very toxic to aquatic life; H410 - Very toxic to aquatic life with long lasting effects. [SCLs/M-factors/ATEs]: STOT RE 1; H372: C ≥ 1 %; STOT RE 2; H373: ,1 % < C < 1 %; Skin Irrit. 2; H315: C ≥ 20 %; Skin Sens. 1; H317: C > ,01 %; M=1	
Lead nitrate (CAS no.: 10099-74-8; EC no.: 233-245-9)	≤ 0.2 % (weight)
CLASSIFICATIONS: Acute toxicity, inhalation, Cat. 4; Acute toxicity, oral, Cat. 4; Toxic to reproduction, Cat. 1; Specific target organ toxicity following repeated exposure, Cat. 2; Hazardous to the aquatic environment, long-term (chronic), Cat. 1; Hazardous to the aquatic environment, short-term (acute), Cat. 1. HAZARDS: No data available.	
Ammonium vanadate (CAS no.: 7803-55-6; EC no.: 232-261-3)	≤ 0.2 % (weight)
CLASSIFICATIONS: Acute toxicity, oral, Cat. 3; Skin corrosion/irritation, Cat. 2; Serious eye damage/eye irritation, Cat. 2A; Acute toxicity, inhalation, Cat. 1; Specific target organ toxicity following single exposure, Cat. 3; Germ cell mutagenicity, Cat. 2. HAZARDS: No data available.	

SECTION 4: First-aid measures

Description of necessary first-aid measures

General advice	For advice, contact a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor (at once).
If inhaled	If inhaled, remove from contaminated area. Apply artificial respiration if not breathing.
In case of skin contact	If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water.
In case of eye contact	If in eyes, hold eyelids apart and flush eye continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor, or for at least 15 minutes.
If swallowed	If swallowed, do NOT induce vomiting.

Most important symptoms/effects, acute and delayed

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

Indication of immediate medical attention and special treatment needed, if necessary

For advice in an emergency, contact a Poisons Information Centre (Phone Australia 131 126) or a doctor at once.

SECTION 5: Fire-fighting measures

Suitable extinguishing media

Use fire extinguishing media appropriate for surrounding environment. Use water spray, dry chemical, carbon dioxide, or appropriate foam. This material is substantially water.

Specific hazards arising from the chemical

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Contact with metals may produce hydrogen gas. Excess thermal conditions or contact with combustible materials may cause decomposition and yield nitrogen oxides.

Hazardous Combustion Products

Hydrogen, nitrogen oxides.

Special protective actions for fire-fighters

Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) operated in positive pressure mode. Fight fire from safe location.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Vapours can accumulate in low areas. For personal protection see section 8.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Contain the spill. Place inert absorbent material onto spillage. Collect the material and place into a suitable labelled container. Do not dilute material but contain. Dispose of waste according to the applicable local and national regulations.

SECTION 7: Handling and storage

Precautions for safe handling

Corrosive liquid. Attacks skin and eyes. Causes burns. Avoid breathing in vapours, mist or fumes. Wear suitable protective clothing, gloves and eye/face protection when mixing and using. Use in designated areas with adequate ventilation. Keep containers tightly closed. Ensure a high level of personal hygiene is maintained when using this product, that is, always wash hands after handling, and before eating, drinking, smoking or using the toilet facilities. Avoid exposure. Do not handle until all safety precautions have been read and understood.

Conditions for safe storage, including any 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

Control parameters

1. Nitric acid (70% to 80%) (CAS: 7697-37-2)

TWA (Inhalation): 2 ppm; 5.2 mg/m³; Australia (AU/SWA)

STEL (Inhalation): 4 ppm; 10 mg/m³; Australia (AU/SWA)

2. Nickel nitrate (CAS: 14216-75-2)

TWA (Inhalation): 0.1 mg/m³; Australia (AU/SWA)

Advisory carc cat: Carc. 1A

Appropriate engineering controls

Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, gas, etc.) below recommended exposure limits.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

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The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.

Skin protection

Clean impervious clothing should be worn. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Body protection

Suitable protective workwear, e.g. cotton overalls buttoned at neck and wrist is recommended. Chemical resistant apron is recommended where large quantities are handled.

Respiratory protection

If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable vapor/ mist filter should be used. Refer to relevant regulations for further information concerning respiratory protective requirements. Reference should be made to Australian Standards AS/ NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

Environmental exposure controls

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Liquid
Appearance	Clear colourless liquid
Color	Colourless
Odor	Slight acidic odor
Odor threshold	No data available.
Melting point/freezing point	No data available.
Boiling point or initial boiling point and boiling range	No data available.
Flammability	Not flammable
Lower and upper explosion limit/flammability limit	N/A
Flash point	N/A
Explosive properties	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
Oxidizing properties	No data available.
pH	Acidic (pH < 1)
Kinematic viscosity	No data available.
Solubility	Miscible
Partition coefficient n-octanol/water (log value)	No data available.
Vapor pressure	No data available.
Evaporation rate	No data available.
Density and/or relative density	Approx 1
Relative vapor density	No data available.

Particle characteristics

No data available.

Supplemental information regarding physical hazard classes

No data available.

Further safety characteristics (supplemental)

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No data available.

SECTION 10: Stability and reactivity

Reactivity

Reacts with incompatible materials

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

May react vigorously or violently with the incompatible materials listed above. Excess thermal conditions may yield hazardous nitrogen oxides. Contact with metals may produce hazardous concentrations of hydrogen gas.

Will corrode metals. Will produce toxic gases on contact with cyanides, sulphides etc.

Conditions to avoid

Avoid storing in direct sunlight and avoid extremes of temperature.

Incompatible materials

Strong bases, strong oxidisers, reducing agents, metals, combustible materials.

Hazardous decomposition products

Nitrogen oxides, hydrogen.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

Corrosive. Oxidiser. May be harmful if swallowed, inhaled, or absorbed through the skin. Causes irritation of the eyes, skin, respiratory tract, and gastrointestinal tract. May enter lungs if swallowed or vomited. Liquid and vapors are corrosive. May cause tissue damage.

Skin corrosion/irritation

Causes severe skin burns. Corrosive to skin. The symptoms may include redness, itching and swelling, irritation, severe pain and chemical burns with resultant skin/tissue destruction.

Serious eye damage/irritation

Causes serious eye damage. Eye contact will cause stinging, blurring, tearing, severe pain and chemical burns, resulting in possible blindness.

Respiratory or skin sensitization

Inhalation of product vapours may cause irritation of nose, throat and respiratory system and possible harmful corrosive effects to the respiratory system. Not expected to be a respiratory or skin sensitiser.

Germ cell mutagenicity

May cause genetic defects.

Carcinogenicity

Suspected of causing cancer. Classified as a suspected human carcinogen.

Occupational exposure to strong-inorganic-acid mists containing nitric acid may be carcinogenic to humans (Group 1) according to the IARC (International Agency

<https://publications.iarc.fr/Book-And-Report-Series/Iarc-Monographs-On-The-Identification-Of-Carcinogenic-Hazards-To-Humans/Occupational-Exposures-To-Mists-And-Vapours-From-Strong-Inorganic-Acids-And-Other-Industrial-Chemicals-1992>

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Reproductive toxicity

Not considered to be toxic to reproduction.

Specific target organ toxicity (STOT) - single exposure

Not expected to cause toxicity to a specific target organ.

Specific target organ toxicity (STOT) - repeated exposure

Not expected to cause toxicity to a specific target organ.

Aspiration hazard

Not expected to be an aspiration hazard.

SECTION 12: Ecological information

Toxicity

No data available on product

Persistence and degradability

No data available on product

Bioaccumulative potential

No data available.

Mobility in soil

No data available.

Results of PBT and vPvB assessment

No data available.

Endocrine disrupting properties

No data available.

Other adverse effects

No data available

SECTION 13: Disposal considerations

Disposal methods

Product disposal

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers.

Other disposal recommendations

Do not discharge this material into waterways, drains and sewers.

SECTION 14: Transport information

ADG (Road and Rail)

UN Number: 3264

Class: 8

Packing Group: III

Proper Shipping Name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Contains Nitric Acid)

Marine pollutant: No

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IERG No: 154

Hazchem emergency action code (EAC)

2X

IMDG

UN Number: 3264

Class: 8

Packing Group: III

EMS Number: F-A, S-B

Proper Shipping Name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Contains Nitric Acid)

Special Provisions: 223, 274

Marine Pollutant: No

IATA

UN Number: 3264

Class: 8

Packing Group: III

Proper Shipping Name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Contains Nitric Acid)

Pax/Cargo Pkg Inst: 852

Max Net Qty/Pkg: 5L

Cargo Aircraft Only Pkg Inst: 856

Max Net Qty/Pkg: 60L

Special Provisions: A3, A803

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

S7

SECTION 16: Other information

Further information/disclaimer

ChemSupply Australia Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon ChemSupply Australia Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of ChemSupply Australia Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

Preparation information

All information provided in this data sheet or by our technical representatives is compiled from the best knowledge available to us. However, since data, safety standards and government regulations are subject to change and the conditions of handling and use, or misuse, are beyond our control, we make no warranty either expressed or implied, with respect to the completeness or accuracy to the information contained herein. ChemSupply Australia Pty Ltd accepts no responsibility whatsoever for its accuracy or for any results that may be obtained by customers from using the data and disclaims all liability for reliance on information provided in this data sheet or by our technical representatives.

Standard for the Uniform Scheduling of Medicines and Poisons, Commonwealth of Australia

National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.'

Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals', July 2020.

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Safe Work Australia, 'National Guide for Classifying Hazardous Chemicals', July 2020.

Safe Work Australia, Workplace Exposure Standards for Airbourne Contaminants, December 2019

Safe Work Australia, Hazardous Chemical Information System (HCIS), hcis.safeworkaustralia.gov.au

IATA, Dangerous Goods Regulations (DGR)

IMO, International Maritime Dangerous Goods Code (IMDG)