

Multielement-Standard "Zinkoxid Pharma 4"–Std. 1 5 Elemente 50 g ZnO /I + 125 ml

Salpetersäure 65%/I

Revision date: 16.02.2024

Product code: 33164

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

1.1. Product identifier

Multielement-Standard "Zinkoxid Pharma 4"-Std. 1 5 Elemente 50 g ZnO /l + 125 ml Salpetersäure 65%/l

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture

Laboratory chemicals

Industrial uses: Uses of substances as such or in preparations at industrial sites

Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Uses advised against

Do not use for private purposes (household).

1.3. Details of the supplier of the safety data sheet

Company name:	AnalytiChem GmbH	
	ACD	
Street:	Stempelstraße 6	
Place:	D-47167 Duisburg	
Telephone:	0203/5194-0	Telefax:0203/5194-290
E-mail:	info@analytichem.de	
Contact person:	Abteilung Produktsicherheit	Telephone:0203/5194-107/117
E-mail:	produktsicherheit@analytichem.de	
Internet:	www.analytichem.de	
Responsible Department:	Abteilung Produktsicherheit	
1.4. Emergency telephone	For Hazardous Materials [or Dangerou	us Goods] Incidents Spill, Leak, Fire,
<u>number:</u>	Exposure, or Accident Call CHEMTRE 1-800-424-9300 Outside USA and Ca accepted)	EC Day or Night Within USA and Canada: nada: +1 703-741-5970 (collect calls

Further Information

This product is a mixture. REACH Registration Number see section 3.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Met. Corr. 1; H290 Acute Tox. 4; H332 Skin Corr. 1B; H314 Eye Dam. 1; H318 Aquatic Chronic 3; H412

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Hazard components for labelling zinc nitrate nitric acid Signal word: Danger



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Pictograms:					
Hazard statements					
H290	May be corrosive to metals.				
H314	Causes severe skin burns and eye damage.				
H332	Harmful if inhaled.				
H412	Harmful to aquatic life with long lasting effects.				
Precautionary statemen	ts				
P260	Do not breathe dust/fume/gas/mist/vapours/spray.				
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.				
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.				
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/doctor.				

Special labelling of certain mixtures

EUH071 Corrosive to the respiratory tract.

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Mixtures in aqueous solution

Relevant ingredients

CAS No	Chemical name	Chemical name			
	EC No	EC No Index No REACH No			
	Classification (Regula	tion (EC) No 1272/2008)			
7779-88-6	zinc nitrate	zinc nitrate			
	Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, STOT SE 3, Aquatic Acute 1, Aquatic Chronic 2; H302 H315 H318 H335 H400 H411				
7697-37-2	nitric acid		10 - < 15 %		
	231-714-2 007-030-00-3 01-2119487297-23				
Ox. Liq. 3, Met. Corr. 1, Acute Tox. 3, Skin Corr. 1A; H272 H290 H331 H314 EUH071					

Full text of H and EUH statements: see section 16.

Specific Cor	nc. Limits, M-fac	tors and ATE			
CAS No	EC No	Chemical name			
	Specific Conc. Limits, M-factors and ATE				
7779-88-6		zinc nitrate 10 - < 15 %			
	oral: ATE = 500 mg/kg				
7697-37-2	231-714-2	nitric acid	10 - < 15 %		
	inhalation: ATE 2,65 mg/l (vapours) Ox. Liq. 3; H272: >= 65 - 100 Skin Corr. 1A; H314: >= 20 - 100 Skin Corr. 1B; H314: >= 5 - < 20				



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Further Information

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

First aider: Pay attention to self-protection!

After inhalation

Provide fresh air.

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. Protect uninjured eye.

After ingestion

Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Do not allow a neutralisation agent to be drunk. Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

Causes burns. Irritant Cough Dyspnoea Vomiting Methaemoglobinaemia Risk of serious damage to eyes.

4.3. Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

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

Unsuitable extinguishing media

no restriction

5.2. Special hazards arising from the substance or mixture

Non-combustible liquids Hazardous combustion products In case of fire may be liberated: Nitrogen oxides (NOx)

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus. In case of fire and/or explosion do not breathe fumes.



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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.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Corrosive to metals.

For non-emergency personnel

Provide adequate ventilation. Use personal protection equipment. Avoid contact with skin, eyes and clothes. Remove persons to safety. Emergency procedures Do not breathe dust/fume/gas/mist/vapours/spray.

For emergency responders

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

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. 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). Collect in closed and suitable containers for disposal. Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

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.

6.4. Reference to other sections

Safe handling: see section 7 Personal protection equipment: see section 8 Disposal: see section 13

SECTION 7: Handling and storage

7.1. 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.



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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.

7.2. 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.

Further information on storage conditions

Keep container tightly closed.

7.3. Specific end use(s)

Laboratory chemicals

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

CAS No	Substance	ppm	mg/m³	fib/cm³	Category	Origin
7697-37-2	Nitric acid	1	2.6		STEL (15 min)	

8.2. 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

Wear eye/face protection.

Hand protection

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: vertrieb@kcl.de With specification (test according to EN374):

By long-term hand contact Recommended glove articles: KCL 741 Dermatril® L Recommended material: NBR (Nitrile rubber) 0,11 mm Wearing time with permanent contact: > 480 min

By short-term hand contact Recommended glove articles: KCL 741 Dermatril® L Recommended material: NBR (Nitrile rubber) 0,11mm Wearing time with occasional contact (splashes): > 480 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet<(>,<)> supplied by us and for the designated use. When dissolving in or mixing with other substances



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and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Skin protection

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

Wash hands before breaks and after work.

Respiratory protection

Respiratory protection necessary at: aerosol or mist formation

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<u>J.</u>	Physical state:		
	Colour:	Liquid clear	
	Odour:	like: Nitric acid	
	Melting point/freezing point:		No data available
	Boiling point or initial boiling point and		No data available
	boiling range:		
	Flammability:		No data available
	Lower explosion limits:		No data available
	Upper explosion limits:		No data available
	Flash point:		No data available
	Auto-ignition temperature:		No data available
	Decomposition temperature:		No data available
	pH-Value:		acidic
	Viscosity / kinematic:		No data available
	Water solubility:		No data available
	Solubility in other solvents		
	No data available		
	Partition coefficient n-octanol/water:		No data available
	Vapour pressure:		No data available
	Vapour pressure:		No data available
	Density:		No data available
	Bulk density:		No data available
	Relative vapour density:		No data available
<u>9.2</u>	2. Other information		
	Information with regard to physical haza	ard classes	
	Explosive properties		
	No data available		
	Sustaining combustion:		No data available
	Self-ignition temperature		
	Solid:		No data available
	Gas:		No data available
	Oxidizing properties		
	Oxidizing		
	Other safety characteristics		
	Evaporation rate:		No data available
	Solvent separation test:		No data available
	Solvent content:		0
	Solid content:		0



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No data available

No data available No data available

No data available

No data available

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Sublimation point: Softening point: Pour point: No data available: Viscosity / dynamic: Flow time:

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Further Information

Corrosive to metals.

SECTION 10: Stability and reactivity

10.1. Reactivity

Corrosive to metals. Oxidising agent

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Alkali (lye)

The product develops hydrogen in an aqueous solution in contact with metals. Amines, Ammonia, Alcohols, Alkali metals, Hydrogen peroxide Copper, Combustible solids, Solvent, Alkaline earth metal, mercury (Hg).

10.4. Conditions to avoid

No data available

10.5. Incompatible materials

Cellulose

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

10.6. Hazardous decomposition products

In case of fire may be liberated: SECTION 5: Firefighting measures

Further information

No data available

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Toxicocinetics, metabolism and distribution

There are no data available on the preparation/mixture itself.

Acute toxicity

Harmful if inhaled.

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) 4,769 mg/l



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CAS No	Chemical name	Chemical name				
	Exposure route	Dose	Species	Source	Method	
7779-88-6	zinc nitrate	zinc nitrate				
	oral	ATE 500 mg/kg				
7697-37-2	nitric acid			-		
	inhalation vapour	ATE 2,65 mg/l				

Irritation and corrosivity

Causes severe skin burns and eye damage. Causes serious eye damage.

Causes serious eye damage.

Corrosive to the respiratory tract.

Following ingestion Gastric perforation

Irritating to respiratory system. Pulmonary oedema

see also Section 4

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

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

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

Aspiration hazard

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

Specific effects in experiment on an animal

There are no data available on the preparation/mixture itself.

Additional information on tests

There are no data available on the preparation/mixture itself.

Practical experience

There are no data available on the preparation/mixture itself.

11.2. Information on other hazards

Other information

There are no data available on the preparation/mixture itself.

Further information

There are no data available on the preparation/mixture itself.

SECTION 12: Ecological information

12.1. Toxicity

Harmful to aquatic life with long lasting effects.



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CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] [d]	Species	Source	Method
7697-37-2	nitric acid						
	Acute fish toxicity	LC50 mg/l	1559	96 h	Topeka shiner	Environmental Toxicology and Chemistry,	other: ASTM E729-26
	Fish toxicity	NOEC	268 mg/l		juvenile Topeka shiner and with juvenile Fathead m	Study report (2009)	Growth tests estimated the test chemical
	Algae toxicity	NOEC mg/l	> 419		several benthic diatoms; see results	Marine Biology 43:307-315 (1977)	Ten cultures of benthic diatoms were iso
	Acute bacteria toxicity	EC50 mg/l()	> 1000	3 h	Activated sludge	Study report (2008)	OECD Guideline 209

12.2. Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

12.3. Bioaccumulative potential

There are no data available on the mixture itself.

12.4. Mobility in soil

There are no data available on the mixture itself.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. 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.

12.7. Other adverse effects

Discharge into the environment must be avoided.

Further information

Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste. Send to a physico-chemical treatment facility under observation of official regulations. Do not empty into drains.

Contaminated packaging

Handle contaminated packages in the same way as the substance itself. The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

SECTION 14: Transport information

Land transport (ADR/RID)

<u>14.1. UN number or ID number:</u>	UN 2031
14.2. UN proper shipping name:	NITRIC ACID
14.3. Transport hazard class(es):	8
14.4. Packing group:	II
Hazard label:	8



Safety Data Sheet

according to Regulation (EC) No 1907/2006

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Classification code:	C1			
Limited quantity:	1 L			
Excepted quantity:	E2			
Transport category:	2			
Hazard No:	80			
Tunnel restriction code:	E			
Inland waterways transport (ADN)				
14.1. UN number or ID number:	UN 2031			
14.2. UN proper shipping name:	NITRIC ACID			
14.3. Transport hazard class(es):	8			
14.4. Packing group:				
Hazard label:	8			
Classification code:	C1			
Limited quantity:	1 L			
Excepted quantity:	E2			
Marine transport (IMDG)				
14.1. UN number or ID number:	UN 2031			
14.2. UN proper shipping name:	NITRIC ACID			
14.3. Transport hazard class(es):	8			
14.4. Packing group:	II			
Hazard label:	8			
Special Provisions:	-			
Limited quantity:	1 L			
Excepted quantity:	E2			
EmS:	F-A, S-B			
Air transport (ICAO-TI/IATA-DGR)				
14.1. UN number or ID number:	UN 2031			
14.2. UN proper shipping name:	NITRIC ACID			
14.3. Transport hazard class(es):	8			
14.4. Packing group:	II			
Hazard label:	8			
Special Provisions:	A212			
Limited quantity Passenger:	Forbidden			
Passenger LQ:	Forbidden			
Excepted quantity:	E0	E a sela i al al a se		
IATA-packing instructions - Passenger:		Forbidden		
IATA-max. quantity - Passenger: IATA-packing instructions - Cargo:		Forbidden		
IATA-packing instructions - Cargo.		855 30 L		
		30 L		
14.5. Environmental hazards				
ENVIRONMENTALLY HAZARDOUS:	No			
SECTION 15: Regulatory information				
15.1. Safety, health and environmental regu	lations/legislation s	pecific for the substance or	mixture	
EU regulatory information				
Restrictions on use (REACH, annex XVII)	:			
Entry 3, Entry 75 Information according to Directive	Not subject to 201	2/18/EU (SEVESO III)		
2012/18/EU (SEVESO III): Marketing and use of explosives precurso	rs (Regulation (FU) 2	019/1148):		



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Acquisition, introduction, possession or use of this product by the general public is restricted by Regulation (EU) 2019/1148. All suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point.

National regulatory information

Employment restrictions:	Observe restrictions to employment for juveniles according to the 'juvenile
	work protection guideline' (94/33/EC).
Water hazard class (D):	3 - highly hazardous to water

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 12.

Abbreviations and acronyms

Ox. Liq: Oxidising liquid Met. Corr: Substance or mixture corrosive to metals Acute Tox: Acute toxicity Skin Corr: Skin corrosion Skin Irrit: Skin irritation Eye Dam: Eye damage STOT SE: Specific target organ toxicity - single exposure Aquatic Acute: Acute aquatic hazard Aquatic Chronic: Chronic aquatic hazard

Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]

Classification	Classification procedure
Met. Corr. 1; H290	On basis of test data
Acute Tox. 4; H332	Calculation method
Skin Corr. 1B; H314	Calculation method
Eye Dam. 1; H318	Calculation method
Aquatic Chronic 3; H412	Calculation method

Relevant H and EUH statements (number and full text)

H272	May intensify fire; oxidiser.
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH071	Corrosive to the respiratory tract.

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.



Safety Data Sheet

according to Regulation (EC) No 1907/2006

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

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