

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### LCK 487 LUMISmini Leuchtbakterientest/Luminescent Bacteria Sample cuvette, 1/3

Revision date: 29.08.2013

Product code: LCK487-1

Page 1 of 8

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

### 1.1. Product identifier

LCK 487 LUMISmini Leuchtbakterientest/Luminescent Bacteria Sample cuvette, 1/3

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

#### Use of the substance/mixture

Reagent for analysis

### 1.3. Details of the supplier of the safety data sheet

Company name: HACH LANGE GmbH  
Street: Willstätterstr. 11  
Place: D-40549 Düsseldorf  
Telephone: +49 (0)211 5288-383  
e-mail: SDS@hach.com  
Internet: www.de.hach.com  
Responsible Department: HACH LANGE Ltd.  
5, Pacific Way  
Salford Manchester M50 1DL - United Kingdom  
Tel. +44 (0) 161 872 1487 \* Fax +44 (0) 161 848 7324  
e-Mail: info-uk@hach.com

HACH LANGE Ltd.  
Unit 1, Chestnut Road Western Industrial Estate  
IRL-Dublin 12  
Tel. +353 (0)1 4602522  
e-Mail: info-ie@hach.com

### 1.4. Emergency telephone number:

Poison Control Center Mainz: Tel: +49 (0) 6131 19240 - 24 hour emergency service -

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

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

This mixture is not classified as hazardous in accordance with Regulation (EC) No. 1272/2008.

The product does not need to be labelled in accordance with EC directives or respective national laws.

### 2.2. Label elements

#### Additional advice on labelling

The product is not classified as dangerous according to Regulation (EC) No. 1272/2008.

### 2.3. Other hazards

no data available

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### LCK 487 LUMISmini Leuchtbakterientest/Luminescent Bacteria Sample cuvette, 1/3

Revision date: 29.08.2013

Product code: LCK487-1

Page 2 of 8

#### Hazardous components

| CAS No     | Chemical name   |          |          | Quantity |
|------------|---|----------|----------|----------|
|            | EC No   | Index No | REACH No |          |
|            | Classification according to Regulation (EC) No. 1272/2008 [CLP] |          |          |          |
| 14431-43-7 | D(+)-Glucose monohydrate  |          |          | 70-80 %  |
|            | 200-075-1   |          |          |          |
| -          | Aliivibro fischeri (Vibrio fischeri)                            |          |          | 10-20 %  |
|            | -   |          |          |          |
| 7647-14-5  | Sodium chloride   |          |          | 1-10 %   |
|            | 231-598-3   |          |          |          |

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

#### SECTION 4: First aid measures

##### 4.1. Description of first aid measures

###### General information

Take off contaminated clothing and shoes immediately.  
Show this safety data sheet to the doctor in attendance.

###### After inhalation

Move to fresh air.  
If symptoms persist, call a physician.

###### After contact with skin

Wash off immediately with plenty of water for at least 15 minutes.  
If skin irritation persists, call a physician.

###### After contact with eyes

Immediately flush eye(s) with plenty of water.  
If eye irritation persists, consult a specialist.

###### After ingestion

Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Consult a physician.

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

No known effect.

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

Treat symptomatically.

#### SECTION 5: Firefighting measures

##### 5.1. Extinguishing media

###### Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
The product itself does not burn.

###### Unsuitable extinguishing media

No Limit

##### 5.2. Special hazards arising from the substance or mixture

Fire may liberate hazardous vapours.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### LCK 487 LUMISmini Leuchtbakterientest/Luminescent Bacteria Sample cuvette, 1/3

Revision date: 29.08.2013

Product code: LCK487-1

Page 3 of 8

#### **5.3. Advice for firefighters**

In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.

In the case of respirable dust and/or fumes, use self-contained breathing apparatus and dust impervious protective suit.

#### **Additional information**

Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

### **SECTION 6: Accidental release measures**

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

Use personal protective equipment.

Only qualified personnel equipped with suitable protective equipment may intervene. Immediately evacuate personnel to safe areas.

For personal protection see section 8.

#### **6.2. Environmental precautions**

Do not flush into surface water or sanitary sewer system.

#### **6.3. Methods and material for containment and cleaning up**

Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local/national regulations (see section 13).

#### **6.4. Reference to other sections**

13. Disposal considerations

### **SECTION 7: Handling and storage**

#### **7.1. Precautions for safe handling**

##### **Advice on safe handling**

Avoid contact with skin and eyes.

Do not breathe vapours/dust.

Wash thoroughly after handling.

General industrial hygiene practice.

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

See also section 5

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

Avoid contact with skin, eyes and clothing.

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

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

Storage temperature: -18°C

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

None known.

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

no data available

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

Reagent for analysis

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

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

##### **Additional advice on limit values**

None known.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### LCK 487 LUMISmini Leuchtbakterientest/Luminescent Bacteria Sample cuvette, 1/3

Revision date: 29.08.2013

Product code: LCK487-1

Page 4 of 8

#### 8.2. Exposure controls

##### Appropriate engineering controls

The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.  
 Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.  
 Handle in accordance with good industrial hygiene and safety practice.

##### Protective and hygiene measures

Wash hands before breaks and after work.  
 General industrial hygiene practice.

##### Eye/face protection

Safety glasses with side-shields

##### Hand protection

Use barrier skin cream.  
 Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374. In full contact:  
 Gloves material: Viton, Layer thickness: 0.70 mm, Breakthrough time: >480 min. In splash contact: Glove material: nitrile rubber, Layer thickness 0,20 mm, Breakthrough time: > 30 min

##### Skin protection

Avoid contact with skin, eyes and clothing.

##### Respiratory protection

Provide adequate ventilation.

##### Environmental exposure controls

Do not flush into surface water or sanitary sewer system.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

|                 |                     |
|-----------------|---------------------|
| Physical state: | solid               |
| Colour:         | white/ light yellow |
| Odour:          | odourless           |

|           |   |                    |
|-----------|---|--------------------|
| pH-Value: | 7 | <b>Test method</b> |
|-----------|---|--------------------|

##### Changes in the physical state

|  |                   |
|--|-------------------|
| Melting point:                           | -18°C °C          |
| Initial boiling point and boiling range: | not applicable    |
| Sublimation point:                       | no data available |
| Softening point:                         | no data available |
| Pour point:                              | not applicable    |
| :  | no data available |
| Flash point:                             | not applicable    |

##### Flammability

|        |                   |
|--------|-------------------|
| Solid: | no data available |
| Gas:   | no data available |

##### Explosive properties

no data available

|                         |                   |
|-------------------------|-------------------|
| Lower explosion limits: | no data available |
| Upper explosion limits: | no data available |
| Ignition temperature:   | no data available |

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### LCK 487 LUMISmini Leuchtbakterientest/Luminescent Bacteria Sample cuvette, 1/3

Revision date: 29.08.2013

Product code: LCK487-1

Page 5 of 8

**Auto-ignition temperature**

Solid: no data available

Gas: no data available

Decomposition temperature: no data available

**Oxidizing properties**

no data available

Vapour pressure: no data available

Vapour pressure: no data available

Density: no data available

Bulk density: no data available

Water solubility:  
(at 20 °C) no data available completely soluble**Solubility in other solvents**

no data available

Partition coefficient: no data available

Viscosity / dynamic: not applicable

Viscosity / kinematic: not applicable

Flow time: not applicable

Vapour density: no data available

Evaporation rate: not applicable

Solvent separation test: not applicable

Solvent content: not applicable

**9.2. Other information**

Solid content: not applicable

no data available

**SECTION 10: Stability and reactivity****10.1. Reactivity**

No dangerous reaction known under conditions of normal use.

**10.2. Chemical stability**

The product is chemically stable.

**10.3. Possibility of hazardous reactions**

Hazardous polymerisation does not occur.

**10.4. Conditions to avoid**

Do not expose to temperatures above -18 °C.

The product is normally supplied in a stabilized form. If the permissible storage period and/or storage temperature is noticeably exceeded, the product may polymerise with heat evolution.

**10.5. Incompatible materials**

None known.

**10.6. Hazardous decomposition products**

No decomposition if stored and applied as directed.

**Further information**

Stable under recommended storage conditions.

**SECTION 11: Toxicological information**

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**LCK 487 LUMISmini Leuchtbakterientest/Luminescent Bacteria Sample cuvette, 1/3**

Revision date: 29.08.2013

Product code: LCK487-1

Page 6 of 8

**11.1. Information on toxicological effects****Toxicokinetics, metabolism and distribution**

No toxicology information is available.

**Acute toxicity**

No data is available on the product itself.

| CAS No    | Chemical name   |                      |           |        |        |
|-----------|-----------------|----------------------|-----------|--------|--------|
|           | Exposure route  | Dose                 | Species   | Source | Method |
| 7647-14-5 | Sodium chloride |                      |           |        |        |
|           | oral            | LD50<br>mg/kg 3000   | Ratte     |        |        |
|           | dermal          | LD50<br>mg/kg >10000 | Kaninchen |        |        |

**Irritation and corrosivity**

May cause eye and skin irritation.

**Sensitising effects**

No known effect.

**Carcinogenic/mutagenic/toxic effects for reproduction**

Contains no ingredient listed as a carcinogen

**STOT-single exposure**

The substance or mixture is not classified as specific target organ toxicant, single exposure.

**STOT-repeated exposure**

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

**Aspiration hazard**

No aspiration toxicity classification

**Specific effects in experiment on an animal**

No toxicology information is available.

**Additional information on tests**

None known.

**Practical experience****Observations relevant to classification**

None known.

**Other observations**

None known.

**Further information**

Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice.

**SECTION 12: Ecological information****12.1. Toxicity**

No information on ecology is available. No data is available on the product itself.

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**LCK 487 LUMISmini Leucht bakterientest/Luminescent Bacteria Sample cuvette, 1/3**

Revision date: 29.08.2013

Product code: LCK487-1

Page 7 of 8

| CAS No    | Chemical name            |              |           |         |                     |        |
|-----------|--------------------------|--------------|-----------|---------|---------------------|--------|
|           | Aquatic toxicity         | Dose         | [h]   [d] | Species | Source              | Method |
| 7647-14-5 | Sodium chloride          |              |           |         |                     |        |
|           | Acute fish toxicity      | LC50<br>mg/l | 7650      | 96 h    | Pimephales promelas |        |
|           | Acute crustacea toxicity | EC50<br>mg/l | 1000      | 48 h    | Daphnia magna       |        |

**12.2. Persistence and degradability**

No data is available on the product itself.

**12.3. Bioaccumulative potential**

no data available

**12.4. Mobility in soil**

no data available

**12.5. Results of PBT and vPvB assessment**

no data available

**12.6. Other adverse effects**

No known effect.

**Further information**

No known effect.

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

**Advice on disposal**

In accordance with local and national regulations.

Our local agencies will accept used cuvettes to ensure their proper disposal. (nur bei Küvettentest, nicht Hach und GE)

**Waste disposal number of waste from residues/unused products**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

**Waste disposal number of used product**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

**Waste disposal number of contaminated packaging**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

**Contaminated packaging**

Dispose of as unused product.

**SECTION 14: Transport information**

**Land transport (ADR/RID)**

**Other applicable information (land transport)**

Not subject to transport regulations.

**Inland waterways transport (ADN)**

**Other applicable information (inland waterways transport)**

Not tested

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### LCK 487 LUMISmini Leuchtbakterientest/Luminescent Bacteria Sample cuvette, 1/3

Revision date: 29.08.2013

Product code: LCK487-1

Page 8 of 8

#### Marine transport (IMDG)

##### Other applicable information (marine transport)

Not subject to transport regulations.

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

##### Other applicable information (air transport)

Not subject to transport regulations.

#### 14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

#### 14.6. Special precautions for user

no data available

#### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not relevant

### SECTION 15: Regulatory information

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

##### EU regulatory information

##### Additional information

The product does not need to be labelled in accordance with EC directives or respective national laws.

##### National regulatory information

Water contaminating class (D): 2 - clearly water contaminating

#### 15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

### SECTION 16: Other information

#### Changes

Revision: 25.07.2013

#### Further Information

The information is based on present level of our knowledge. It does not, however, give assurances of product properties and establishes no contract legal rights.

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



## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### LCK 487 LUMISmini Leuchtakterien Standardlösung/Luminescent Bacteria Standard Solution; 2/3

Revision date: 29.08.2013

Product code: LCK487-2

Page 1 of 8

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

##### 1.1. Product identifier

LCK 487 LUMISmini Leuchtakterien Standardlösung/Luminescent Bacteria Standard Solution; 2/3

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

###### Use of the substance/mixture

Reagent for analysis

##### 1.3. Details of the supplier of the safety data sheet

Company name: HACH LANGE GmbH  
Street: Willstätterstr. 11  
Place: D-40549 Düsseldorf  
Telephone: +49 (0)211 5288-383  
e-mail: SDS@hach.com  
Internet: www.de.hach.com  
Responsible Department: HACH LANGE Ltd.  
5, Pacific Way  
Salford Manchester M50 1DL - United Kingdom  
Tel. +44 (0) 161 872 1487 \* Fax +44 (0) 161 848 7324  
e-Mail: info-uk@hach.com

HACH LANGE Ltd.  
Unit 1, Chestnut Road Western Industrial Estate  
IRL-Dublin 12  
Tel. +353 (0)1 4602522  
e-Mail: info-ie@hach.com

##### 1.4. Emergency telephone number:

Poison Control Center Mainz: Tel: +49 (0) 6131 19240 - 24 hour emergency service -

#### SECTION 2: Hazards identification

##### 2.1. Classification of the substance or mixture

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

This mixture is not classified as hazardous in accordance with Regulation (EC) No. 1272/2008.

The product does not need to be labelled in accordance with EC directives or respective national laws.

##### 2.2. Label elements

###### Additional advice on labelling

The product is not classified as dangerous according to Regulation (EC) No. 1272/2008.

##### 2.3. Other hazards

no data available

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

##### 3.2. Mixtures

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**LCK 487 LUMISmini Leuchtbakterien Standardlösung/Luminescent Bacteria Standard Solution; 2/3**

Revision date: 29.08.2013

Product code: LCK487-2

Page 2 of 8

**Hazardous components**

| CAS No    | Chemical name   |          |          | Quantity |
|-----------|---|----------|----------|----------|
|           | EC No   | Index No | REACH No |          |
|           | Classification according to Regulation (EC) No. 1272/2008 [CLP] |          |          |          |
| 7732-18-5 | Water   |          |          | 90-99 %  |
|           | 231-791-2   |          |          |          |
| 7647-14-5 | Sodium chloride   |          |          | 1-10 %   |
|           | 231-598-3   |          |          |          |

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

**SECTION 4: First aid measures****4.1. Description of first aid measures****General information**

Take off contaminated clothing and shoes immediately.  
Show this safety data sheet to the doctor in attendance.

**After inhalation**

Move to fresh air.  
If symptoms persist, call a physician.

**After contact with skin**

Wash off immediately with plenty of water for at least 15 minutes.  
If skin irritation persists, call a physician.

**After contact with eyes**

Immediately flush eye(s) with plenty of water.  
If eye irritation persists, consult a specialist.

**After ingestion**

Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Consult a physician.

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

No known effect.

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

Treat symptomatically.

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
The product itself does not burn.

**Unsuitable extinguishing media**

No Limit

**5.2. Special hazards arising from the substance or mixture**

Fire may liberate hazardous vapours.

**5.3. Advice for firefighters**

In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.  
In the case of respirable dust and/or fumes, use self-contained breathing apparatus and dust impervious

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### LCK 487 LUMISmini Leuchtbakterien Standardlösung/Luminescent Bacteria Standard Solution; 2/3

Revision date: 29.08.2013

Product code: LCK487-2

Page 3 of 8

protective suit.

#### Additional information

Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

### SECTION 6: Accidental release measures

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

Use personal protective equipment.

Only qualified personnel equipped with suitable protective equipment may intervene. Immediately evacuate personnel to safe areas.

For personal protection see section 8.

#### 6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

#### 6.3. Methods and material for containment and cleaning up

Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local/national regulations (see section 13).

#### 6.4. Reference to other sections

13. Disposal considerations

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

##### Advice on safe handling

Avoid contact with skin and eyes.

Do not breathe vapours/dust.

Wash thoroughly after handling.

General industrial hygiene practice.

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

See also section 5

##### Further information on handling

Avoid contact with skin, eyes and clothing.

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

##### Requirements for storage rooms and vessels

Storage temperature: 2-8°C

##### Hints on joint storage

None known.

##### Further information on storage conditions

no data available

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

Reagent for analysis

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### Additional advice on limit values

None known.

#### 8.2. Exposure controls

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### LCK 487 LUMISmini Leuchtbakterien Standardlösung/Luminescent Bacteria Standard Solution; 2/3

Revision date: 29.08.2013

Product code: LCK487-2

Page 4 of 8

#### Appropriate engineering controls

The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

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

Handle in accordance with good industrial hygiene and safety practice.

#### Protective and hygiene measures

Wash hands before breaks and after work.

General industrial hygiene practice.

#### Eye/face protection

Safety glasses with side-shields

#### Hand protection

Use barrier skin cream.

Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374. In full contact:

Gloves material: Viton, Layer thickness: 0.70 mm, Breakthrough time: >480 min. In splash contact: Glove material: nitrile rubber, Layer thickness 0,20 mm, Breakthrough time: > 30 min

#### Skin protection

Avoid contact with skin, eyes and clothing.

#### Respiratory protection

Provide adequate ventilation.

#### Environmental exposure controls

Do not flush into surface water or sanitary sewer system.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

|                      |            |
|----------------------|------------|
| Physical state:      | liquid     |
| Colour:              | colourless |
| Odour:               | odourless  |
| pH-Value (at 20 °C): | 7          |

#### Changes in the physical state

|  |                   |
|--|-------------------|
| Melting point:                           | not applicable    |
| Initial boiling point and boiling range: | no data available |
| Sublimation point:                       | not applicable    |
| Softening point:                         | not applicable    |
| Pour point:                              | no data available |
| :  | no data available |
| Flash point:                             | no data available |

#### Flammability

|        |                |
|--------|----------------|
| Solid: | not applicable |
| Gas:   | not applicable |

#### Explosive properties

no data available

|                         |                   |
|-------------------------|-------------------|
| Lower explosion limits: | no data available |
| Upper explosion limits: | no data available |
| Ignition temperature:   | no data available |

#### Auto-ignition temperature

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### LCK 487 LUMISmini Leuchtbakterien Standardlösung/Luminescent Bacteria Standard Solution; 2/3

Revision date: 29.08.2013

Product code: LCK487-2

Page 5 of 8

Solid: not applicable

Gas: not applicable

Decomposition temperature: not applicable

**Oxidizing properties**

no data available

Vapour pressure: no data available

Vapour pressure: no data available

Density (at 20 °C): 1.05 g/cm<sup>3</sup>

Bulk density: not applicable

Water solubility: completely soluble

(at 20 °C)

**Solubility in other solvents**

no data available

Partition coefficient: no data available

Viscosity / dynamic: no data available

Viscosity / kinematic: no data available

Flow time: no data available

Vapour density: no data available

Evaporation rate: no data available

Solvent separation test: no data available

Solvent content: no data available

**9.2. Other information**

Solid content: no data available

no data available

**SECTION 10: Stability and reactivity****10.1. Reactivity**

No dangerous reaction known under conditions of normal use.

**10.2. Chemical stability**

The product is chemically stable.

**10.3. Possibility of hazardous reactions**

Hazardous polymerisation does not occur.

**10.4. Conditions to avoid**

Extremes of temperature and direct sunlight.

**10.5. Incompatible materials**

None known.

**10.6. Hazardous decomposition products**

No decomposition if stored and applied as directed.

**Further information**

Stable under recommended storage conditions.

**SECTION 11: Toxicological information****11.1. Information on toxicological effects**

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**LCK 487 LUMISmini Leuchtbakterien Standardlösung/Luminescent Bacteria Standard Solution; 2/3**

Revision date: 29.08.2013

Product code: LCK487-2

Page 6 of 8

**Toxicokinetics, metabolism and distribution**

No toxicology information is available.

**Acute toxicity**

No data is available on the product itself.

| CAS No    | Chemical name   |               |         |           |        |
|-----------|-----------------|---------------|---------|-----------|--------|
|           | Exposure route  | Dose          | Species | Source    | Method |
| 7647-14-5 | Sodium chloride |               |         |           |        |
|           | oral            | LD50<br>mg/kg | 3000    | Ratte     |        |
|           | dermal          | LD50<br>mg/kg | >10000  | Kaninchen |        |

**Irritation and corrosivity**

May cause eye and skin irritation.

**Sensitising effects**

No known effect.

**Carcinogenic/mutagenic/toxic effects for reproduction**

Contains no ingredient listed as a carcinogen

**STOT-single exposure**

The substance or mixture is not classified as specific target organ toxicant, single exposure.

**STOT-repeated exposure**

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

**Aspiration hazard**

No aspiration toxicity classification

**Specific effects in experiment on an animal**

No toxicology information is available.

**Additional information on tests**

None known.

**Practical experience**
**Observations relevant to classification**

None known.

**Other observations**

None known.

**Further information**

Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice.

**SECTION 12: Ecological information**
**12.1. Toxicity**

No information on ecology is available. No data is available on the product itself.

| CAS No    | Chemical name            |              |           |         |                     |        |
|-----------|--------------------------|--------------|-----------|---------|---------------------|--------|
|           | Aquatic toxicity         | Dose         | [h]   [d] | Species | Source              | Method |
| 7647-14-5 | Sodium chloride          |              |           |         |                     |        |
|           | Acute fish toxicity      | LC50<br>mg/l | 7650      | 96 h    | Pimephales promelas |        |
|           | Acute crustacea toxicity | EC50<br>mg/l | 1000      | 48 h    | Daphnia magna       |        |

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### LCK 487 LUMISmini Leuchtbakterien Standardlösung/Luminescent Bacteria Standard Solution; 2/3

Revision date: 29.08.2013

Product code: LCK487-2

Page 7 of 8

#### **12.2. Persistence and degradability**

No data is available on the product itself.

#### **12.3. Bioaccumulative potential**

no data available

#### **12.4. Mobility in soil**

no data available

#### **12.5. Results of PBT and vPvB assessment**

no data available

#### **12.6. Other adverse effects**

No known effect.

#### **Further information**

No known effect.

## SECTION 13: Disposal considerations

### **13.1. Waste treatment methods**

#### **Advice on disposal**

In accordance with local and national regulations.

Our local agencies will accept used cuvettes to ensure their proper disposal. (nur bei Küvettentest, nicht Hach und GE)

#### **Waste disposal number of waste from residues/unused products**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

#### **Waste disposal number of used product**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

#### **Waste disposal number of contaminated packaging**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

#### **Contaminated packaging**

Dispose of as unused product.

## SECTION 14: Transport information

### **Land transport (ADR/RID)**

#### **Other applicable information (land transport)**

Not subject to transport regulations.

### **Inland waterways transport (ADN)**

#### **Other applicable information (inland waterways transport)**

Not tested

### **Marine transport (IMDG)**

#### **Other applicable information (marine transport)**

Not subject to transport regulations.

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

#### **Other applicable information (air transport)**

Not subject to transport regulations.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### LCK 487 LUMISmini Leuchtakterien Standardlösung/Luminescent Bacteria Standard Solution; 2/3

Revision date: 29.08.2013

Product code: LCK487-2

Page 8 of 8

#### **14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: no

#### **14.6. Special precautions for user**

no data available

#### **14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**

Not relevant

### **SECTION 15: Regulatory information**

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

##### **EU regulatory information**

##### **Additional information**

The product does not need to be labelled in accordance with EC directives or respective national laws.

##### **National regulatory information**

Water contaminating class (D): 1 - slightly water contaminating

#### **15.2. Chemical safety assessment**

Chemical safety assessments for substances in this mixture were not carried out.

### **SECTION 16: Other information**

#### **Changes**

Revision: 25.07.2013

#### **Further Information**

The information is based on present level of our knowledge. It does not, however, give assurances of product properties and establishes no contract legal rights.

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



## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### LCK 487 LUMIStox Leuchtbakterien Reaktivierungslösung/Luminescent Bacteria Reactivation Sol., 3/3

Revision date: 29.08.2013

Product code: LCK487-3

Page 1 of 8

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

##### 1.1. Product identifier

LCK 487 LUMIStox Leuchtbakterien Reaktivierungslösung/Luminescent Bacteria Reactivation Sol.,  
3/3

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

###### Use of the substance/mixture

Reagent for analysis

##### 1.3. Details of the supplier of the safety data sheet

Company name: HACH LANGE GmbH  
Street: Willstätterstr. 11  
Place: D-40549 Düsseldorf  
Telephone: +49 (0)211 5288-383  
e-mail: SDS@hach.com  
Internet: www.de.hach.com  
Responsible Department: HACH LANGE Ltd.  
5, Pacific Way  
Salford Manchester M50 1DL - United Kingdom  
Tel. +44 (0) 161 872 1487 \* Fax +44 (0) 161 848 7324  
e-Mail: info-uk@hach.com

HACH LANGE Ltd.  
Unit 1, Chestnut Road Western Industrial Estate  
IRL-Dublin 12  
Tel. +353 (0)1 4602522  
e-Mail: info-ie@hach.com

##### 1.4. Emergency telephone number:

Poison Control Center Mainz: Tel: +49 (0) 6131 19240 - 24 hour emergency service -

#### SECTION 2: Hazards identification

##### 2.1. Classification of the substance or mixture

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

This mixture is not classified as hazardous in accordance with Regulation (EC) No. 1272/2008.

The product does not need to be labelled in accordance with EC directives or respective national laws.

##### 2.2. Label elements

###### Additional advice on labelling

The product is not classified as dangerous according to Regulation (EC) No. 1272/2008.

##### 2.3. Other hazards

no data available

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

##### 3.2. Mixtures

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**LCK 487 LUMIStox Leuchtbakterien Reaktivierungslösung/Luminescent Bacteria  
Reactivation Sol., 3/3**

Revision date: 29.08.2013

Product code: LCK487-3

Page 2 of 8

**Hazardous components**

| CAS No    | Chemical name   |          |          | Quantity |
|-----------|---|----------|----------|----------|
|           | EC No   | Index No | REACH No |          |
|           | Classification according to Regulation (EC) No. 1272/2008 [CLP] |          |          |          |
| 7732-18-5 | Water   |          |          | > 95 %   |
|           | 231-791-2   |          |          |          |
| 7647-14-5 | Sodium chloride   |          |          | 1-10 %   |
|           | 231-598-3   |          |          |          |
| 7791-18-6 | Magnesium chloride hexahydrate                                  |          |          | < 1 %    |
|           | 232-094-6   |          |          |          |

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

**SECTION 4: First aid measures**
**4.1. Description of first aid measures**
**General information**

Take off contaminated clothing and shoes immediately.  
Show this safety data sheet to the doctor in attendance.

**After inhalation**

Move to fresh air.  
If symptoms persist, call a physician.

**After contact with skin**

Wash off immediately with plenty of water for at least 15 minutes.  
If skin irritation persists, call a physician.

**After contact with eyes**

Immediately flush eye(s) with plenty of water.  
If eye irritation persists, consult a specialist.

**After ingestion**

Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Consult a physician.

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

No known effect.

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

Treat symptomatically.

**SECTION 5: Firefighting measures**
**5.1. Extinguishing media**
**Suitable extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
The product itself does not burn.

**Unsuitable extinguishing media**

No Limit

**5.2. Special hazards arising from the substance or mixture**

Fire may liberate hazardous vapours.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### LCK 487 LUMIStox Leuchtakterien Reaktivierungslösung/Luminescent Bacteria Reactivation Sol., 3/3

Revision date: 29.08.2013

Product code: LCK487-3

Page 3 of 8

#### **5.3. Advice for firefighters**

In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.  
In the case of respirable dust and/or fumes, use self-contained breathing apparatus and dust impervious protective suit.

#### **Additional information**

Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

### **SECTION 6: Accidental release measures**

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

Use personal protective equipment.  
Only qualified personnel equipped with suitable protective equipment may intervene. Immediately evacuate personnel to safe areas.  
For personal protection see section 8.

#### **6.2. Environmental precautions**

Do not flush into surface water or sanitary sewer system.

#### **6.3. Methods and material for containment and cleaning up**

Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local/national regulations (see section 13).

#### **6.4. Reference to other sections**

13. Disposal considerations

### **SECTION 7: Handling and storage**

#### **7.1. Precautions for safe handling**

##### **Advice on safe handling**

Avoid contact with skin and eyes.  
Do not breathe vapours/dust.  
Wash thoroughly after handling.  
General industrial hygiene practice.

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

See also section 5

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

Avoid contact with skin, eyes and clothing.

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

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

Storage temperature: -18°C

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

None known.

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

no data available

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

no data available

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

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

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### LCK 487 LUMIStox Leuchtbakterien Reaktivierungslösung/Luminescent Bacteria Reactivation Sol., 3/3

Revision date: 29.08.2013

Product code: LCK487-3

Page 4 of 8

#### Additional advice on limit values

None known.

#### 8.2. Exposure controls

##### Appropriate engineering controls

The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

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

Handle in accordance with good industrial hygiene and safety practice.

##### Protective and hygiene measures

Wash hands before breaks and after work.

General industrial hygiene practice.

##### Eye/face protection

Safety glasses with side-shields

##### Hand protection

Use barrier skin cream.

Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374. In full contact:

Gloves material: Viton, Layer thickness: 0.70 mm, Breakthrough time: >480 min. In splash contact: Glove material: nitrile rubber, Layer thickness 0,20 mm, Breakthrough time: > 30 min

##### Skin protection

Avoid contact with skin, eyes and clothing.

##### Respiratory protection

Provide adequate ventilation.

##### Environmental exposure controls

Do not flush into surface water or sanitary sewer system.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

|                 |            |
|-----------------|------------|
| Physical state: | liquid     |
| Colour:         | colourless |
| Odour:          | odourless  |

|           |   |                    |
|-----------|---|--------------------|
| pH-Value: | 7 | <b>Test method</b> |
|-----------|---|--------------------|

#### Changes in the physical state

|  |                   |
|--|-------------------|
| Melting point:                           | -18°C °C          |
| Initial boiling point and boiling range: | no data available |
| Sublimation point:                       | not applicable    |
| Softening point:                         | not applicable    |
| Pour point:                              | no data available |
| :  | no data available |
| Flash point:                             | no data available |

#### Flammability

|        |                |
|--------|----------------|
| Solid: | not applicable |
| Gas:   | not applicable |

#### Explosive properties

no data available

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### LCK 487 LUMIStox Leuchtbakterien Reaktivierungslösung/Luminescent Bacteria Reactivation Sol., 3/3

Revision date: 29.08.2013

Product code: LCK487-3

Page 5 of 8

|                                     |                                      |
|-------------------------------------|--------------------------------------|
| Lower explosion limits:             | no data available                    |
| Upper explosion limits:             | no data available                    |
| Ignition temperature:               | no data available                    |
| <b>Auto-ignition temperature</b>    |                                      |
| Solid:                              | not applicable                       |
| Gas:                                | not applicable                       |
| Decomposition temperature:          | not applicable                       |
| <b>Oxidizing properties</b>         |                                      |
| no data available                   |                                      |
| Vapour pressure:                    | no data available                    |
| Vapour pressure:                    | no data available                    |
| Density:                            | 1,02 g/cm <sup>3</sup>               |
| Bulk density:                       | not applicable                       |
| Water solubility:<br>(at 20 °C)     | no data available completely soluble |
| <b>Solubility in other solvents</b> |                                      |
| no data available                   |                                      |
| Partition coefficient:              | no data available                    |
| Viscosity / dynamic:                | no data available                    |
| Viscosity / kinematic:              | no data available                    |
| Flow time:                          | no data available                    |
| Vapour density:                     | no data available                    |
| Evaporation rate:                   | no data available                    |
| Solvent separation test:            | no data available                    |
| Solvent content:                    | no data available                    |

#### **9.2. Other information**

|                   |                   |
|-------------------|-------------------|
| Solid content:    | no data available |
| no data available |                   |

## **SECTION 10: Stability and reactivity**

### **10.1. Reactivity**

No dangerous reaction known under conditions of normal use.

### **10.2. Chemical stability**

The product is chemically stable.

### **10.3. Possibility of hazardous reactions**

Hazardous polymerisation does not occur.

### **10.4. Conditions to avoid**

Do not expose to temperatures above -18 °C.

The product is normally supplied in a stabilized form. If the permissible storage period and/or storage temperature is noticeably exceeded, the product may polymerise with heat evolution.

### **10.5. Incompatible materials**

None known.

### **10.6. Hazardous decomposition products**

No decomposition if stored and applied as directed.

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**LCK 487 LUMIStox Leuchtbakterien Reaktivierungslösung/Luminescent Bacteria  
Reactivation Sol., 3/3**

Revision date: 29.08.2013

Product code: LCK487-3

Page 6 of 8

**Further information**

Stable under recommended storage conditions.

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

**Toxicokinetics, metabolism and distribution**

No toxicology information is available.

**Acute toxicity**

No data is available on the product itself.

| CAS No    | Chemical name                  |                      |           |        |        |
|-----------|--------------------------------|----------------------|-----------|--------|--------|
|           | Exposure route                 | Dose                 | Species   | Source | Method |
| 7647-14-5 | Sodium chloride                |                      |           |        |        |
|           | oral                           | LD50 3000<br>mg/kg   | Ratte     |        |        |
|           | dermal                         | LD50 >10000<br>mg/kg | Kaninchen |        |        |
| 7791-18-6 | Magnesium chloride hexahydrate |                      |           |        |        |
|           | oral                           | LD50 8100<br>mg/kg   | rat       |        |        |

**Irritation and corrosivity**

May cause eye and skin irritation.

**Sensitising effects**

No known effect.

**Carcinogenic/mutagenic/toxic effects for reproduction**

Contains no ingredient listed as a carcinogen

**STOT-single exposure**

The substance or mixture is not classified as specific target organ toxicant, single exposure.

**STOT-repeated exposure**

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

**Aspiration hazard**

No aspiration toxicity classification

**Specific effects in experiment on an animal**

No toxicology information is available.

**Additional information on tests**

None known.

**Practical experience**

**Observations relevant to classification**

None known.

**Other observations**

None known.

**Further information**

Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice.

**SECTION 12: Ecological information**

**12.1. Toxicity**

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**LCK 487 LUMIStox Leuchtbakterien Reaktivierungslösung/Luminescent Bacteria  
Reactivation Sol., 3/3**

Revision date: 29.08.2013

Product code: LCK487-3

Page 7 of 8

No information on ecology is available. No data is available on the product itself.

| CAS No    | Chemical name                  |              |           |         |                     |        |
|-----------|--------------------------------|--------------|-----------|---------|---------------------|--------|
|           | Aquatic toxicity               | Dose         | [h]   [d] | Species | Source              | Method |
| 7647-14-5 | Sodium chloride                |              |           |         |                     |        |
|           | Acute fish toxicity            | LC50<br>mg/l | 7650      | 96 h    | Pimephales promelas |        |
|           | Acute crustacea toxicity       | EC50<br>mg/l | 1000      | 48 h    | Daphnia magna       |        |
| 7791-18-6 | Magnesium chloride hexahydrate |              |           |         |                     |        |
|           | Acute fish toxicity            | LC50<br>mg/l | 2120      | 96 h    |                     |        |
|           | Acute crustacea toxicity       | EC50<br>mg/l | 1400      | 48 h    |                     |        |

**12.2. Persistence and degradability**

No data is available on the product itself.

**12.3. Bioaccumulative potential**

no data available

**12.4. Mobility in soil**

no data available

**12.5. Results of PBT and vPvB assessment**

no data available

**12.6. Other adverse effects**

No known effect.

**Further information**

No known effect.

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

**Advice on disposal**

In accordance with local and national regulations.

Our local agencies will accept used cuvettes to ensure their proper disposal. (nur bei Küvettentest, nicht Hach und GE)

**Waste disposal number of waste from residues/unused products**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

**Waste disposal number of used product**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

**Waste disposal number of contaminated packaging**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

**Contaminated packaging**

Dispose of as unused product.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### LCK 487 LUMIStox Leuchtbakterien Reaktivierungslösung/Luminescent Bacteria Reactivation Sol., 3/3

Revision date: 29.08.2013

Product code: LCK487-3

Page 8 of 8

#### SECTION 14: Transport information

##### Land transport (ADR/RID)

###### Other applicable information (land transport)

Not subject to transport regulations.

##### Inland waterways transport (ADN)

###### Other applicable information (inland waterways transport)

Not tested

##### Marine transport (IMDG)

###### Other applicable information (marine transport)

Not subject to transport regulations.

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

###### Other applicable information (air transport)

Not subject to transport regulations.

#### 14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

#### 14.6. Special precautions for user

no data available

#### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not relevant

#### SECTION 15: Regulatory information

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

###### EU regulatory information

###### Additional information

The product does not need to be labelled in accordance with EC directives or respective national laws.

###### National regulatory information

Water contaminating class (D): 2 - clearly water contaminating

##### 15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

#### SECTION 16: Other information

##### Changes

Revision: 25.07.2013

##### Further Information

The information is based on present level of our knowledge. It does not, however, give assurances of product properties and establishes no contract legal rights.

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