

Safety Data Sheet

According to EC Directive 91/155/EEC

Date of issue:
Supersedes edition of

04.04.2005
15.01.2004

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

Identification of the product

Catalogue No.: 114825
Product name: Aluminium Test Method: photometric 0.020 - 1.20 mg/l 350 Tests
Spectroquant®
Al-1A

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)6151/722440 * Fax: +49 (0)6151/72-7780

2. Composition/information on ingredients

Substance mixture.

Synonyms

Spectroquant, analytical test kits

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. Call in ophthalmologist if necessary.
After swallowing: make victim drink plenty of water. Consult doctor if feeling unwell.

5. Fire-fighting measures

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

Special risks:
Preparation with combustible ingredients.

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.

Merck Safety Data Sheet

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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

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.

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Product name: Aluminium Test Method: photometric 0.020 - 1.20 mg/l 350 Tests
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Al-1A

9. Physical and chemical properties

Form:	solid	
Colour:	colourless to white	
Odour:	odourless	
pH value		not available
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

10. Stability and reactivity

Conditions to be avoided
no information available

Substances to be avoided
no information available

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

No toxic effects are to be expected 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.

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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Al-1A

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

Entire package: not subject to transport regulations.

15. Regulatory information

Labelling according to EC Directives

Symbol: ---

R-phrases: ---

S-phrases: ---

German regulations

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

Storage class VCI 10-13

16. Other information

Reason for alteration

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

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Identification of the product

Catalogue No.: 114825
Product name: Aluminium Test Method: photometric 0.020 - 1.20 mg/l 350 Tests
Spectroquant®
Al-2A

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)6151/722440 * Fax: +49 (0)6151/72-7780

2. Composition/information on ingredients

Aqueous solution.

Synonyms

Spectroquant, analytical test kits

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. Call in ophthalmologist if necessary.
After swallowing: 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.

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

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Product name: Aluminium Test Method: photometric 0.020 - 1.20 mg/l 350 Tests
Spectroquant®
Al-2A

6. Accidental release measures

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

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:

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: 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.

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Catalogue No.: 114825
Product name: Aluminium Test Method: photometric 0.020 - 1.20 mg/l 350 Tests
Spectroquant®
Al-2A

9. Physical and chemical properties

Form:	liquid
Colour:	colourless
Odour:	odourless
pH value	not available
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	(20 °C) soluble

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

Effect that cannot be excluded on the basis of the components of the preparation:
After eye contact: Slight irritations.

Further data

However, when the product is handled appropriately, hazardous effects are unlikely to occur. 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.

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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

Entire package: not subject to transport regulations.

15. Regulatory information

Labelling according to EC Directives

Symbol: ---

R-phrases: ---

S-phrases: ---

German regulations

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

Storage class VCI 10-13

16. Other information

Reason for alteration

General update.

Contact for information:

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Catalogue No.: 114825
Product name: Aluminium Test Method: photometric 0.020 - 1.20 mg/l 350 Tests
Spectroquant®
Al-4A

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)6151/722440 * Fax: +49 (0)6151/72-7780

2. Composition/information on ingredients

Solution in DMSO.

Synonyms

Spectroquant, analytical test kits

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. Call in ophthalmologist if necessary.

After swallowing: make victim drink plenty of water. Subsequently administer: activated charcoal (20 - 40 g in 10% slurry). Laxative: Sodium sulfate (1 tablespoon/1/4 l water). Call in physician.

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Spectroquant®
Al-4A

5. Fire-fighting measures

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

Special risks:
Combustible. Vapours heavier than air. Forms explosive mixtures with air on intense heating.
Development of hazardous combustion gases or vapours possible in the event of fire. The following may develop in event of fire: 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:
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 material (e.g. Chemizorb®). Forward for disposal. Clean up affected area.

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

Specific control parameter

TRGS 900

Name	Dimethyl sulfoxide
Value	160 mg/m ³
Skin resorption	Risk of skin absorption

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Spectroquant®
Al-4A

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).

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:	blue
Odour:	characteristic
pH value	not available
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	(20 °C) soluble

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10. Stability and reactivity

Conditions to be avoided

Strong heating.

Substances to be avoided

alkali metals, hydrides, nitrates, halogen-halogen compounds, perchloric acid, perchlorates, chlorates, nonmetallic oxyhalides, oxyhalogenic compounds, acid halides, nitrogen oxides, sulfur oxides, strong oxidizing agents.

Hazardous decomposition products

in the event of fire: See chapter 5.

Further information

incompatible with various plastics, metals (in the presence of atmospheric oxygen and/or moisture);
Forms explosive mixtures with air on intense heating.

11. Toxicological information

Acute toxicity

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

Further toxicological information

Properties to be expected on the basis of the main component of the preparation:

After skin contact: Slight irritations. Danger of skin absorption.

After eye contact: Slight irritations.

Possible symptoms: After uptake: CNS disorders, nausea, tiredness, headache.

Possible damages: Damage of: liver, kidneys.

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:

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.

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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

Entire package: not subject to transport regulations.

15. Regulatory information

Labelling according to EC Directives

Symbol: ---
R-phrases: ---
S-phrases: ---

German regulations

Water pollution class 1 (slightly polluting substance) VwVwS Anh. 4
Storage class VCI 10-13

16. Other information

Reason for alteration

Chapter 3: hazards identification.
Chapter 11: toxicological information.

General update.

Contact for information:

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