

Safety Data Sheet

According to EC Directive 91/155/EEC

Date of issue:
Supersedes edition of

24.02.2007
26.04.2004

1. Identification of the substance/preparation and of the company/undertaking

Identification of the product

Catalogue No.: 114833
Product name: Lead Cell Test Method: photometric 0.10 - 5.00 mg/l Pb
Spectroquant®
Blindwertreagenz

Use of the substance/preparation

Reagent for analysis

Company/undertaking identification

Company: Merck KGaA * 64271 Darmstadt * Germany * Phone: +49 6151 72-0
Emergency telephone No.: Please contact the regional Merck representation
in your country.

2. Composition/information on ingredients

Aqueous solution of organic compounds.

3. Hazards identification

No hazardous product as specified in Directive 67/548/EEC.

4. First aid measures

After inhalation: fresh air.
After skin contact: wash off with plenty of water. Remove contaminated clothing.
After eye contact: rinse out with plenty of water with the eyelid held wide open.
After swallowing: immediately make victim drink plenty of water. Consult doctor if feeling unwell.

5. Fire-fighting measures

Suitable extinguishing media:
In adaption to materials stored in the immediate neighbourhood.

Special risks:
Non-combustible.

6. Accidental release measures

Person-related precautionary measures:
Do not inhale vapours/aerosols. Avoid substance contact.

Procedures for cleaning / absorption:
Take up with liquid-absorbent material (e.g. Chemizorb®). Forward for disposal. Clean up affected area.

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114833
Product name: Lead Cell Test Method: photometric 0.10 - 5.00 mg/l Pb Spectroquant®
Blindwertreagenz

7. Handling and storage

Handling:

No further requirements.

Storage:

Tightly closed in a well-ventilated place. Accessible only for authorised persons. At +15°C to +25°C.

The data apply to the entire pack.

8. Exposure controls/personal protection

Personal protective equipment:

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Respiratory protection: required when vapours/aerosols are generated.

Eye protection: required

Hand protection: In full contact:
Glove material: nitrile rubber
Layer thickness: 0.11 mm
Breakthrough time: > 480 Min.

In splash contact:
Glove material: nitrile rubber
Layer thickness: 0.11 mm
Breakthrough time: > 480 Min.

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

This recommendation applies only to the product stated in the safety data sheet and supplied by us as well as to the purpose specified by us. 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).

Industrial hygiene:

Change contaminated clothing. Wash hands after working with substance.

9. Physical and chemical properties

Form: liquid
Colour: pink
Odour: odourless
pH value (20 °C) ~ 7
Melting point not available
Boiling point not available

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114833
Product name: Lead Cell Test Method: photometric 0.10 - 5.00 mg/l Pb Spectroquant®
Blindwertreagenz

Ignition temperature		not available
Flash point		not available
Explosion limits	lower	not available
	upper	not available
Density	(20 °C)	~ 1.00 g/cm ³
Solubility in Water		not available

10. Stability and reactivity

Conditions to be avoided
no information available

Substances to be avoided

The generally known reaction partners of water.

Hazardous decomposition products
no information available

11. Toxicological information

Acute toxicity

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

Further toxicological information

Due to the low concentration of the components contained in this product, risks are relatively improbable.

Further data

The product should be handled with the care usual when dealing with chemicals.

12. Ecological information

Ecotoxic effects:
Quantitative data on the ecological effect of this product are not available.

Further ecologic data:
No ecological problems are to be expected when the product is handled and used with due care and attention.

13. Disposal considerations

Product:

Chemicals must be disposed of in compliance with the respective national regulations. Under www.retrologistik.de you will find country- and substance-specific information as well as contact partners.

Packaging:

Merck product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system. Under www.retrologistik.de you will find special information on the respective national conditions as well as contact partners.

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114833
Product name: Lead Cell Test Method: photometric 0.10 - 5.00 mg/l Pb Spectroquant®
Blindwertreagenz

14. Transport information

Road & Rail ADR, RID
UN 3316 CHEMIE-TESTSATZ, 9, II

Inland waterway ADN, ADNR not tested

Sea IMDG-Code
UN 3316 CHEMICAL KIT, 9, II
Ems F-A S-P

Air CAO, PAX
UN 3316 CHEMICAL KIT, 9, II

The transport regulations are cited according to international regulations and in the form applicable in Germany. Possible national deviations in other countries are not considered.
THESE TRANSPORT DATA APPLY TO THE ENTIRE PACK !

15. Regulatory information

Labelling according to EC Directives

Symbol: ---

R-phrases: ---

S-phrases: ---

16. Other information

Reason for alteration

Chapter 8: personal protective equipment.

General update.

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 characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.

Safety Data Sheet

According to EC Directive 91/155/EEC

Date of issue:
Supersedes edition of

24.02.2007
27.08.2004

1. Identification of the substance/preparation and of the company/undertaking

Identification of the product

Catalogue No.: 114833
Product name: Lead Cell Test Method: photometric 0.10 - 5.00 mg/l Pb
Spectroquant®
Küvetten-Reagenz

Use of the substance/preparation

Reagent for analysis

Company/undertaking identification

Company: Merck KGaA * 64271 Darmstadt * Germany * Phone: +49 6151 72-0
Emergency telephone No.: Please contact the regional Merck representation
in your country.

2. Composition/information on ingredients

Solution in: dimethyl sulfoxide / water.
Contains: potassium cyanide.

Hazardous ingredients:

Name according to EC Directives:

CAS-No.	EC No.	EC-Index-No.	Classification	Content:
Potassium cyanide 151-50-8	205-792-3	006-007-00-5	T+; R26/27/28 R32 N; R50/53	≥ 2.5 - < 7 %

(Full text of R-Phrases in heading 16)

3. Hazards identification

Toxic by inhalation, in contact with skin and if swallowed. Contact with acids liberates very toxic gas. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4. First aid measures

First-aid personnel: ensure self-protection!

After inhalation: fresh air.

If breathing stops: immediately apply mechanical ventilation, if necessary oxygen mask.

Immediately call in physician.

After skin contact: wash off with plenty of water. Remove contaminated clothing. Call in physician.

After eye contact: rinse out with plenty of water with the eyelid held wide open. Call in ophthalmologist.

After swallowing: make the victim drink plenty of water, induce vomiting. Immediately call in physician (mentioning hydrocyanic acid poisoning).

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114833
Product name: Lead Cell Test Method: photometric 0.10 - 5.00 mg/l Pb Spectroquant®
Küvetten-Reagenz

5. Fire-fighting measures

Suitable extinguishing media:
CO₂, foam, powder.

Special risks:
Combustible. Vapours heavier than air. Development of hazardous combustion gases or vapours possible in the event of fire. Forms explosive mixtures with air at ambient temperatures. The following may develop in event of fire: hydrogen cyanide, sulfur oxides.

Special protective equipment for fire fighting:
Do not stay in dangerous zone without self-contained breathing apparatus. In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.

Other information:
Contain escaping vapours with water. Prevent fire-fighting water from entering surface water or groundwater.

6. Accidental release measures

Person-related precautionary measures:
Do not inhale vapours/aerosols. Avoid substance contact. Ensure supply of fresh air in enclosed rooms.

Environmental-protection measures:
Do not allow to enter sewerage system.

Procedures for cleaning / absorption:
Take up with liquid-absorbent material (e.g. Chemizorb®). Forward for disposal. Clean up affected area.

7. Handling and storage

Handling:

Notes for safe handling:
Work under hood. Do not inhale substance.

Storage:

Tightly closed in a well-ventilated place. Accessible only for authorised persons. At +15°C to +25°C.

The data apply to the entire pack.

8. Exposure controls/personal protection

Personal protective equipment:

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Respiratory protection: required when vapours/aerosols are generated. filter ABEK

Eye protection: required

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According to EC Directive 91/155/EEC

Catalogue No.: 114833
Product name: Lead Cell Test Method: photometric 0.10 - 5.00 mg/l Pb Spectroquant®
Küvetten-Reagenz

Hand protection:

In full contact:

Glove material: polychloroprene
Layer thickness: 0.65 mm
Breakthrough time: > 480 Min.

In splash contact:

Glove material: natural latex
Layer thickness: 0.6 mm
Breakthrough time: > 240 Min.

The protective gloves to be used must comply with the specifications of EC directive 89/686/EEC and the resultant standard EN374, for example KCL 720 Camapren® (full contact), 706 Lapren® (splash contact). This recommendation applies only to the product stated in the safety data sheet and supplied by us as well as to the purpose specified by us. 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).

Other protective equipment:

Suitable protective clothing.

Industrial hygiene:

Immediately change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance. Under no circumstances eat or drink at workplace. Work under hood . Do not inhale substance.

9. Physical and chemical properties

Form:	liquid	
Colour:	orange	
Odour:	aromatic	
pH value	(20 °C)	~ 12-13
Melting point		not available
Boiling point		not available
Ignition temperature		not available
Flash point		not available
Explosion limits	lower	not available
	upper	not available
Density	(20 °C)	1.10 g/cm ³
Solubility in water	(20 °C)	soluble

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114833
Product name: Lead Cell Test Method: photometric 0.10 - 5.00 mg/l Pb Spectroquant®
Küvetten-Reagenz

10. Stability and reactivity

Conditions to be avoided

Heating.

Substances to be avoided

Generates dangerous gases or fumes in contact with: acids (Formed could be: hydrogen cyanide).

Hazardous decomposition products
in the event of fire: See chapter 5.

Further information

incompatible with various plastics;
Explosible with air in a vaporous/gaseous state when heated.

11. Toxicological information

Acute toxicity

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

Further toxicological information

Property that must be anticipated on the basis of the components of the preparation:

After inhalation of vapours: mucosal irritations, absorption.

After skin contact: Danger of skin absorption.

After eye contact: Slight irritations.

After swallowing: absorption.

After absorption: nausea, vomiting, tachycardia, dyspnoea, dizziness, unconsciousness, cardiovascular failure, death.

Other notes:

The following applies to cyanogen compounds/ nitriles in general: utmost caution! Release of hydrocyanic acid is possible - blockade of cellular respiration. Cardiovascular disorders, dyspnoea, unconsciousness.

Further data

Further hazardous properties cannot be excluded.

The product should be handled with the care usual when dealing with chemicals.

12. Ecological information

Ecotoxic effects:

Quantitative data on the ecological effect of this product are not available.

Biological effects:

Toxic for aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Further ecologic data:

The following applies to cyanogen compounds in general: cyanide ions: biological effects: fish: 60 h. LC₅₀: 0.08 mg/l; lethal as from 0.05 mg/l ; for lower organisms lethal as from 0.1 mg/l .

Crustaceans: D. magna EC₅₀: 1.0 mg/l.

Do not allow to enter waters, waste water, or soil!

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114833
Product name: Lead Cell Test Method: photometric 0.10 - 5.00 mg/l Pb Spectroquant®
Küvetten-Reagenz

13. Disposal considerations

Product:

Chemicals must be disposed of in compliance with the respective national regulations. Under www.retrologistik.de you will find country- and substance-specific information as well as contact partners.

Packaging:

Merck product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system. Under www.retrologistik.de you will find special information on the respective national conditions as well as contact partners.

14. Transport information

Road & Rail ADR, RID
UN 3316 CHEMIE-TESTSATZ, 9, II

Inland waterway ADN, ADNR not tested

Sea IMDG-Code
UN 3316 CHEMICAL KIT, 9, II
Ems F-A S-P

Air CAO, PAX
UN 3316 CHEMICAL KIT, 9, II

The transport regulations are cited according to international regulations and in the form applicable in Germany. Possible national deviations in other countries are not considered.
THESE TRANSPORT DATA APPLY TO THE ENTIRE PACK !

15. Regulatory information

Labelling according to EC Directives

Symbol:	T N	Toxic Dangerous for the environment
R-phrases:	23/24/25-32	Toxic by inhalation, in contact with skin and if swallowed. Contact with acids liberates very toxic gas.
S-phrases:	36/37-45	Wear suitable protective clothing and gloves. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
contains:	Potassium cyanide	

16. Other information

Text of any R phrases referred to under heading 2:

26/27/28	Very toxic by inhalation, in contact with skin and if swallowed.
32	Contact with acids liberates very toxic gas.
50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.:	114833
Product name:	Lead Cell Test Method: photometric 0.10 - 5.00 mg/l Pb Spectroquant® Küvetten-Reagenz

Reduced labelling on the container due to small quantity.

Reason for alteration

Chapter 4: first aid measures.
Chapter 5: fire-fighting measures.
Chapter 8: personal protective equipment.
Chapter 11: toxicological information.

General update.

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 characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.

Safety Data Sheet

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24.02.2007
23.08.2004

1. Identification of the substance/preparation and of the company/undertaking

Identification of the product

Catalogue No.: 114833
Product name: Lead Cell Test Method: photometric 0.10 - 5.00 mg/l Pb
Spectroquant®
Pb-1K

Use of the substance/preparation

Reagent for analysis

Company/undertaking identification

Company: Merck KGaA * 64271 Darmstadt * Germany * Phone: +49 6151 72-0
Emergency telephone No.: Please contact the regional Merck representation
in your country.

2. Composition/information on ingredients

Aqueous solution of inorganic compounds.

Hazardous ingredients:

Name according to EC Directives:

CAS-No.	EC No.	EC-Index-No.	Classification	Content:
Hydroxylammonium chloride 5470-11-1	226-798-2	612-123-00-2	Xn; R22-48/22 Xi; R36/38 R43 N; R50	≥ 10 - < 25 %
ammonia solution 1336-21-6	215-647-6	007-001-01-2	C; R34 N; R50	≥ 1 - < 5 %
Ammonium chloride 12125-02-9	235-186-4	017-014-00-8	Xn; R22 Xi; R36	≥ 1 - < 10 %

(Full text of R-Phrases in heading 16)

3. Hazards identification

Harmful if swallowed. Irritating to eyes and skin. May cause sensitization by skin contact. Harmful: danger of serious damage to health by prolonged exposure if swallowed. Very toxic to aquatic organisms.

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114833
Product name: Lead Cell Test Method: photometric 0.10 - 5.00 mg/l Pb Spectroquant®
Pb-1K

4. First aid measures

After inhalation: fresh air.

After skin contact: wash off with plenty of water. Remove contaminated clothing.

After eye contact: rinse out with plenty of water with the eyelid held wide open. Call in ophthalmologist.

After swallowing: immediately make victim drink plenty of water. Call in physician.

5. Fire-fighting measures

Suitable extinguishing media:

In adaption to materials stored in the immediate neighbourhood.

Special risks:

Non-combustible. Ambient fire may liberate hazardous vapours. The following may develop in event of fire: nitrogen oxides, hydrochloric acid.

Special protective equipment for fire fighting:

Do not stay in dangerous zone without self-contained breathing apparatus. In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.

Other information:

Prevent fire-fighting water from entering surface water or groundwater. Contain escaping vapours with water.

6. Accidental release measures

Person-related precautionary measures:

Avoid substance contact. Do not inhale vapours/aerosols. Ensure supply of fresh air in enclosed rooms.

Environmental-protection measures:

Do not allow to enter sewerage system.

Procedures for cleaning / absorption:

Take up with liquid-absorbent and neutralizing material (e.g. Chemizorb® OH⁻, Merck Art. No. 101596). Forward for disposal. Clean up affected area.

7. Handling and storage

Handling:

No further requirements.

Storage:

Tightly closed in a well-ventilated place. Accessible only for authorised persons. At +15°C to +25°C.

The data apply to the entire pack.

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114833
Product name: Lead Cell Test Method: photometric 0.10 - 5.00 mg/l Pb Spectroquant®
Pb-1K

8. Exposure controls/personal protection

Specific control parameter

EC

Name Hydroxylammonium chloride
Sensitization Sh Danger of sensitization of the skin

Name Ammonia
Value 20 ml/m³
14 mg/m³
Short term (<15 min.) 50 ml/m³
36 mg/m³

Personal protective equipment:

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Respiratory protection: required when vapours/aerosols are generated.

Eye protection: required

Hand protection: In full contact:
Glove material: nitrile rubber
Layer thickness: 0.11 mm
Breakthrough time: > 480 Min.
In splash contact:
Glove material: nitrile rubber
Layer thickness: 0.11 mm
Breakthrough time: > 480 Min.

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

This recommendation applies only to the product stated in the safety data sheet and supplied by us as well as to the purpose specified by us. 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).

Other protective equipment: Suitable protective clothing.

Industrial hygiene:

Immediately change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance.

9. Physical and chemical properties

Form: liquid
Colour: colourless
Odour: of ammonia
pH value (20 °C) ~ 11
Melting point not available

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114833
Product name: Lead Cell Test Method: photometric 0.10 - 5.00 mg/l Pb Spectroquant® Pb-1K

Boiling point		not available
Ignition temperature		not available
Flash point		not available
Explosion limits	lower	not available
	upper	not available
Density	(20 °C)	1.03 g/cm ³
Solubility in water	(20 °C)	soluble

10. Stability and reactivity

Conditions to be avoided

Heating.

Substances to be avoided

increased reactivity with: strong acids, alkalis.

Hazardous decomposition products

in the event of fire: See chapter 5.

Further information

incompatible with various metals, metal alloys.

11. Toxicological information

Acute toxicity

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

Further toxicological information

Property that must be anticipated on the basis from the components of the preparation:

After inhalation: Irritations of the mucous membranes, coughing, and dyspnoea.

After skin contact: Irritations. Risk of skin sensitization.

After eye contact: Irritations.

After swallowing: irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

Systemic effects: After absorption of toxic quantities: drop in blood pressure, cyanosis, Risk of methaemoglobin formation.

Other notes:

The following applies to ammonium salts in general: after swallowing: local irritation symptoms, nausea, vomiting, diarrhoea. Systemic effect: after the uptake of very large quantities: drop in blood pressure, collapse, CNS disorders, spasms, narcotic conditions, respiratory paralysis, haemolysis.

Further data

Further hazardous properties cannot be excluded.

The product should be handled with the care usual when dealing with chemicals.

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114833
Product name: Lead Cell Test Method: photometric 0.10 - 5.00 mg/l Pb Spectroquant®
Pb-1K

12. Ecological information

Ecotoxic effects:
Quantitative data on the ecological effect of this product are not available.

Biological effects:
Highly toxic for aquatic organisms.

Further ecologic data:
The following applies to ammonium ions in general: biological effects: fish: toxic as from 0.3 mg/l ; nourishment for fish: toxic as from 0.3 mg/l .

Do not allow to enter waters, waste water, or soil!

13. Disposal considerations

Product:

Chemicals must be disposed of in compliance with the respective national regulations. Under www.retrologistik.de you will find country- and substance-specific information as well as contact partners.

Packaging:

Merck product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system. Under www.retrologistik.de you will find special information on the respective national conditions as well as contact partners.

14. Transport information

Road & Rail ADR, RID
UN 3316 CHEMIE-TESTSATZ, 9, II

Inland waterway ADN, ADNR not tested

Sea IMDG-Code
UN 3316 CHEMICAL KIT, 9, II
Ems F-A S-P

Air CAO, PAX
UN 3316 CHEMICAL KIT, 9, II

The transport regulations are cited according to international regulations and in the form applicable in Germany . Possible national deviations in other countries are not considered.
THESE TRANSPORT DATA APPLY TO THE ENTIRE PACK !

15. Regulatory information

Labelling according to EC Directives

Symbol:	Xn N	Harmful Dangerous for the environment
R-phrases:	22-43-48/22	Harmful if swallowed. May cause sensitization by skin contact. Harmful: danger of serious damage to health by prolonged exposure if swallowed.
S-phrases:	24-37	Avoid contact with skin. Wear suitable gloves.
contains:	Hydroxylammonium chloride	

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114833
Product name: Lead Cell Test Method: photometric 0.10 - 5.00 mg/l Pb Spectroquant®
Pb-1K

16. Other information

Text of any R phrases referred to under heading 2:

22	Harmful if swallowed.
34	Causes burns.
36	Irritating to eyes.
36/38	Irritating to eyes and skin.
43	May cause sensitization by skin contact.
48/22	Harmful: danger of serious damage to health by prolonged exposure if swallowed.
50	Very toxic to aquatic organisms.

Reduced labelling on the container due to small quantity.

Reason for alteration

General update.

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 characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.

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Identification of the product

Catalogue No.: 114833
Product name: Lead Cell Test Method: photometric 0.10 - 5.00 mg/l Pb
Spectroquant®
Pb-2K

Use of the substance/preparation

Reagent for analysis

Company/undertaking identification

Company: Merck KGaA * 64271 Darmstadt * Germany * Phone: +49 6151 72-0
Emergency telephone No.: Please contact the regional Merck representation
in your country.

2. Composition/information on ingredients

CAS-No.:	20624-25-3		
M:	225.31 g/mol	EC-No.:	205-710-6
Formula Hill:	C ₅ H ₁₀ NNaS ₂ * 3 H ₂ O		

3. Hazards identification

Harmful if swallowed. Very toxic to aquatic organisms.

4. First aid measures

After inhalation: fresh air.
After skin contact: wash off with plenty of water. Remove contaminated clothing.
After eye contact: rinse out with plenty of water with the eyelid held wide open.
After swallowing: immediately make victim drink plenty of water. Call in physician.

5. Fire-fighting measures

Suitable extinguishing media:
Water, CO₂, foam, powder.

Special risks:
Combustible. Ambient fire may liberate hazardous vapours. The following may develop in event of fire:
sulfur oxides, nitrogen oxides, nitrosamines.

Special protective equipment for fire fighting:
Do not stay in dangerous zone without self-contained breathing apparatus. In order to
avoid contact with skin, keep a safety distance and wear suitable protective clothing.

Other information:
Contain escaping vapours with water. Prevent fire-fighting water from entering surface water or
groundwater.

Merck Safety Data Sheet

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Catalogue No.: 114833
Product name: Lead Cell Test Method: photometric 0.10 - 5.00 mg/l Pb Spectroquant®
Pb-2K

6. Accidental release measures

Person-related precautionary measures:

Avoid generation of dusts; do not inhale dusts. Avoid substance contact. Ensure supply of fresh air in enclosed rooms.

Environmental-protection measures:

Do not allow to enter sewerage system.

Procedures for cleaning / absorption:

Take up dry. Forward for disposal. Clean up affected area.

7. Handling and storage

Handling:

No further requirements.

Storage:

Tightly closed in a well-ventilated place. Accessible only for authorised persons. Dry. At +15°C to +25°C.

The data apply to the entire pack.

8. Exposure controls/personal protection

Personal protective equipment:

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Respiratory protection: required when dusts are generated. Filter P 1 (acc. to DIN 3181) for solid particles of inert substances

Eye protection: required

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Catalogue No.: 114833
Product name: Lead Cell Test Method: photometric 0.10 - 5.00 mg/l Pb Spectroquant® Pb-2K

Hand protection:

In full contact:

Glove material: nitrile rubber
Layer thickness: 0.11 mm
Breakthrough time: > 480 Min.

In splash contact:

Glove material: nitrile rubber
Layer thickness: 0.11 mm
Breakthrough time: > 480 Min.

The protective gloves to be used must comply with the specifications of EC directive 89/686/EEC and the resultant standard EN374, for example KCL 741 Dermatril® L (full contact), 741 Dermatril® L (splash contact). The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

This recommendation applies only to the product stated in the safety data sheet and supplied by us as well as to the purpose specified by us. 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).

Industrial hygiene:

Immediately change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance.

9. Physical and chemical properties

Form:	solid		
Colour:	white		
Odour:	almost odourless		
pH value at 20 g/l H ₂ O	(20 °C)	~ 7	
Melting point		~ 93	°C
Boiling point		not available	
Ignition temperature		not available	
Flash point		not available	
Explosion limits	lower	not available	
	upper	not available	
Density		not available	
Solubility in water	(20 °C)	~ 600	g/l
log Pow		-1.43	(calculated) (Lit.)

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114833
Product name: Lead Cell Test Method: photometric 0.10 - 5.00 mg/l Pb Spectroquant®
Pb-2K

10. Stability and reactivity

Conditions to be avoided

Strong heating.

Substances to be avoided

Violent reactions possible with: acids, strong bases, oxidizing agent.

Hazardous decomposition products

in the event of fire: See chapter 5.

Further information

The following applies in general to flammable organic substances and preparations: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

11. Toxicological information

Acute toxicity

LD₅₀ (dermal, rat): >1000 mg/kg (anhydrous substance) (RTECS).

LD₅₀ (oral, rat): 1500 mg/kg (anhydrous substance) (RTECS).

Subacute to chronic toxicity

Bacterial mutagenicity: Salmonella typhimurium: negative. (anhydrous substance) (National Toxicology Program)

Mutagenicity (mammal cell test): chromosome aberration negative. (anhydrous substance) (National Toxicology Program)

Mutagenicity (mammal cell test): positive. (anhydrous substance) (National Toxicology Program)

Further toxicological information

After swallowing: We have no description of any toxic symptoms.

Further data

Further hazardous properties cannot be excluded.

The product should be handled with the care usual when dealing with chemicals.

12. Ecological information

Biologic degradation:

Distribution: log Pow: -1.43 (calculated) (Lit.).

No bioaccumulation is to be expected (log Pow <1).

Ecotoxic effects:

Biological effects:

Highly toxic for aquatic organisms.

Fish toxicity: P.reticulata LC₅₀: 5.5-8.5 mg/l /96 h (anhydrous substance) (ECOTOX Database).

Daphnia toxicity: Daphnia magna EC₅₀: 0.71-1.06 mg/l /48 h (anhydrous substance) (ECOTOX Database).

Algal toxicity: chlorella pyrenoidosa IC₅₀: 1.4 mg/l /96 h (anhydrous substance) (ECOTOX Database).

Further ecologic data:

Do not allow to enter waters, waste water, or soil!

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13. Disposal considerations

Product:

Chemicals must be disposed of in compliance with the respective national regulations. Under www.retrologistik.de you will find country- and substance-specific information as well as contact partners.

Packaging:

Merck product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system. Under www.retrologistik.de you will find special information on the respective national conditions as well as contact partners.

14. Transport information

Road & Rail ADR, RID

UN 3316 CHEMIE-TESTSATZ, 9, II

Inland waterway ADN, ADNR not tested

Sea IMDG-Code

UN 3316 CHEMICAL KIT, 9, II

Ems F-A S-P

Air CAO, PAX

UN 3316 CHEMICAL KIT, 9, II

The transport regulations are cited according to international regulations and in the form applicable in Germany. Possible national deviations in other countries are not considered.
THESE TRANSPORT DATA APPLY TO THE ENTIRE PACK !

15. Regulatory information

Labelling according to EC Directives

Symbol:	Xn	Harmful
R-phrases:	22	Harmful if swallowed.
S-phrases:	---	
contains:	Sodium diethyldithiocarbamate	

16. Other information

Reason for alteration

General update.

General update.

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 characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.