

Safety Data Sheet

According to EC Directive 91/155/EEC

Date of issue: 15.04.2004
Supersedes edition of 19.06.2000

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

Identification of the product

Catalogue No.: 114561
Product name: Cyanide Cell Test Method: photometric 0.010 - 0.500 mg/l CN 25
Tests Spectroquant®
CN-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

CAS-No.: 77-92-9
M: 192.13 g/mol
Formula Hill: C₆H₈O₇
Chemical formula: (HOOCCH₂)₂C(OH)COOH
EC-No.: 201-069-1

3. Hazards identification

Irritating to eyes.

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:
powder, foam, water.

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

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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Product name: Cyanide Cell Test Method: photometric 0.010 - 0.500 mg/l CN 25 Tests
Spectroquant®
CN-1K

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. Dry. At +15°C to +25°C.

Requirements for storage rooms and containers:

No metal containers.

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.

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).

Industrial hygiene:

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

9. Physical and chemical properties

Form:	solid
Colour:	colourless
Odour:	odourless
pH value at 100 g/l H ₂ O	(20 °C) ~ 1.7
Melting point	~ 153 °C (decomposition)
Boiling point	(decomposition)
Ignition temperature	345 °C
Flash point	not applicable
Explosion limits	lower not available upper not available
Vapour pressure	(20 °C) < 0.1 hPa
Density	(18 °C) 1.665 g/cm ³
Bulk density	~ 560 kg/m ³
Solubility in water	(20 °C) 1330 g/l
Thermal decomposition	175 °C
log Pow:	(20 °C) -1.72

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10. Stability and reactivity

Conditions to be avoided

Strong heating.

Substances to be avoided

metals, oxidizing agent, bases, reducing agents.

Hazardous decomposition products

not known to date

Further information

dust explosion possible.

11. Toxicological information

Acute toxicity

LD₅₀ (oral, rat): 3000 mg/kg.

Specific symptoms in animal studies:

Eye irritation test (rabbit): Severe irritations.

Skin irritation test (rabbit): Slight irritations.

Subacute to chronic toxicity

Bacterial mutagenicity: Ames test: negative.

No teratogenic effect in animal experiments.

No impairment of reproductive performance in animal experiments.

Further toxicological information

Substance which occurs in the human body under physiological conditions.

After inhalation of dust: Irritation symptoms in the respiratory tract.

After skin contact: Slight irritations.

After eye contact: Severe irritations.

After swallowing of large amounts: Irritations of: mucous membranes (stomach); coughing, pain, bloody vomiting.

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

Biologic degradation:
Biodegradation: 98 % /2 d (modified Zahn-Wellens-test);
Easily eliminable.

Behavior in environmental compartments:
Distribution: log p(o/w): -1.72 (20 °C);
No bioaccumulation is to be expected (log P(o/w) <1).

Ecotoxic effects:
Biological effects: Harmful effect due to pH shift.
Fish toxicity: *L.idus* LC₅₀: 440-760 mg/l /96 h;
Daphnia toxicity: *Daphnia magna* EC₅₀: ~120 mg/l /72 h.
Maximum permissible toxic concentration:
Protozoa: *E.sulcatum* EC₅: 485 mg/l /72 h;
Bacterial toxicity: *Ps.putida* EC₅: >10000 mg/l /16 h; *M.aeruginosa* EC₅: 80 mg/l /8 d;
Algal toxicity: *Sc.quadricauda* IC₅: 640 mg/l /7 d;

Further ecologic data:
Degradability:
BOD₅: 0.526 g/g;
TOD: 0.75 g/g;
COD: 0.728 g/g.

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.

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 !

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114561
Product name: Cyanide Cell Test Method: photometric 0.010 - 0.500 mg/1 CN 25 Tests
Spectroquant®
CN-1K

15. Regulatory information

Labelling according to EC Directives

Symbol: Xi Irritant
R-phrases: ---
S-phrases: ---

German regulations

Water pollution class 1 (slightly polluting substance) VwVwS Anh. 2 KennNr. 57
Storage class VCI 10-13
Data sheet of the Chemical Professional Association M004 Irritant substances/corrosive substances
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.

16. Other information

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

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

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Tests Spectroquant®
CN-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

Aqueous solution.

Hazardous ingredients:

Name according to EC Directives:

CAS-No.	EC No.	EC-Index-No.	Classification	Content:
Sodium hydroxide 1310-73-2	215-185-5	011-002-00-6	C; R35	≥ 5 - < 10 %

(Full text of R-Phrases in heading 16)

3. Hazards identification

Causes severe burns.

4. First aid measures

After inhalation: fresh air. Call in physician.
After skin contact: wash off with plenty of water. Dab with polyethylene glycol 400.
Immediately remove contaminated clothing.
After eye contact: rinse out with plenty of water for at least 10 minutes with the eyelid held wide open. Immediately call in ophthalmologist.
After swallowing: make victim drink plenty of water (if necessary several litres), avoid vomiting (risk of perforation!). Immediately call in physician. Do not attempt to neutralize.

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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.

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.

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 and neutralizing material (e.g. Chemizorb® OH⁻, Art. No. 101596). Forward for disposal. Clean up affected area.

7. Handling and storage

Handling:

Cannot be stored indefinitely.
No further requirements.

Storage:

Tightly closed. At +15°C to +25°C.

Requirements for storage rooms and containers:
No aluminium, tin, or zinc containers.

The data apply to the entire pack.

8. Exposure controls/personal protection

Specific control parameter

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TRGS 900

Name Sodium hydroxide
Value 2 mg/m³ inhalable fraction
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). 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).

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: odourless
pH value (20 °C) ~ 13.8
Melting point not available
Boiling point not available

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Ignition temperature		not available
Flash point		not available
Explosion limits	lower	not available
	upper	not available
Density	(20 °C)	1.09 g/cm ³
Solubility in water	(20 °C)	soluble

10. Stability and reactivity

Conditions to be avoided

no information available

Substances to be avoided

metals, light metals: Formed could be: hydrogen (risk of explosion!).
ammonium compounds: Formed could be: ammonia.
acids.

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

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: burns, necrosis.

After eye contact: burns, necrosis, Risk of blindness!

After swallowing: burns in mouth, throat, oesophagus and gastrointestinal tract. Risk of perforation in the oesophagus and stomach.

Systemic effects: collapse, death.

Further data

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

12. Ecological information

Ecotoxic effects:

Biological effects:

Toxic effect on fish and plankton. Harmful effect due to pH shift. Death of fish possible. Does not cause biological oxygen deficit. Neutralization possible in waste water treatment plants.

Fish toxicity: LC₅₀: 189 mg/l (1 N solution = 40 g/l).

Further ecologic data:

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

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13. Disposal considerations

Product:

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Packaging:

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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 !

15. Regulatory information

Labelling according to EC Directives

Symbol:	C	Corrosive
R-phrases:	35	Causes severe burns.
S-phrases:	26-36/37/39-45	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

contains: Sodium hydroxide

German regulations

Water pollution class 1 (slightly polluting substance) VwVwS Anh. 4

Storage class VCI 8 B

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

M051 Dangerous chemical substances

M053 General industrial safety measures for dangerous substances.

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

16. Other information

Text of any R phrases referred to under heading 2:

35 Causes severe burns.

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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Tests Spectroquant®
CN-3K

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

Mixture of organic compounds.

Hazardous ingredients:

Name according to EC Directives:

CAS-No.	EC No.	EC-Index-No.	Classification	Content:
1,3-Dimethylbarbituric acid 769-42-6	212-211-7		Xn; R22 Xi; R41	≥ 25 - < 50 %

(Full text of R-Phrases in heading 16)

3. Hazards identification

Harmful if swallowed. Risk of serious damage to eyes.

Attention - this preparation contains a substance which has not been fully tested so far.

The test results available so far do not permit a complete evaluation. Further risks cannot be excluded if the product is handled inappropriately.

4. First aid measures

After inhalation: fresh air. Consult doctor in the event of any complaints.
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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Spectroquant®
CN-3K

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.

Special protective equipment for fire fighting:
Do not stay in dangerous zone without self-contained breathing apparatus.

Other information:
Prevent fire-fighting water from entering surface water or groundwater.

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. 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.

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).

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

9. Physical and chemical properties

Form:	solid	
Colour:	white	
Odour:	almost odourless	
pH value at 10 g/l H ₂ O	(25 °C)	~ 4
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	not available	
Solubility in water	(25 °C)	soluble

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10. Stability and reactivity

Conditions to be avoided

Strong heating.

Substances to be avoided

strong alkalis, strong oxidizing agents.

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

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

After eye contact: Risk of serious damage to eyes.

After swallowing: mucosal irritations.

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:

Applicable to the ecotoxic determinant component:

Biological degradability: poor.

Ecotoxic effects:

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

Further ecologic data:

A harmful effect on aquatic organisms cannot be excluded in the event of improper handling or disposal.

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.

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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

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THESE TRANSPORT DATA APPLY TO THE ENTIRE PACK !

15. Regulatory information

Labelling according to EC Directives

Symbol:	Xn	Harmful
R-phrases:	22-41	Harmful if swallowed. Risk of serious damage to eyes.
S-phrases:	26-39	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear eye/face protection.

Additional labelling
contains: Attention - this preparation contains a substance which has not been fully tested so far.
1,3-Dimethylbarbituric acid

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

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.

16. Other information

Text of any R phrases referred to under heading 2:

22	Harmful if swallowed.
41	Risk of serious damage to eyes.

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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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Blindwert-Simulationsreagenz, Wasser zur Analyse

Use of the substance/preparation

Reagent for analysis

Company/undertaking identification

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Emergency telephone No.: +49 (0)6151/72112 * Fax: +49 (0)6151/72-7780

2. Composition/information on ingredients

CAS-No.: 7732-18-5
M: 18.02 g/mol
Formula Hill: H₂O
EC-No.: 231-791-2

3. Hazards identification

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

4. First aid measures

No special precautionary measures necessary.

5. Fire-fighting measures

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

Special risks:
none

6. Accidental release measures

Procedures for cleaning / absorption:
Pour into drain.

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Blindwert-Simulationsreagenz, Wasser zur Analyse

7. Handling and storage

Handling:

No further requirements.

Storage:

Tightly closed. 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: not required

Eye protection: not required

Hand protection: not required

Industrial hygiene:
not required

9. Physical and chemical properties

Form:	liquid		
Colour:	colourless		
Odour:	odourless		
pH value	(20 °C)	neutral	
Viscosity dynamic	(20 °C)	0.952	mPa*s
Melting point		0	°C
Boiling point		100	°C
Ignition temperature		not applicable	
Flash point		not applicable	
Explosion limits	lower	not applicable	
	upper	not applicable	
Vapour pressure	(20 °C)	23	hPa
Density	(20 °C)	1.00	g/cm ³
Solubility in ethanol	(20 °C)	soluble	

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114561
Product name: Cyanide Cell Test Method: photometric 0.010 - 0.500 mg/l CN 25 Tests
Spectroquant®
Blindwert-Simulationsreagenz, Wasser zur Analyse

10. Stability and reactivity

Conditions to be avoided

none

Substances to be avoided

The generally known reaction partners of water.

Hazardous decomposition products

none

Further information

none

11. Toxicological information

Acute toxicity

No toxic effects are to be expected when the product is handled appropriately.

12. Ecological information

not required

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

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 !

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114561
Product name: Cyanide Cell Test Method: photometric 0.010 - 0.500 mg/l CN 25 Tests
Spectroquant®
Blindwert-Simulationsreagenz, Wasser zur Analyse

15. Regulatory information

Labelling according to EC Directives

Symbol: ---

R-phrases: ---

S-phrases: ---

German regulations

Storage class VCI 10-13

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

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

15.04.2004
08.09.2003

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

Identification of the product

Catalogue No.: 114561
Product name: Cyanide Cell Test Method: photometric 0.010 - 0.500 mg/l CN 25
Tests Spectroquant®
Feststoffmischung für Cyanid

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

Preparation contains inorganic and organic compounds.

Hazardous ingredients:

Name according to EC Directives:

CAS-No.	EC No.	EC-Index-No.	Classification	Content:
51580-86-0	220-767-7	613-030-01-7	Xn; R22 Xi; R36/37 R31 N; R50/53	≥ 0.25 - < 1 %

(Full text of R-Phrases in heading 16)

3. Hazards identification

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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.

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

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Spectroquant®
Feststoffmischung für Cyanid

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.

Special protective equipment for fire fighting:
Do not stay in dangerous zone without self-contained breathing apparatus.

Other information:
Prevent fire-fighting water from entering surface water or groundwater.

6. Accidental release measures

Person-related precautionary measures:
Avoid generation of dusts; do not inhale dusts.

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. 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.

Eye protection: required

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

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Product name: Cyanide Cell Test Method: photometric 0.010 - 0.500 mg/l CN 25 Tests
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Feststoffmischung für Cyanid

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).

Industrial hygiene:
Change contaminated clothing. Wash hands after working with substance.

9. Physical and chemical properties

Form:	powder, finecrystalline
Colour:	white
Odour:	of chlorine
pH value	not available
Melting point	not available
Boiling point	not available
Ignition temperature	not available
Flash point	not applicable
Explosion limits	lower not available
	upper not available
Density	not available
Bulk density	1150-1350 kg/m ³
Solubility in Water	not available

10. Stability and reactivity

Conditions to be avoided

no information available

Substances to be avoided

alkali metals.

Hazardous decomposition products

no information available

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114561
Product name: Cyanide Cell Test Method: photometric 0.010 - 0.500 mg/l CN 25 Tests
Spectroquant®
Feststoffmischung für Cyanid

11. Toxicological information

Acute toxicity

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

Further toxicological information

Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.

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.

Biological effects:

Harmful effect on aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Further ecologic data:

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:

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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

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THESE TRANSPORT DATA APPLY TO THE ENTIRE PACK !

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114561
Product name: Cyanide Cell Test Method: photometric 0.010 - 0.500 mg/1 CN 25 Tests
Spectroquant®
Feststoffmischung für Cyanid

15. Regulatory information

Labelling according to EC Directives

Symbol: ---
R-phrases: 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S-phrases: ---

German regulations

Water pollution class 2 (polluting substance) VwVwS Anh. 4
Storage class VCI 10-13

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

16. Other information

Text of any R phrases referred to under heading 2:

22 Harmful if swallowed.
31 Contact with acids liberates toxic gas.
36/37 Irritating to eyes and respiratory system.
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 14: transport information.

General update.

Contact for information:

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