

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Multiementstandard 4 Elements

Revision date: 16.01.2023

Product code: 34329

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

### 1.1. Product identifier

Multiementstandard 4 Elements

### 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	
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 number:

For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

### 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

STOT RE 2; H373

Full text of hazard statements: see SECTION 16.

### 2.2. Label elements

#### Regulation (EC) No 1272/2008

#### Hazard components for labelling

potassium iodide

Signal word: Warning

#### Pictograms:



#### Hazard statements

H373 May cause damage to organs through prolonged or repeated exposure.

#### Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P314 Get medical advice/attention if you feel unwell.

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P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**2.3. Other hazards**

No data available

**SECTION 3: Composition/information on ingredients**

**3.2. Mixtures**

**Chemical characterization**

Mixtures in aqueous solution

**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
7647-14-5	sodium chloride			1 - < 5 %
	231-598-3		01-2119485491-33	
7758-02-3	potassium bromide			1 - < 5 %
	231-830-3		01-2119962195-33	
	Eye Irrit. 2; H319			
7681-11-0	potassium iodide			1 - < 5 %
	231-659-4		01-2119906339-35	
	STOT RE 1; H372			

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

**Specific Conc. Limits, M-factors and ATE**

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
7647-14-5	231-598-3	sodium chloride	1 - < 5 %
	dermal: LD50 = > 10000 mg/kg; oral: LD50 = 3550 mg/kg		
7758-02-3	231-830-3	potassium bromide	1 - < 5 %
	dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 5000 mg/kg		
7681-11-0	231-659-4	potassium iodide	1 - < 5 %
	oral: LD50 = 3118 mg/kg		

**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**

No data available

**After inhalation**

Provide fresh air.

**After contact with skin**

Wash immediately with: Water

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

**After contact with eyes**

Rinse immediately carefully and thoroughly with eye-bath or water.

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#### After ingestion

Rinse mouth immediately and drink plenty of water.  
Call a physician immediately.

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

No data available

#### 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

#### 5.3. Advice for firefighters

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

#### Additional information

Use water spray jet to protect personnel and to cool endangered containers.  
Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### General advice

No data available

##### 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). 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.

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#### **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**

Handle and open container with care.  
Keep container tightly closed.  
Do not breathe vapour/aerosol.  
Avoid contact with skin, eyes and clothes.

##### **Advice on protection against fire and explosion**

Usual measures for fire prevention.

##### **Advice on general occupational hygiene**

Wash contaminated clothing prior to re-use.  
Do not breathe vapour/aerosol.  
Avoid contact with skin, eyes and clothes.

##### **Further information on handling**

Wash contaminated clothing before reuse.  
Wash hands before breaks and after work.

#### **7.2. Conditions for safe storage, including any incompatibilities**

##### **Requirements for storage rooms and vessels**

Keep container tightly closed.

##### **Hints on joint storage**

TRGS 510

##### **Further information on storage conditions**

Store in a dry place.

#### **7.3. Specific end use(s)**

Laboratory chemicals

### **SECTION 8: Exposure controls/personal protection**

#### **8.1. Control parameters**

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**DNEL/DMEL values**

CAS No	Substance	Exposure route	Effect	Value
7647-14-5	sodium chloride			
Consumer DNEL, acute		inhalation	systemic	443,28 mg/m <sup>3</sup>
Worker DNEL, long-term		dermal	systemic	295,52 mg/kg bw/day
Consumer DNEL, long-term		dermal	systemic	126,65 mg/kg bw/day
Consumer DNEL, acute		dermal	systemic	126,65 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	126,65 mg/kg bw/day
Consumer DNEL, acute		oral	systemic	126,65 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	2068,62 mg/m <sup>3</sup>
Worker DNEL, acute		inhalation	systemic	2068,62 mg/m <sup>3</sup>
Worker DNEL, acute		dermal	systemic	295,52 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	443,28 mg/m <sup>3</sup>
7758-02-3	potassium bromide			
Worker DNEL, long-term		inhalation	systemic	4,75 mg/m <sup>3</sup>
Worker DNEL, long-term		dermal	systemic	95 mg/kg bw/day
Worker DNEL, acute		dermal	systemic	95 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	1,66 mg/m <sup>3</sup>
Consumer DNEL, long-term		dermal	systemic	95 mg/kg bw/day
Consumer DNEL, acute		dermal	systemic	95 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,475 mg/kg bw/day
Consumer DNEL, acute		oral	systemic	50 mg/kg bw/day

**PNEC values**

CAS No	Substance	Environmental compartment	Value
7647-14-5	sodium chloride		
		Freshwater	5 mg/l
		Micro-organisms in sewage treatment plants (STP)	500 mg/l
		Soil	4,86 mg/kg
7758-02-3	potassium bromide		
		Freshwater	0,52 mg/l
		Freshwater (intermittent releases)	109 mg/l
		Marine water	41 mg/l
		Micro-organisms in sewage treatment plants (STP)	100 mg/l
		Soil	3,2 mg/kg

**8.2. Exposure controls**

**Appropriate engineering controls**

Technical measures and the application of suitable work processes have priority over personal protection

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equipment.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**

goggles

**Hand protection**

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: [vertrieb@kcl.de](mailto: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) 0,11mm  
Wearing time with permanent contact: >480min

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): >480min

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 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](http://www.kcl.de)).

**Skin protection**

Wear suitable protective clothing.  
Wash hands before breaks and after work.

**Respiratory protection**

Respiratory protection necessary at: aerosol or mist formation

**Thermal hazards**

No data available

**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**

Physical state:	Liquid	
Colour:		
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		
Solid/liquid:		No data available
Gas:		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
Viscosity / kinematic:		No data available
Water solubility:		No data available

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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:

No data available

Relative density:

No data available

Bulk density:

No data available

Relative vapour density:

No data available

Particle characteristics:

No data available

**9.2. Other information**

**Information with regard to physical hazard classes**

Explosive properties

No data available

Sustaining combustion:

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:

0

Solid content:

0

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**

No data available

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

There are no data available on the mixture itself.

**10.2. Chemical stability**

There are no data available on the mixture itself.

**10.3. Possibility of hazardous reactions**

There are no data available on the mixture itself.

**10.4. Conditions to avoid**

There are no data available on the mixture itself.

**10.5. Incompatible materials**

There are no data available on the mixture itself.

**10.6. Hazardous decomposition products**

There are no data available on the mixture itself.

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**Further information**

There are no data available on the mixture itself.

**SECTION 11: Toxicological information**

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

**Toxicokinetics, metabolism and distribution**

There are no data available on the mixture itself.

**Acute toxicity**

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

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7647-14-5	sodium chloride				
	oral	LD50 3550 mg/kg	Rat	Study report	The study methodology followed appeared
	dermal	LD50 > 10000 mg/kg	Rabbit	Study report	The study methodology followed appeared to
7758-02-3	potassium bromide				
	oral	LD50 > 5000 mg/kg	Rat	Study report (1992)	EPA OPP 81-1
	dermal	LD50 > 2000 mg/kg	Rabbit	Study report (1988)	other: EPA FIFRA 81-6
7681-11-0	potassium iodide				
	oral	LD50 3118 mg/kg	Rat	Study report (1980)	OECD Guideline 401

**Irritation and corrosivity**

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

**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**

May cause damage to organs through prolonged or repeated exposure. (potassium iodide)

**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.

**11.2. Information on other hazards**



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**Endocrine disrupting properties**

There are no data available on the mixture itself.

**Other information**

There are no data available on the mixture itself.

**Further information**

There are no data available on the mixture itself.

**SECTION 12: Ecological information**

**12.1. Toxicity**

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

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
7647-14-5	sodium chloride					
	Acute fish toxicity	LC50 mg/l	5840	96 h	Lepomis macrochirus	Study report (1985) other: ASTM E729
	Acute crustacea toxicity	EC50 mg/l	4136	48 h	Daphnia magna	J. fish. Res. Bd. Canada, 29: 1691-1700. OECD Guideline 202
	Fish toxicity	NOEC	252 mg/l	33 d	Pimephales promelas	Study report (1985) OECD Guideline 210
	Crustacea toxicity	NOEC	314 mg/l	21 d	Daphnia pulex	Memorandum of agreement No. 5429, Kentuc OECD Guideline 211
7758-02-3	potassium bromide					
	Acute fish toxicity	LC50 mg/l	> 440	96 h	Scophthalmus maximus	Study report (2000) OECD Guideline 203
	Acute algae toxicity	ErC50 mg/l	> 440	72 h	Skeletonema costatum	Study report (2000) OECD Guideline 201
	Acute crustacea toxicity	EC50 mg/l	> 100	48 h	Daphnia magna	Study report (1996) OECD Guideline 202
	Fish toxicity	NOEC	10 mg/l	124 d	Poecilia reticulata	Fd. Chem. Toxic. Vol. 21, No. 4, 369-378 Dutch Standardisation Organisation
	Crustacea toxicity	NOEC	7,5 mg/l	21 d	Daphnia magna	Ecotoxicology and Environmental Safety, other: OECD
	Acute bacteria toxicity	(EC50 mg/l)	> 1000	3 h	activated sludge of a predominantly domestic sewage	Study report (2007) OECD Guideline 209
7681-11-0	potassium iodide					
	Acute fish toxicity	LC50 mg/l	3780	96 h	Oncorhynchus mykiss	Publication (1995) other: Protocol to d
	Acute crustacea toxicity	EC50 mg/l	1,27	48 h	Daphnia magna	Study report (2012) OECD Guideline 202

**12.2. Persistence and degradability**

There are no data available on the mixture itself.

**12.3. Bioaccumulative potential**

There are no data available on the mixture itself.

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**BCF**

CAS No	Chemical name	BCF	Species	Source
7758-02-3	potassium bromide	0,23	Artemia salina	Environmental Toxicology

**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**

There are no data available on the mixture itself.

**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 allow to enter into surface water or drains.

**Contaminated packaging**

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)**

- 14.1. UN number or ID number:** No dangerous good in sense of this transport regulation.
- 14.2. UN proper shipping name:** No dangerous good in sense of this transport regulation.
- 14.3. Transport hazard class(es):** No dangerous good in sense of this transport regulation.
- 14.4. Packing group:** No dangerous good in sense of this transport regulation.

**Inland waterways transport (ADN)**

- 14.1. UN number or ID number:** No dangerous good in sense of this transport regulation.
- 14.2. UN proper shipping name:** No dangerous good in sense of this transport regulation.
- 14.3. Transport hazard class(es):** No dangerous good in sense of this transport regulation.
- 14.4. Packing group:** No dangerous good in sense of this transport regulation.

**Marine transport (IMDG)**

- 14.1. UN number or ID number:** No dangerous good in sense of this transport regulation.
- 14.2. UN proper shipping name:** No dangerous good in sense of this transport regulation.
- 14.3. Transport hazard class(es):** No dangerous good in sense of this transport regulation.
- 14.4. Packing group:** No dangerous good in sense of this transport regulation.

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

- 14.1. UN number or ID number:** No dangerous good in sense of this transport regulation.
- 14.2. UN proper shipping name:** No dangerous good in sense of this transport regulation.
- 14.3. Transport hazard class(es):** No dangerous good in sense of this transport regulation.
- 14.4. Packing group:** No dangerous good in sense of this transport regulation.

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

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**14.6. Special precautions for user**

No dangerous good in sense of this transport regulation.

**14.7. Maritime transport in bulk according to IMO instruments**

No dangerous good in sense of this transport regulation.

**SECTION 15: Regulatory information**

**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

**EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 75

**National regulatory information**

Water hazard class (D): 2 - obviously hazardous to water

**Additional information**

No data available

**SECTION 16: Other information**

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

Classification	Classification procedure
STOT RE 2; H373	Calculation method

**Relevant H and EUH statements (number and full text)**

- H319 Causes serious eye irritation.
- H372 Causes damage to organs (thyroid gland) through prolonged or repeated exposure if swallowed.
- H373 May cause damage to organs through prolonged or repeated exposure.

**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.

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