

# Safety Data Sheet

According to EC Directive 91/155/EEC

Date of issue:  
Supersedes edition of

07.04.2004  
28.08.1997

## 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 25 Tests  
Spectroquant®  
Blindwertreagenz

### *Use of the substance/preparation*

Reagent for analysis

### *Company/undertaking identification*

Company: Merck KGaA \* 64271 Darmstadt \* Germany \* Tel: +49 (0)6151/72-0  
Emergency telephone No.: +49 (0)6151/72112 \* Fax: +49 (0)6151/72-7780

## 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 under running water.  
After eye contact: rinse out with water.  
After swallowing (large amounts): 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.

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

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## 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.

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## 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: not required

Industrial hygiene:

Change contaminated clothing. Wash hands after working with substance.

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## 9. Physical and chemical properties

Form:	liquid	
Colour:	pink	
Odour:	odourless	
pH value	(20 °C)	~ 7
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)	~ 1.00 g/cm <sup>3</sup>
Solubility in Water		not available

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## 10. Stability and reactivity

*Conditions to be avoided*

none

*Substances to be avoided*

The generally known reaction partners of water.

*Hazardous decomposition products*

no information available

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## 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.

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## 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.

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## 13. Disposal considerations

*Product:*

Chemicals must be disposed of in compliance with the respective national regulations. Under [www.retrologistik.de](http://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](http://www.retrologistik.de) you will find special information on the respective national conditions as well as contact partners.

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# 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 25 Tests  
Spectroquant®  
Blindwertreagenz

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## 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  
CHEMICAL KIT, 9, UN 3316, 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 !**

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## 15. Regulatory information

*Labelling according to EC Directives*

Symbol: ---

R-phrases: ---

S-phrases: ---

*German regulations*

Water pollution class nwg (nonpolluting substance) VwVwS Anh. 4

Storage class VCI 10-13

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## 16. Other information

*Reason for alteration*

Chapter 14: transport information.

General update.

*Contact for information:*

HSSE-C/CI \* Tel: +49 (0)6151/722775 \* Fax: +49 (0)6151/726433 \* e-mail:prodsafe@merck.de

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*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: 07.04.2004  
Supersedes edition of 16.09.1998

## 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 25 Tests  
Spectroquant®  
Küvetten-Reagenz

### Use of the substance/preparation

Reagent for analysis

### Company/undertaking identification

Company: Merck KGaA \* 64271 Darmstadt \* Germany \* Tel: +49 (0)6151/72-0  
Emergency telephone No.: +49 (0)6151/72112 \* Fax: +49 (0)6151/72-7780

## 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 necessary, apply mechanical ventilation. 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).

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## 5. Fire-fighting measures

Suitable extinguishing media:  
Powder, foam.

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.

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## 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.

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## 7. Handling and storage

*Handling:*

Notes for safe handling:  
Work under hood. Do not inhale substance. Avoid generation of vapours/aerosols.

*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.

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## 8. Exposure controls/personal protection

*Specific control parameter*

# Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114833  
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Küvetten-Reagenz

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## TRGS 900

Name	Dimethyl sulfoxide
Value	160 mg/m <sup>3</sup>
Skin resorption	Risk of skin absorption
Name	Cyanides (as CN)
Value	5 mg/m <sup>3</sup> inhalable fraction
Peak limit	4 exceeding factor: 4-fold in 15 minutes
Skin resorption	Risk of skin absorption

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

### 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.

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## 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

# 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 25 Tests  
Spectroquant®  
Küvetten-Reagenz

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Explosion limits	lower	not available
	upper	not available
Density	(20 °C)	1.10 g/cm <sup>3</sup>
Solubility in water	(20 °C)	soluble

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## 10. Stability and reactivity

*Conditions to be avoided*

Heating.

*Substances to be avoided*

acids: Formed could be: hydrogen cyanide.

*Hazardous decomposition products*

in the event of fire: See chapter 5.

*Further information*

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

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## 11. Toxicological information

*Acute toxicity*

LD<sub>50</sub> (dermal, rabbit): 14.3-33.3 mg/kg (toxicologically determinant component).

LD<sub>50</sub> (oral, rat): 5 mg/kg (toxicologically determinant component).

LDLo (oral, human): 2.86 mg/kg (toxicologically determinant component).

*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.

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## 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. LC<sub>50</sub>: 0.08 mg/l; lethal as from 0.05 mg/l ; for lower organisms lethal as from 0.1 mg/l . Crustaceans: D. magna EC<sub>50</sub>: 1.0 mg/l.

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](http://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](http://www.retrologistik.de) you will find special information on the respective national conditions as well as contact partners.

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## 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

CHEMICAL KIT, 9, UN 3316, 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.  
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Spectroquant®  
Küvetten-Reagenz

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## 15. Regulatory information

### *Labelling according to EC Directives*

Symbol: T Toxic  
N 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

### *German regulations*

Water pollution class 3 (highly polluting substance) VwVwS Anh. 4

Storage class VCI 6.1 B

Data sheet of the Chemical Professional Association M002 Hydrocyanic acid  
M050 Dealing with harmful substances

Local regulations on chemical accidents: 2  
9b

The employment restrictions for young workers in accordance with section 22 of the Youth Employment Protection Law (JArbSchG) are to be observed.

The employment restrictions for expectant and nursing mothers in accordance with sections 4 and 5 of the Maternity Protection Guideline (MuSchRiV) are to be observed.

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## 16. Other information

Text of any R phrases referred to under heading 2:

26/27/28

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.

Reduced labelling on the container due to small quantity.

### *Reason for alteration*

Chapter 2: change in ingredients data.

Chapter 14: transport information.

General update.

### *Contact for information:*

HSSE-C/CI \* Tel: +49 (0)6151/722775 \* Fax: +49 (0)6151/726433 \* e-mail:prodsafe@merck.de

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*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: 07.04.2004  
Supersedes edition of 28.08.1997

## 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 25 Tests  
Spectroquant®  
Pb-1K

### Use of the substance/preparation

Reagent for analysis

### Company/undertaking identification

Company: Merck KGaA \* 64271 Darmstadt \* Germany \* Tel: +49 (0)6151/72-0  
Emergency telephone No.: +49 (0)6151/72112 \* Fax: +49 (0)6151/72-7780

## 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; R22-43-48/22 Xi; R36/38 N; R50	≥ 10 - < 25 %
ammonia solution 7664-41-7	231-635-3	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.

## 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.

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Pb-1K

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## 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.

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## 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<sup>-</sup>, Art. No. 101596). Forward for disposal. Clean up affected area.

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## 7. Handling and storage

*Handling:*

No further requirements.

*Storage:*

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

The data apply to the entire pack.

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## 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/m <sup>3</sup>
	14 mg/m <sup>3</sup>

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# Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114833  
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Spectroquant®  
Pb-1K

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## TRGS 900

Name	Ammonia
Value	50 ml/m <sup>3</sup> 35 mg/m <sup>3</sup>
Peak limit	=1= Concentration must not exceed limit concentration.
Embryotoxic	Y Substances with which no foetotoxic risk is to be expected when observing the maximum allowable concentration (MAC Germany) and the biological tolerance value at the workplace (BAT Germany).

### *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 740 Dermatril® (full contact), 740 Dermatril® (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](http://www.kcl.de)).

### Industrial hygiene:

Change contaminated clothing. Apply skin-protective barrier cream. Wash hands after working with substance.

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## 9. Physical and chemical properties

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

# 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 25 Tests  
Spectroquant®  
Pb-1K

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Explosion limits	lower	not available
	upper	not available
Density	(20 °C)	1.03 g/cm <sup>3</sup>
Solubility in water	(20 °C)	soluble

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## 10. Stability and reactivity

*Conditions to be avoided*

Heating.

*Substances to be avoided*

strong acids, alkalis.

*Hazardous decomposition products*

in the event of fire: See chapter 5.

*Further information*

incompatible with various metals, metal alloys.

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## 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.

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# Merck Safety Data Sheet

According to EC Directive 91/155/EEC

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Pb-1K

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## 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!

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## 13. Disposal considerations

*Product:*

Chemicals must be disposed of in compliance with the respective national regulations. Under [www.retrologistik.de](http://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](http://www.retrologistik.de) you will find special information on the respective national conditions as well as contact partners.

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## 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

CHEMICAL KIT, 9, UN 3316, 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 !**

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## 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	

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Pb-1K

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## *German regulations*

Water pollution class 3 (highly polluting substance) VwVwS Anh. 4

Storage class VCI 10-13

Data sheet of the Chemical Professional Association M004 Irritant substances/corrosive substances

M051 Dangerous chemical substances

Local regulations on chemical accidents: 9a

The employment restrictions for young workers in accordance with section 22 of the Youth Employment Protection Law (JArbSchG) are to be observed.

The employment restrictions for expectant and nursing mothers in accordance with sections 4 and 5 of the Maternity Protection Guideline (MuSchRiV) are to be observed.

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## **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*

Chapter 14: transport information.

General update.

### *Contact for information:*

HSSE-C/CI \* Tel: +49 (0)6151/722775 \* Fax: +49 (0)6151/726433 \* e-mail:prodsafe@merck.de

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*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: 07.04.2004  
Supersedes edition of 28.08.2003

## 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 25 Tests  
Spectroquant®  
Pb-2K

### Use of the substance/preparation

Reagent for analysis

### Company/undertaking identification

Company: Merck KGaA \* 64271 Darmstadt \* Germany \* Tel: +49 (0)6151/72-0  
Emergency telephone No.: +49 (0)6151/72112 \* Fax: +49 (0)6151/72-7780

## 2. Composition/information on ingredients

CAS-No.: 20624-25-3  
M: 225.31 g/mol  
Formula Hill:  $C_5H_{10}NNaS_2 * 3 H_2O$   
EC-No.: 205-710-6

## 3. Hazards identification

Harmful if swallowed.

## 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, foam, powder.

Special risks:  
Combustible. Formation of hazardous combustion gases or vapours possible in event of fire.  
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.

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

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## 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.

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## 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.

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## 8. Exposure controls/personal protection

*Specific control parameter*

TRGS 900

Name	Sodium diethyldithiocarbamate
Value	2 mg/m <sup>3</sup> inhalable fraction. The limit value protects from a systemic effect, the stimulus threshold has to be checked.
Peak limit	4 exceeding factor: 4-fold in 15 minutes

*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.

Eye protection: required

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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 740 Dermatril® (full contact), 740 Dermatril® (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](http://www.kcl.de)).

#### Industrial hygiene:

Change contaminated clothing. Application of skin- protective barrier cream recommended. Wash hands after working with substance.

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## 9. Physical and chemical properties

Form:	solid
Colour:	white
Odour:	almost odourless
pH value at 20 g/l H <sub>2</sub> 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

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## 10. Stability and reactivity

### *Conditions to be avoided*

Strong heating.

### *Substances to be avoided*

acids, strong bases, oxidizing agent.

### *Hazardous decomposition products*

in the event of fire: See chapter 5.

### *Further information*

none

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## 11. Toxicological information

### *Acute toxicity*

LD<sub>50</sub> (dermal, rat): >1000 mg/kg (anhydrous substance).

LD<sub>50</sub> (oral, rat): 1500 mg/kg (anhydrous substance).

### *Further toxicological information*

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

### *Further data*

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

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## 12. Ecological information

### Ecotoxic effects:

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

### 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](http://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](http://www.retrologistik.de) you will find special information on the respective national conditions as well as contact partners.

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## 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  
CHEMICAL KIT, 9, UN 3316, 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 !**

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## 15. Regulatory information

*Labelling according to EC Directives*

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

*German regulations*

Water pollution class 2 (polluting substance) VwVwS Anh. 3

Storage class VCI 10-13

Data sheet of the Chemical Professional Association M050 Dealing with harmful substances

The employment restrictions for young workers in accordance with section 22 of the Youth Employment Protection Law (JArbSchG) are to be observed.

The employment restrictions for expectant and nursing mothers in accordance with sections 4 and 5 of the Maternity Protection Guideline (MuSchRiV) are to be observed.

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## 16. Other information

*Reason for alteration*

Chapter 14: transport information.

General update.

*Contact for information:*

HSSE-C/CI \* Tel: +49 (0)6151/722775 \* Fax: +49 (0)6151/726433 \* e-mail:prodsafe@merck.de

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*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.*