

Safety Data Sheet

According to 91/155/EEC

Date of issue: January 1 2011

1. Identification of the substance / preparation and of the enterprise

Trade name:

Humidity Standard 0 %rh

Use of the substance / preparation:

Only suitable for the calibration of humidity measuring instruments.

Company / enterprise identification:

Rotronic AG * Grindelstrasse 6 * CH-8303 Bassersdorf * Tel. +41 44 838 11 11

Rotronic Messgeräte GmbH * Einsteinstrasse 17-23 * D-76275 Ettlingen * Tel. +49 7243 383 250

Emergency telephone no.:

Toxicological Information centre Tel. +41 44 251 51 51

Chemical manufacturer:

Sigma-Aldrich * 3050 Spruce Street * Saint Louis MO * 63103 * USA * Tel. +18003255832

Emergency telephone no.:

Tel. (314) 776-6555

2. Composition / information on ingredients

Silicate with inorganic binding agent.

3. Hazards identification

No dangerous product as per the instructions on dangerous substances 67/548/EEC and 1999/45/EC.

4. First aid measures

After skin contact:

Wash off with water.

After eye contact:

Rinse out with plenty of water, have mechanical fragments removed by physician.

After swallowing:

No further requirements.

5. Fire-fighting measures

Suitable extinguishing media:

In adaptation to materials stored in the immediate neighbourhood.

Special risks:

Not combustible.

Special protective equipment for fire fighting:

Do not stay in dangerous zone without suitable chemical protection clothing and self-contained breathing apparatus.

6. Accidental release measures

Person-related precautionary measures:

Avoid substance contact.

Procedures for cleaning:

Take up dry and forward for disposal.

7. Handling and storage

Handling:

Avoid contact with eyes, skin and clothing.

Storage:

Store in a cool, dry place.

8. Exposure controls / personal protection

Personal protective equipment:

Respiratory protection:	not required
Hand protection:	not required
Eye protection:	safety glasses

9. Physical and chemical properties

Form:	solid
Colour:	brown-yellow
Odour:	odourless
Melting point:	>1000°C
Flash point:	not applicable
Lower explosion limit:	not combustible and not oxidising
Upper explosion limit:	not combustible and not oxidising
Density (bulk density)	700 - 750 g/l
pH - value:	not applicable
Solubility in water:	insoluble
Solubility in other solvents:	insoluble

10. Stability und reactivity

Stability

At usual storage and handling, the product is stable.

Substances to be avoided
Strong acids

Hazardous decomposition products
Hazardous products of decomposition are not known.

11. Toxical information

Toxic effects on humans and animals are not known.

12. Ecological information

Under normal conditions, the product is environment neutral.

13. Disposal considerations

Conduct to the house garbage.

14. Transport information

Not subject to transport regulations.

15. Regulatory information

The product is no dangerous substance / composition in terms of chemical law resp. the ordinance on hazardous substances in their valid version as well as the regulations 67/548/EEC resp. 1999/45/EC.

16. Other information

Relevant R-phrases: not applicable

Reason for alteration
General update.

The indications in this Safety Data Sheet correspond to our present knowledge. The given working conditions of the user, however, are deprived to our knowledge and control. The product may not be conveyed to any other application purpose, than mentioned in paragraph 1. The user is responsible for the employment of a statutory decree. The indications in this Safety Data Sheet describe demands of state of product and do not represent any assurance of product properties.

Safety Data Sheet

According to 91/155/EEC

Date of issue: January 1 2011

1. Identification of the substance / preparation and of the enterprise

Trade name

Humidity Standard 5 %rh

Use of the substance / preparation

Only suitable for the calibration of humidity measuring instruments.

Company / enterprise identification

Rotronic AG * Grindelstrasse 6 * CH-8303 Bassersdorf * Tel. +41 44 838 11 11

Rotronic Messgeräte GmbH * Einsteinstrasse 17-23 * D-76275 Ettlingen * Tel. +49 7243 383 250

Emergency telephone No.:

Toxicological Information Centre Tel. +41 44 251 51 51

Chemical manufacturer:

Sigma-Aldrich * 3050 Spruce Street * Saint Louis MO * 63103 * USA * Tel. +18003255832

Emergency telephone no.:

Tel. (314) 776-6555

2. Composition / information on ingredients

Hazardous substance of content

Zinc bromide, CAS - Nr. 7699-45-8, C, R-phrases R 34

Content weight percent: 53%

Calcium bromide, CAS - Nr. 71626-99-8, Xi, R-phrases R 36/38

Content weight percent: 28%

3. Hazards identification

Causes burns.

4. First aid measures

After skin contact

Wash off with plenty of water.

After eye contact

Rinse out with plenty of water during at least 15 minutes with the eyelid held wide open. Immediately call in physician.

After swallowing

Make victim drink plenty of water, avoid vomiting. Immediately call in physician.

5. Fire-fighting measures

Suitable extinguishing media

In adaptation to materials stored in the immediate neighbourhood.

Special risks

Not combustible.

Special protective equipment for fire fighting

Do not stay in dangerous zone without suitable chemical protection clothing and self-contained breathing apparatus.

6. Accidental release measures

Person-related precautionary measures

Avoid substance contact.

Procedures for cleaning

Take up with an absorbent cloth and forward for disposal.

7. Handling and storage

Handling

Avoid contact with eyes, skin and clothing.

Storage

Store in a cool and dry place.

8. Exposure controls / personal protection

Personal protective equipment:

Respiratory protection: not required
Hand protection: chemical resistant gloves
Eye protection: safety glasses

9. Physical and chemical properties

Form: fluid
Colour: colourless
Odour: odourless

Boiling point: 165°C
Flash point: not applicable
Lower explosion limit: not applicable
Upper explosion limit: not applicable
Viscosity: not available
Density: not available
pH - value: about 4
Mixable with water: not limited

10. Stability und reactivity

Stability

At usual storage and handling, the product is stable.

Substances to be avoided

Sodium, Potassium

Hazardous decomposition products

Hydrogen bromide

11. Toxical information

Quantitative data on the toxicity of this product are not available.

Further toxicological information

After skin contact: Burns
After eye contact: Burns
After swallowing: Burns in mouth, throat, oesophagus and gastrointestinal tract.

12. Ecological information

Water endangering class
See paragraph 15

13. Disposal considerations

Thinned with lots of water, conduct the product to the sewage.
Likewise conduct to the house garbage materials contaminated with the product.

14. Transport information

Land transport ADR/RID: not regulated
Transport by air ICAO/IATA: not regulated

15. Regulatory information

Hazard symbol: C
Hazard description: Corrosive

R-phrases:
R 34 Causes burns.

S-phrases:
S 26 In case of contact with eyes rinse immediately with plenty of water and seek medical advice.
S 37/39 Wear suitable gloves and eye / face protection.

National regulations

Switzerland:
Poisonous category: 3 BAGT-No.: 79188
Germany:
Water endangering class: 1

16. Other information

Wording of R-phrases, mentioned in paragraph 2 and 3:

R 34 Causes burns.
R 36/38 Irritating to eyes and skin.

Reason for alteration
General update

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Safety Data Sheet

According to 91/155/EEC

Date of issue: January 1 2011

1. Identification of the substance / preparation and of the enterprise

Trade name

Humidity Standard (10 / 11.3 %rh)

Use of the substance / preparation

Only suitable for the calibration of humidity measuring instruments.

Company / enterprise identification

Rotronic AG * Grindelstrasse 6 * CH-8303 Bassersdorf * Tel. +41 44 838 11 11

Rotronic Messgeräte GmbH * Einsteinstrasse 17-23 * D-76275 Ettlingen * Tel. +49 7243 383 250

Emergency telephone no.:

Toxicological Information Centre Tel. +41 44 251 51 51

Chemical manufacturer:

Sigma-Aldrich * 3050 Spruce Street * Saint Louis MO * 63103 * USA * Tel. +18003255832

Emergency telephone no.:

Tel. (314) 776-6555

2. Composition / information on ingredients

Hazardous substance of content

Lithium bromide

CAS - Nr.: 7550-35-8

Hazard symbol: Xn

R-phrases: R 22

Content weight percent: 60%

3. Hazards identification

Harmful if swallowed.

Irritating to eyes and skin

4. First aid measures

After skin contact

Wash off with plenty of water

After eye contact

Rinse out with plenty of water during at least 15 minutes with the eyelid held wide open. Call in physician

After swallowing

Make victim drink plenty of water, call in physician

5. Fire-fighting measures

Suitable extinguishing media

in adaptation to materials stored in the immediate neighbourhood

Special risks

Non-combustible

Special protective equipment for fire fighting

Do not stay in dangerous zone without suitable chemical protection clothing and self-contained breathing apparatus

6. Accidental release measures

Person-related precautionary measures

Avoid substance contact.

Procedures for cleaning

Take up with an absorbent cloth and forward for disposal.

7. Handling and storage

Handling

Avoid contact with eyes, skin and clothing.

Storage

Store in a cool and dry place

8. Exposure controls / personal protection

Personal protective equipment:

Respiratory protection: not required
Hand protection: chemical resistant gloves
Eye protection: safety glasses

9. Physical and chemical properties

Form: fluid
Colour: colourless
Odour: odourless

Boiling point: 150°C
Flash point: not applicable
Lower explosion limit: not applicable
Upper explosion limit: not applicable
Viscosity: not available
Density: not available
pH - value: about 8
Mixable with water: not limited

10. Stability und reactivity

Stability

At usual storage and handling, the product is stable.

Substances to be avoided

Strong acids

Hazardous decomposition products

Hydrogen bromide, Lithium oxides

11. Toxical information

Oral toxicity human (LDLo)

Not available

Oral toxicity mouse (LD50)

LiBr 100%: 1840 mg/kg

Oral toxicity rat (LD50)

LiBr 100%: 1800 mg/kg

Further toxicological information

No information available.

12. Ecological information

Water endangering class

See paragraph 15

13. Disposal considerations

Thinned with lots of water, conduct the product to the sewage.
Likewise conduct to the house garbage materials contaminated with the product.

14. Transport information

Not subject to transport regulations.

15. Regulatory information

Hazard symbol: Xn
Hazard description: Harmful

R-phrases:
R 22 Harmful if swallowed.
R 36/38 Irritating to eyes and skin.

S-phrases:
S 26 In case of contact with eyes rinse immediately with plenty of water and seek medical advice.

National regulations

Switzerland:
Poisonous category: 3 BAGT-No.: 79187
Germany:
Water endangering class: 1

16. Other information

Wording of R-phrases, mentioned in paragraph 2 and 3:

R 22 Harmful if swallowed.
R 36/38 Irritating to eyes and skin.

Reason for alteration
General update

The indications in this Safety data sheet correspond to our present knowledge. The given working conditions of the user, however, are deprived to our knowledge and control. The product may not be conveyed to any other application purpose, than mentioned in paragraph 1. The user is responsible for the employment of a statutory decree. The indications in this Safety Data Sheet describe demands of state of product and do not represent any assurance of product properties.

Safety Data Sheet

According to 91/155/EEC

Date of issue: January 1 2011

1. Identification of the substance / preparation and of the enterprise

Trade name

Humidity Standard (20 / 35 / 50 / 65 / 75.3 / 80 / 95 %rh)

Use of the substance / preparation

Only suitable for the calibration of humidity measuring instruments.

Company / undertaking identification

Rotronic AG * Grindelstrasse 6 * CH-8303 Bassersdorf * Tel. +41 44 838 11 11

Rotronic Messgeräte GmbH * Einsteinstrasse 17-23 * D-76275 Ettlingen * Tel. +49 7243 383 250

Emergency telephone no.

Toxicological Information Centre Tel. +41 44 251 51 51

Chemical manufacturer:

Sigma-Aldrich * 3050 Spruce Street * Saint Louis MO * 63103 * USA * Tel. +18003255832

Emergency telephone no.:

Tel. (314) 776-6555

2. Composition / information on ingredients

Hazardous substance of content

Lithium chloride

CAS - Nr.: 7447-41-8
EG-No.: 231-212-3
Content weight percent: 5 - 40%Hazard symbol: Xn
R-phrases: R 22

3. Hazards identification

Harmful if swallowed.

Irritating to eyes and skin

4. First aid measures

After skin contact

Wash off with plenty of water.

After eye contact

Rinse out with plenty of water during at least 15 minutes with the eyelid held wide open. Call in physician.

After swallowing

Make victim drink plenty of water, call in physician.

5. Fire-fighting measures

Suitable extinguishing media

In adaptation to materials stored in the immediate neighbourhood.

Special risks

Not combustible

Special protective equipment for fire fighting

Do not stay in dangerous zone without suitable chemical protection clothing and self-contained breathing apparatus.

6. Accidental release measures

Person-related precautionary measures

Avoid substance contact.

Procedures for cleaning

Take up with an absorbent cloth and forward for disposal.

7. Handling and storage

Handling

Avoid contact with eyes, skin and clothing.

Storage

Store in a cool and dry place

8. Exposure controls / personal protection

Personal protective equipment

Respiratory protection: not required

Hand protection: chemical resistant gloves

Eye protection: safety glasses

9. Physical and chemical properties

Form: fluid
Colour: colourless
Odour: odourless

Boiling point: depending on concentration about 100 - 130°C
Flash point: not applicable
Lower explosion limit: not applicable
Upper explosion limit: not applicable
Viscosity: not available
Density: not available
pH - value: about 6 - 7
Mixable with water: not limited

10. Stability und reactivity

Stability

At usual storage and handling, the product is stable.

Substances to be avoided

Strong acids

Hazardous decomposition products

Hydrogen chloride, Lithium oxides

11. Toxical information

Oral toxicity human (LDLo)

LiCl 100%: 200 mg/kg

Oral toxicity mouse (LD50)

LiCl 100%: 1165 mg/kg

Oral toxicity rat (LD50)

LiCl 100%: 514 mg/kg

Skin irritation test (rabbit, 24 h)

Irritations

Eye irritation test (rabbit, 24 h)

Irritations

12. Ecological information

Water endangering class

See paragraph 15

13. Disposal considerations

Thinned with lots of water, conduct the product to the sewage.

Likewise conduct to the house garbage materials contaminated with the product.

14. Transport information

Not subject to transport regulations.

15. Regulatory information

Hazard symbol: Xn
Hazard description: Harmful

R-phrases:
R 22 Harmful if swallowed.
R 36/38 Irritating to eyes and skin.

S-phrases:
S 26 In case of contact with eyes rinse immediately with plenty of water and seek medical advice.

National regulations

Switzerland:
Poisonous category: 3 BAGT-No.: 40810

Germany:
Water endangering class: 1

16. Other information

Wording of R-phrases, mentioned in paragraph 2 and 3:

R 22 Harmful if swallowed.
R 36/38 Irritating to eyes and skin.

Reason for alteration
General update

The indications in this Safety data sheet correspond to our present knowledge. The given working conditions of the user, however, are deprived to our knowledge and control. The product may not be conveyed to any other application purpose, than mentioned in paragraph 1. The user is responsible for the employment of statutory decrees. The indications in this Safety Data Sheet describe demands of state of product and do not represent any assurance of product properties.