

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Revision Date 04.08.2021

Version 9.1

SECTION 1. Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

Catalogue No.	100961
Product name	Total Hardness Cell Test Method: photometric 5 - 215 mg/l Ca 0.7 - 30.1 °d 0.9 - 37.6 °e 1.2 - 53.7 °f 7 - 301 mg/l CaO 12 - 537 mg/l CaCO ₃ Spectroquant®
	H
REACH Registration Number	This product is a mixture. REACH Registration Number see section 3.

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

Identified uses	Reagent for analysis For additional information on uses please refer to the Merck Chemicals portal (www.merckgroup.com).
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1.3 Details of the supplier of the safety data sheet

Company	Merck KGaA * 64271 Darmstadt * Germany * Phone: +49 6151 72-0
Responsible Department	LS-QHC * e-mail: prodsafe@merckgroup.com

1.4 Emergency telephone number Please contact the regional company representation in your country.**SECTION 2. Hazards identification****2.1 Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)**

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

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Product name Total Hardness Cell Test Method: photometric 5 - 215 mg/l Ca
0.7 - 30.1 °d
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Corrosive to metals, Category 1, H290
Reproductive toxicity, Category 1B, H360D

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

Labelling.(REGULATION (EC) No 1272/2008)

Hazard pictograms



Signal word
Danger

Hazard statements

H290 May be corrosive to metals.
H360D May damage the unborn child.

Precautionary statements

Prevention

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.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/
hearing protection.

Response

P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P390 Absorb spillage to prevent material damage.

Restricted to professional users.

Reduced labelling (≤125 ml)

Hazard pictograms



Signal word
Danger

Hazard statements

H360D May damage the unborn child.

Precautionary statements

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.

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Contains: Imidazole

2.3 Other hazards

None known.

SECTION 3. Composition/information on ingredients

Chemical nature Aqueous solution of inorganic and organic compounds.

3.1 Substance

Not applicable

3.2 Mixture

Hazardous components (REGULATION (EC) No 1272/2008)

Chemical name (Concentration)

CAS-No.	Registration number	Classification
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Imidazole ($\geq 0,3\%$ - $< 1\%$)

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

288-32-4 *)

Acute toxicity, Category 4, H302
Skin corrosion, Category 1C, H314
Reproductive toxicity, Category 1B, H360D

*) A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4. First aid measures

4.1 Description of first aid measures

General advice

Show this safety data sheet to the doctor in attendance.

After inhalation: fresh air. Call in physician.

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

We have no description of any symptoms of toxicity.

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4.3 Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Not combustible.

Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters

Special protective equipment for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information

Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

Indications about waste treatment see section 13.

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SECTION 7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Keep locked up or in an area accessible only to qualified or authorised persons.

Recommended storage temperature see product label.

The data applies to the entire pack.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8. Exposure controls/personal protection

8.1 Control parameters

Derived No Effect Level (DNEL)

Imidazole (288-32-4)

Worker DNEL, longterm	Systemic effects	inhalation	10,6 mg/m ³
Worker DNEL, longterm	Systemic effects	dermal	1,5 mg/kg Body weight

Predicted No Effect Concentration (PNEC)

Imidazole (288-32-4)

PNEC Fresh water	0,13 mg/l
PNEC Marine water	0,013 mg/l
PNEC Aquatic intermittent release	1,3 mg/l
PNEC Fresh water sediment	0,336 mg/kg
PNEC Marine sediment	0,0336 mg/kg
PNEC Soil	0,0425 mg/kg

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PNEC Sewage treatment plant 10 mg/l

8.2 Exposure controls

Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

Individual protection measures

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Eye/face protection

Protective spectacles with side shields, arc goggles, or other approved eye protection. Safety glasses

Hand protection

full contact:

Glove material: Nitrile rubber
Glove thickness: 0,11 mm
Break through time: > 480 min

splash contact:

Glove material: Nitrile rubber
Glove thickness: 0,11 mm
Break through time: > 480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).

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).

Respiratory protection

required when vapours/aerosols are generated.

Recommended Filter type: Filter P 3 (acc. to DIN 3181) for solid and liquid particles of toxic and very toxic substances

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.

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Environmental exposure controls

Do not let product enter drains.

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	liquid
Colour	colourless
Odour	odourless
Odour Threshold	Not applicable
pH	7,6 at 20 °C
Melting point	No information available.
Boiling point	No information available.
Flash point	does not flash Not applicable
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Vapour pressure	No information available.
Relative vapour density	No information available.
Density	ca.0,999 g/cm ³ at 20 °C
Relative density	No information available.
Water solubility	at 20 °C soluble
Partition coefficient: n-octanol/water	No information available.

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Auto-ignition temperature No information available.
Decomposition temperature No information available.
Viscosity, dynamic No information available.
Explosive properties Not classified as explosive.
Oxidizing properties none

9.2 Other data

none

SECTION 10. Stability and reactivity

10.1 Reactivity

See section 10.3

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

Violent reactions possible with:

The generally known reaction partners of water.

10.4 Conditions to avoid

no information available

10.5 Incompatible materials

no information available

10.6 Hazardous decomposition products

no information available

SECTION 11. Toxicological information

11.1 Information on toxicological effects

Mixture

Acute oral toxicity

This information is not available.

Acute inhalation toxicity

This information is not available.

Acute dermal toxicity

This information is not available.

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Skin irritation

This information is not available.

Eye irritation

This information is not available.

Sensitisation

This information is not available.

Germ cell mutagenicity

This information is not available.

Carcinogenicity

This information is not available.

Reproductive toxicity

This information is not available.

Teratogenicity

This information is not available.

CMR effects

Teratogenicity:

May damage the unborn child.

Specific target organ toxicity - single exposure

This information is not available.

Specific target organ toxicity - repeated exposure

This information is not available.

Aspiration hazard

This information is not available.

11.2 Further information

Other dangerous properties can not be excluded.

This substance should be handled with particular care.

Components

Imidazole

Acute oral toxicity

LD50 Rat: 970 mg/kg

OECD Test Guideline 401

Skin irritation

Rabbit

Result: Corrosive

OECD Test Guideline 404

Eye irritation

Rabbit

Result: Causes serious eye damage.

OECD Test Guideline 405

Germ cell mutagenicity

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Genotoxicity in vivo
In vivo micronucleus test
Mouse
male and female
Oral
Result: negative
Method: OECD Test Guideline 474

Genotoxicity in vitro
unscheduled DNA synthesis assay
rat hepatocytes
Result: negative
Method: OECD Test Guideline 482

Ames test
Salmonella typhimurium
Result: negative
Method: OECD Test Guideline 471

In vitro mammalian cell gene mutation test
Chinese hamster lung cells
Result: negative
Method: OECD Test Guideline 476

SECTION 12. Ecological information

Mixture

12.1 Toxicity

No information available.

12.2 Persistence and degradability

No information available.

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6 Other adverse effects

Discharge into the environment must be avoided.

Components

Imidazole

Toxicity to fish

LC50 *Leuciscus idus* (Golden orfe): ca. 280 mg/l; 48 h
DIN 37 412 T 15 (External MSDS)

Toxicity to daphnia and other aquatic invertebrates

static test EC50 *Daphnia magna* (Water flea): 341,5 mg/l; 48 h
OECD Test Guideline 202

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Toxicity to algae

static test ErC50 *Desmodesmus subspicatus* (green algae): 133 mg/l; 72 h
DIN 38412

Toxicity to bacteria

Respiration inhibition EC50 activated sludge: > 1.000 mg/l; 30 min
OECD Test Guideline 209

Biodegradability

90 - 100 %; 18 d; aerobic
OECD Test Guideline 301A
Readily biodegradable

Partition coefficient: n-octanol/water

log Pow: -0,02
OECD Test Guideline 107
Bioaccumulation is not expected. (Lit.)

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

SECTION 13. Disposal considerations

Waste treatment methods

See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14. Transport information

Land transport (ADR/RID)

14.1 UN number	UN 3316
14.2 Proper shipping name	CHEMICAL KIT
14.3 Class	9
14.4 Packing group	III
14.5 Environmentally hazardous	--
14.6 Special precautions for user	yes
Tunnel restriction code	E

Inland waterway transport (ADN)

Not relevant

Air transport (IATA)

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H

14.1 UN number UN 3316
14.2 Proper shipping name CHEMICAL KIT
14.3 Class 9
14.4 Packing group III
14.5 Environmentally hazardous --
14.6 Special precautions for user no

Sea transport (IMDG)

14.1 UN number UN 3316
14.2 Proper shipping name CHEMICAL KIT
14.3 Class 9
14.4 Packing group III
14.5 Environmentally hazardous --
14.6 Special precautions for user yes
EmS F-A S-P

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not relevant

THIS TRANSPORT DATA APPLIES TO THE ENTIRE PACK!

SECTION 15. Regulatory information

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

EU regulations

Major Accident Hazard ZEU_SEVES3
Legislation Not applicable

Occupational restrictions Take note of Dir 94/33/EC on the protection of young people at work. Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Regulation (EC) No 1005/2009 on substances not regulated that deplete the ozone layer

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Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC not regulated

Substances of very high concern (SVHC) 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 $\geq 0.1\%$ (w/w).

Storage class 3
The data applies to the entire pack.

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

SECTION 16. Other information

Full text of H-Statements referred to under sections 2 and 3.

H290 May be corrosive to metals.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H360D May damage the unborn child.

Training advice

Provide adequate information, instruction and training for operators.

Labelling

Hazard pictograms



Signal word
Danger

Hazard statements

H290 May be corrosive to metals.
H360 May damage fertility or the unborn child.

Precautionary statements

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Prevention

P201 Obtain special instructions before use.

Response

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

Further information

Restricted to professional users.

Contains: Imidazole

Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

Regional representation

This information is given on the authorised Safety Data Sheet for your country.

The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.

The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we transition our branding. However, all of the information in the document regarding the product remains unchanged and matches the product ordered. For further information please contact mlsbranding@sial.com.

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	H-1K
REACH Registration Number	This product is a mixture. REACH Registration Number see section 3.

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

Identified uses	Reagent for analysis For additional information on uses please refer to the Merck Chemicals portal (www.merckgroup.com).
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1.3 Details of the supplier of the safety data sheet

Company	Merck KGaA * 64271 Darmstadt * Germany * Phone: +49 6151 72-0
Responsible Department	LS-QHC * e-mail: prodsafe@merckgroup.com

1.4 Emergency telephone number Please contact the regional company representation in your country.**SECTION 2. Hazards identification****2.1 Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)**

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H-1K

Flammable liquid, Category 3, H226

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

Labelling.(REGULATION (EC) No 1272/2008)

Hazard pictograms



Signal word

Warning

Hazard statements

H226 Flammable liquid and vapour.

Precautionary statements

Prevention

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.

No smoking.

P233 Keep container tightly closed.

P240 Ground and bond container and receiving equipment.

P241 Use explosion-proof electrical/ ventilating/ lighting equipment.

P242 Use non-sparking tools.

P243 Take action to prevent static discharges.

Reduced labelling (≤125 ml)

Hazard pictograms



Signal word

Warning

2.3 Other hazards

None known.

SECTION 3. Composition/information on ingredients

Chemical nature

Aqueous solution of inorganic and organic compounds.

3.1 Substance

Not applicable

3.2 Mixture

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H-1K

Hazardous components (REGULATION (EC) No 1272/2008)

Chemical name (Concentration)

CAS-No.	Registration number	Classification
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ethanol (>= 30 % - < 50 %)

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

64-17-5 *)

Flammable liquid, Category 2, H225
Eye irritation, Category 2, H319

*) A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4. First aid measures

4.1 Description of first aid measures

General advice

Show this safety data sheet to the doctor in attendance.

After inhalation: fresh air.

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

After eye contact: rinse out with plenty of water. Remove contact lenses.

After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

4.2 Most important symptoms and effects, both acute and delayed

irritant effects, respiratory paralysis, Dermatitis, Dizziness, narcosis, inebriation, euphoria, Nausea, Vomiting

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO₂), Dry powder, Foam

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

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H-1K

5.2 Special hazards arising from the substance or mixture

Combustible.

Vapours are heavier than air and may spread along floors.

Forms explosive mixtures with air at elevated temperatures.

Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

Special protective equipment for firefighters

In the event of fire, wear self-contained breathing apparatus.

Further information

Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

6.2 Environmental precautions

Do not let product enter drains. Risk of explosion.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

Indications about waste treatment see section 13.

SECTION 7. Handling and storage

7.1 Precautions for safe handling

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Hygiene measures

Change contaminated clothing. Preventive skin protection recommended. Wash hands after working with substance.

Change contaminated clothing. Wash hands after working with substance.

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H-1K

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Keep locked up or in an area accessible only to qualified or authorised persons.

Recommended storage temperature see product label.

The data applies to the entire pack.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8. Exposure controls/personal protection

8.1 Control parameters

Derived No Effect Level (DNEL)

ethanol (64-17-5)

Worker DNEL, acute	Local effects	inhalation	1900 mg/m ³
Worker DNEL, longterm	Systemic effects	dermal	343 mg/kg Body weight
Worker DNEL, longterm	Systemic effects	inhalation	950 mg/m ³
Consumer DNEL, acute	Local effects	inhalation	950 mg/m ³
Consumer DNEL, longterm	Systemic effects	dermal	206 mg/kg Body weight
Consumer DNEL, longterm	Systemic effects	inhalation	114 mg/m ³
Consumer DNEL, longterm	Systemic effects	oral	87 mg/kg Body weight

Predicted No Effect Concentration (PNEC)

ethanol (64-17-5)

PNEC Fresh water	0,96 mg/l
PNEC Marine water	0,79 mg/l
PNEC Fresh water sediment	3,6 mg/kg
PNEC Soil	0,63 mg/kg
PNEC Aquatic intermittent release	2,75 mg/l
PNEC Sewage treatment plant	580 mg/l
PNEC oral	720 mg/kg

8.2 Exposure controls

Engineering measures

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 100961
Product name Total Hardness Cell Test Method: photometric 5 - 215 mg/l Ca
0.7 - 30.1 °d
0.9 - 37.6 °e
1.2 - 53.7 °f
7 - 301 mg/l CaO
12 - 537 mg/l CaCO₃ Spectroquant®
H-1K

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

Individual protection measures

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Eye/face protection

Protective spectacles with side shields, arc goggles, or other approved eye protection. Safety glasses

Hand protection

full contact:

Glove material: butyl-rubber
Glove thickness: 0,7 mm
Break through time: > 480 min

splash contact:

Glove material: Nitrile rubber
Glove thickness: 0,40 mm
Break through time: > 120 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 898 Butoject® (full contact), KCL 730 Camatril® -Velours (splash contact).

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).

Respiratory protection

required when vapours/aerosols are generated.

Recommended Filter type: Filter A-(P2)

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.

Environmental exposure controls

Do not let product enter drains.

Risk of explosion.

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

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0.9 - 37.6 °e
1.2 - 53.7 °f
7 - 301 mg/l CaO
12 - 537 mg/l CaCO₃ Spectroquant®
H-1K

Form	liquid
Colour	colourless
Odour	ethanolic
Odour Threshold	No information available.
pH	ca. 7,5 at 20 °C
Melting point	No information available.
Boiling point	No information available.
Flash point	ca. 25 °C
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Vapour pressure	No information available.
Relative vapour density	No information available.
Density	ca.0,929 g/cm ³ at 20 °C
Relative density	No information available.
Water solubility	No information available.
Partition coefficient: n-octanol/water	No information available.
Auto-ignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	No information available.
Explosive properties	Not classified as explosive.

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according to Regulation (EC) No. 1907/2006

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Product name Total Hardness Cell Test Method: photometric 5 - 215 mg/l Ca
0.7 - 30.1 °d
0.9 - 37.6 °e
1.2 - 53.7 °f
7 - 301 mg/l CaO
12 - 537 mg/l CaCO₃ Spectroquant®
H-1K

Oxidizing properties none

9.2 Other data

none

SECTION 10. Stability and reactivity

10.1 Reactivity

Vapour/air-mixtures are explosive at intense warming.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

Risk of explosion/exothermic reaction with:

hydrogen peroxide, perchlorates, perchloric acid, Nitric acid, mercury(II) nitrate, permanganic acid, Nitriles, peroxi compounds, Strong oxidizing agents, nitrosyl compounds, Peroxides, sodium, Potassium, halogen oxides, calcium hypochlorite, nitrogen dioxide, metallic oxides, uranium hexafluoride, iodides, Chlorine, Alkali metals, Alkaline earth metals, alkali oxides, Ethylene oxide

silver, with, Nitric acid

silver compounds, with, Ammonia

potassium permanganate, with, conc. sulfuric acid

Risk of ignition or formation of inflammable gases or vapours with:

halogen-halogen compounds, chromium(VI) oxide, chromyl chloride, Fluorine, hydrides, Oxides of phosphorus, platinum

Nitric acid, with, potassium permanganate

10.4 Conditions to avoid

Heating.

10.5 Incompatible materials

rubber, various plastics

10.6 Hazardous decomposition products

no information available

SECTION 11. Toxicological information

11.1 Information on toxicological effects

Mixture

Acute oral toxicity

Symptoms: Nausea, Vomiting

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according to Regulation (EC) No. 1907/2006

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1.2 - 53.7 °f
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12 - 537 mg/l CaCO₃ Spectroquant®
H-1K

Acute inhalation toxicity

absorption

Symptoms: Possible damages: , slight mucosal irritations

Acute dermal toxicity

This information is not available.

Skin irritation

Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product.

Eye irritation

Possible damages: slight irritation

Sensitisation

This information is not available.

Germ cell mutagenicity

This information is not available.

Carcinogenicity

This information is not available.

Reproductive toxicity

This information is not available.

Teratogenicity

This information is not available.

Specific target organ toxicity - single exposure

This information is not available.

Specific target organ toxicity - repeated exposure

This information is not available.

Aspiration hazard

This information is not available.

11.2 Further information

Dizziness, inebriation, narcosis, respiratory paralysis

Systemic effects:

euphoria

After absorption of large quantities:

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

Components

ethanol

Acute oral toxicity

LD50 Rat: 10.470 mg/kg

OECD Test Guideline 401

Acute inhalation toxicity

LC50 Rat: 124,7 mg/l; 4 h ; vapour

OECD Test Guideline 403

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1.2 - 53.7 °f
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H-1K

Skin irritation

Rabbit
Result: No skin irritation
OECD Test Guideline 404

Eye irritation

Rabbit
Result: Eye irritation
OECD Test Guideline 405

Sensitisation

Local lymph node assay (LLNA) Mouse
Result: negative
Method: OECD Test Guideline 429

Germ cell mutagenicity

Genotoxicity in vitro
Ames test
Salmonella typhimurium
Result: negative
Method: OECD Test Guideline 471

In vitro mammalian cell gene mutation test

Mouse lymphoma test
Result: negative
Method: OECD Test Guideline 476

Reproductive toxicity

Application Route: Oral
Mouse
Method: OECD Test Guideline 416

SECTION 12. Ecological information

Mixture

12.1 Toxicity

No information available.

12.2 Persistence and degradability

No information available.

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6 Other adverse effects

Discharge into the environment must be avoided.

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according to Regulation (EC) No. 1907/2006

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H-1K

Components

ethanol

Toxicity to fish

flow-through test EC50 Pimephales promelas (fathead minnow): 15.300 mg/l; 96 h
Analytical monitoring: yes
US-EPA

Toxicity to daphnia and other aquatic invertebrates

EC50 Daphnia magna (Water flea): 9.268 - 14.221 mg/l; 48 h (IUCLID)

Toxicity to algae

IC5 Scenedesmus quadricauda (Green algae): 5.000 mg/l; 7 d (Lit.)

Toxicity to bacteria

EC5 Pseudomonas putida: 6.500 mg/l; 16 h (IUCLID)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)

semi-static test NOEC Daphnia magna (Water flea): 9,6 mg/l; 9 d
(ECHA)

Biodegradability

94 %
OECD Test Guideline 301E
Readily biodegradable

Biochemical Oxygen Demand (BOD)

930 - 1.670 mg/g (5 d)
(Lit.)

Theoretical oxygen demand (ThOD)

2.100 mg/g
(Lit.)

Ratio COD/ThBOD

90 %
(Lit.)

Partition coefficient: n-octanol/water

log Pow: -0,31
(experimental)
(Lit.) Bioaccumulation is not expected.

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

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H-1K

SECTION 13. Disposal considerations

Waste treatment methods

See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14. Transport information

Land transport (ADR/RID)

14.1 UN number UN 3316
14.2 Proper shipping name CHEMICAL KIT
14.3 Class 9
14.4 Packing group III
14.5 Environmentally hazardous --
14.6 Special precautions for user yes
Tunnel restriction code E

Inland waterway transport (ADN)

Not relevant

Air transport (IATA)

14.1 UN number UN 3316
14.2 Proper shipping name CHEMICAL KIT
14.3 Class 9
14.4 Packing group III
14.5 Environmentally hazardous --
14.6 Special precautions for user no

Sea transport (IMDG)

14.1 UN number UN 3316
14.2 Proper shipping name CHEMICAL KIT
14.3 Class 9
14.4 Packing group III
14.5 Environmentally hazardous --

SAFETY DATA SHEET

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0.9 - 37.6 °e
1.2 - 53.7 °f
7 - 301 mg/l CaO
12 - 537 mg/l CaCO₃ Spectroquant®
H-1K

14.6 Special precautions for user yes

EmS F-A S-P

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant

THIS TRANSPORT DATA APPLIES TO THE ENTIRE PACK!

SECTION 15. Regulatory information

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

EU regulations

Major Accident Hazard Legislation ZEU_SEVES3
FLAMMABLE LIQUIDS
P5c
Quantity 1: 5.000 t
Quantity 2: 50.000 t
P5c

Occupational restrictions Take note of Dir 94/33/EC on the protection of young people at work.

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer not regulated

Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC not regulated

Substances of very high concern (SVHC) 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 $\geq 0.1\%$ (w/w).

Storage class 3
The data applies to the entire pack.

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

SAFETY DATA SHEET

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1.2 - 53.7 °f
7 - 301 mg/l CaO
12 - 537 mg/l CaCO₃ Spectroquant®
H-1K

SECTION 16. Other information

Full text of H-Statements referred to under sections 2 and 3.

H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H319 Causes serious eye irritation.

Training advice

Provide adequate information, instruction and training for operators.

Labelling

Hazard pictograms



Signal word
Warning

Hazard statements

H226 Flammable liquid and vapour.

Precautionary statements

Prevention
P210 Keep away from heat.

Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

Regional representation

This information is given on the authorised Safety Data Sheet for your country.

The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.

The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we transition our branding. However, all of the information in the document regarding the product remains unchanged and matches the product ordered. For further information please contact mlsbranding@sial.com.

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Product name Total Hardness Cell Test Method: photometric 5 - 215 mg/l Ca
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1.2 - 53.7 °f
7 - 301 mg/l CaO
12 - 537 mg/l CaCO₃ Spectroquant®
H-1K

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Revision Date 04.08.2021

Version 9.1

SECTION 1. Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

Catalogue No.	100961
Product name	Total Hardness Cell Test Method: photometric 5 - 215 mg/l Ca 0.7 - 30.1 °d 0.9 - 37.6 °e 1.2 - 53.7 °f 7 - 301 mg/l CaO 12 - 537 mg/l CaCO ₃ Spectroquant®
	H-2K
REACH Registration Number	This product is a mixture. REACH Registration Number see section 3.

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

Identified uses	Reagent for analysis For additional information on uses please refer to the Merck Chemicals portal (www.merckgroup.com).
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1.3 Details of the supplier of the safety data sheet

Company	Merck KGaA * 64271 Darmstadt * Germany * Phone: +49 6151 72-0
Responsible Department	LS-QHC * e-mail: prodsafe@merckgroup.com

1.4 Emergency telephone number Please contact the regional company representation in your country.**SECTION 2. Hazards identification****2.1 Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)**

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 100961
Product name Total Hardness Cell Test Method: photometric 5 - 215 mg/l Ca
0.7 - 30.1 °d
0.9 - 37.6 °e
1.2 - 53.7 °f
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12 - 537 mg/l CaCO₃ Spectroquant®
H-2K

Corrosive to metals, Category 1, H290
Reproductive toxicity, Category 1B, H360D

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

Labelling.(REGULATION (EC) No 1272/2008)

Hazard pictograms



Signal word
Danger

Hazard statements

H290 May be corrosive to metals.
H360D May damage the unborn child.

Precautionary statements

Prevention

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.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/
hearing protection.

Response

P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P390 Absorb spillage to prevent material damage.

Restricted to professional users.

Reduced labelling (≤125 ml)

Hazard pictograms



Signal word
Danger

Hazard statements

H360D May damage the unborn child.

Precautionary statements

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 100961
Product name Total Hardness Cell Test Method: photometric 5 - 215 mg/l Ca
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1.2 - 53.7 °f
7 - 301 mg/l CaO
12 - 537 mg/l CaCO₃ Spectroquant®
H-2K

Contains: Imidazole

2.3 Other hazards

None known.

SECTION 3. Composition/information on ingredients

Chemical nature Aqueous solution of inorganic and organic compounds.

3.1 Substance

Not applicable

3.2 Mixture

Hazardous components (REGULATION (EC) No 1272/2008)

Chemical name (Concentration)

CAS-No.	Registration number	Classification
---------	---------------------	----------------

Barium nitrate ($\geq 0,1\%$ - $< 1\%$)

The concentration stated or, in the absence of such concentrations, the generic concentrations set out in this Regulation are the percentages by weight of the metallic element calculated with reference to the total weight of the mixture.

10022-31-8 *)

Oxidizing solid, Category 2, H272
Acute toxicity, Category 3, H301
Acute toxicity, Category 4, H332
Eye irritation, Category 2, H319

Imidazole ($\geq 0,3\%$ - $< 1\%$)

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

288-32-4 *)

Acute toxicity, Category 4, H302
Skin corrosion, Category 1C, H314
Reproductive toxicity, Category 1B, H360D

*) A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4. First aid measures

4.1 Description of first aid measures

General advice

Show this safety data sheet to the doctor in attendance.

After inhalation: fresh air. Call in physician.

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according to Regulation (EC) No. 1907/2006

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7 - 301 mg/l CaO
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H-2K

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

We have no description of any symptoms of toxicity.

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Not combustible.

Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters

Special protective equipment for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information

Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

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1.2 - 53.7 °f
7 - 301 mg/l CaO
12 - 537 mg/l CaCO₃ Spectroquant®
H-2K

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

Indications about waste treatment see section 13.

SECTION 7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Keep locked up or in an area accessible only to qualified or authorised persons.

Recommended storage temperature see product label.

The data applies to the entire pack.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8. Exposure controls/personal protection

8.1 Control parameters

Derived No Effect Level (DNEL)

Imidazole (288-32-4)

Worker DNEL, longterm	Systemic effects	inhalation	10,6 mg/m ³
Worker DNEL, longterm	Systemic effects	dermal	1,5 mg/kg Body weight

Imidazole (288-32-4)

PNEC Fresh water	0,13 mg/l
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SAFETY DATA SHEET

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1.2 - 53.7 °f
7 - 301 mg/l CaO
12 - 537 mg/l CaCO₃ Spectroquant®
H-2K

PNEC Marine water	0,013 mg/l
PNEC Aquatic intermittent release	1,3 mg/l
PNEC Fresh water sediment	0,336 mg/kg
PNEC Marine sediment	0,0336 mg/kg
PNEC Soil	0,0425 mg/kg
PNEC Sewage treatment plant	10 mg/l

8.2 Exposure controls

Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

Individual protection measures

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Eye/face protection

Protective spectacles with side shields, arc goggles, or other approved eye protection. Safety glasses

Hand protection

full contact:

Glove material: Nitrile rubber
Glove thickness: 0,11 mm
Break through time: > 480 min

splash contact:

Glove material: Nitrile rubber
Glove thickness: 0,11 mm
Break through time: > 480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).

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).

SAFETY DATA SHEET

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0.9 - 37.6 °e
1.2 - 53.7 °f
7 - 301 mg/l CaO
12 - 537 mg/l CaCO₃ Spectroquant®
H-2K

Respiratory protection

required when vapours/aerosols are generated.
Recommended Filter type: Filter P 3 (acc. to DIN 3181) for solid and liquid particles of toxic and very toxic substances
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.

Environmental exposure controls

Do not let product enter drains.

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	liquid
Colour	colourless
Odour	odourless
Odour Threshold	Not applicable
pH	ca. 7,5 at 20 °C
Melting point	No information available.
Boiling point	No information available.
Flash point	Not applicable
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Vapour pressure	No information available.
Relative vapour density	No information available.

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1.2 - 53.7 °f
7 - 301 mg/l CaO
12 - 537 mg/l CaCO₃ Spectroquant®
H-2K

Density	ca.1,01 g/cm ³ at 20 °C
Relative density	No information available.
Water solubility	No information available.
Partition coefficient: n-octanol/water	No information available.
Auto-ignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	No information available.
Explosive properties	Not classified as explosive.
Oxidizing properties	none

9.2 Other data

none

SECTION 10. Stability and reactivity

10.1 Reactivity

See section 10.3

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

Violent reactions possible with:

The generally known reaction partners of water.

10.4 Conditions to avoid

no information available

10.5 Incompatible materials

no information available

10.6 Hazardous decomposition products

no information available

in the event of fire: See section 5.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

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1.2 - 53.7 °f
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H-2K

SECTION 11. Toxicological information

11.1 Information on toxicological effects

Mixture

Acute oral toxicity

This information is not available.

Acute inhalation toxicity

This information is not available.

Acute dermal toxicity

This information is not available.

Skin irritation

This information is not available.

Eye irritation

This information is not available.

Sensitisation

This information is not available.

Germ cell mutagenicity

This information is not available.

Carcinogenicity

This information is not available.

Reproductive toxicity

This information is not available.

Teratogenicity

This information is not available.

CMR effects

Teratogenicity:

May harm the unborn child.

Specific target organ toxicity - single exposure

This information is not available.

Specific target organ toxicity - repeated exposure

This information is not available.

Aspiration hazard

This information is not available.

11.2 Further information

Other dangerous properties can not be excluded.

This substance should be handled with particular care.

Components

Barium nitrate

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 100961
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0.7 - 30.1 °d
0.9 - 37.6 °e
1.2 - 53.7 °f
7 - 301 mg/l CaO
12 - 537 mg/l CaCO₃ Spectroquant®
H-2K

Acute oral toxicity

LD50 Rat: 50 - 300 mg/kg
OECD Test Guideline 423

Acute inhalation toxicity

Acute toxicity estimate: 1,6 mg/l; dust/mist
Expert judgement

Skin irritation

Rabbit
Result: No skin irritation
OECD Test Guideline 404

Eye irritation

Rabbit
Result: irritating
OECD Test Guideline 405

Sensitisation

Sensitisation test: Mouse
Result: Does not cause skin sensitisation.
Method: OECD Test Guideline 429

Germ cell mutagenicity

Genotoxicity in vitro
Ames test
Escherichia coli/Salmonella typhimurium
Result: negative
Method: OECD Test Guideline 471

Imidazole

Acute oral toxicity

LD50 Rat: 970 mg/kg
OECD Test Guideline 401

Skin irritation

Rabbit
Result: Corrosive
OECD Test Guideline 404

Eye irritation

Rabbit
Result: Causes serious eye damage.
OECD Test Guideline 405

Germ cell mutagenicity

Genotoxicity in vivo
In vivo micronucleus test
Mouse
male and female
Oral
Result: negative
Method: OECD Test Guideline 474

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Genotoxicity in vitro
unscheduled DNA synthesis assay
rat hepatocytes
Result: negative
Method: OECD Test Guideline 482

Ames test
Salmonella typhimurium
Result: negative
Method: OECD Test Guideline 471

In vitro mammalian cell gene mutation test
Chinese hamster lung cells
Result: negative
Method: OECD Test Guideline 476

SECTION 12. Ecological information

Mixture

12.1 Toxicity

No information available.

12.2 Persistence and degradability

No information available.

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6 Other adverse effects

Discharge into the environment must be avoided.

Components

Barium nitrate

Biodegradability

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

Imidazole

Toxicity to fish

LC50 *Leuciscus idus* (Golden orfe): ca. 280 mg/l; 48 h
DIN 37 412 T 15 (External MSDS)

Toxicity to daphnia and other aquatic invertebrates

static test EC50 *Daphnia magna* (Water flea): 341,5 mg/l; 48 h
OECD Test Guideline 202

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Toxicity to algae

static test ErC50 *Desmodesmus subspicatus* (green algae): 133 mg/l; 72 h
DIN 38412

Toxicity to bacteria

Respiration inhibition EC50 activated sludge: > 1.000 mg/l; 30 min
OECD Test Guideline 209

Biodegradability

90 - 100 %; 18 d; aerobic
OECD Test Guideline 301A
Readily biodegradable

Partition coefficient: n-octanol/water

log Pow: -0,02
OECD Test Guideline 107
Bioaccumulation is not expected. (Lit.)

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

SECTION 13. Disposal considerations

Waste treatment methods

See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14. Transport information

Land transport (ADR/RID)

14.1 UN number	UN 3316
14.2 Proper shipping name	CHEMICAL KIT
14.3 Class	9
14.4 Packing group	III
14.5 Environmentally hazardous	--
14.6 Special precautions for user	yes
Tunnel restriction code	E

Inland waterway transport (ADN)

Not relevant

Air transport (IATA)

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1.2 - 53.7 °f
7 - 301 mg/l CaO
12 - 537 mg/l CaCO₃ Spectroquant®
H-2K

14.1 UN number UN 3316
14.2 Proper shipping name CHEMICAL KIT
14.3 Class 9
14.4 Packing group III
14.5 Environmentally hazardous --
14.6 Special precautions for user no

Sea transport (IMDG)

14.1 UN number UN 3316
14.2 Proper shipping name CHEMICAL KIT
14.3 Class 9
14.4 Packing group III
14.5 Environmentally hazardous --
14.6 Special precautions for user yes
EmS F-A S-P

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not relevant

THIS TRANSPORT DATA APPLIES TO THE ENTIRE PACK!

SECTION 15. Regulatory information

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

EU regulations

Major Accident Hazard ZEU_SEVES3
Legislation Not applicable

Occupational restrictions Take note of Dir 94/33/EC on the protection of young people at work. Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Regulation (EC) No 1005/2009 on substances not regulated that deplete the ozone layer

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H-2K

Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC not regulated

Substances of very high concern (SVHC) 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 $\geq 0.1\%$ (w/w).

Storage class 3
The data applies to the entire pack.

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

SECTION 16. Other information

Full text of H-Statements referred to under sections 2 and 3.

H272	May intensify fire; oxidizer.
H290	May be corrosive to metals.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H360D	May damage the unborn child.

Training advice

Provide adequate information, instruction and training for operators.

Labelling

Hazard pictograms



Signal word
Danger

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H-2K

Hazard statements

H290 May be corrosive to metals.
H360 May damage fertility or the unborn child.

Precautionary statements

Prevention
P201 Obtain special instructions before use.
Response
P308 + P313 IF exposed or concerned: Get medical advice/ attention.

Further information

Restricted to professional users.

Contains: Imidazole

Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

Regional representation

This information is given on the authorised Safety Data Sheet for your country.

The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.

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