

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Revision Date 20.05.2019

Version 10.2

SECTION 1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Catalogue No.	114598
Product name	Fluoride Test Method: photometric 0.10 - 20.0 mg/l F Spectroquant®
	F-1
REACH Registration Number	This product is a mixture. REACH Registration Number see section 3.

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

Identified uses	Reagent for analysis For additional information on uses please refer to the Merck Chemicals portal (www.merckgroup.com).
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1.3 Details of the supplier of the safety data sheet

Company	Merck KGaA * 64271 Darmstadt * Germany * Phone: +49 6151 72-0
Responsible Department	LS-QHC * e-mail: prodsafe@merckgroup.com

1.4 Emergency telephone number

Please contact the regional company representation in your country.

SECTION 2. Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Flammable liquid, Category 2, H225

Eye irritation, Category 2, H319

Specific target organ toxicity - single exposure, Category 3, Central nervous system, H336

For the full text of the H-Statements mentioned in this Section, see Section 16.

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Product name

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2.2 Label elements

Labelling.(REGULATION (EC) No 1272/2008)

Hazard pictograms



Signal word
Danger

Hazard statements

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

EUH066 Repeated exposure may cause skin dryness or cracking.

Precautionary statements

Prevention

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
No smoking.

P240 Ground/bond container and receiving equipment.

Response

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

Storage

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

Reduced labelling (≤125 ml)

Hazard pictograms



Signal word
Danger

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Contains: acetone

2.3 Other hazards

None known.

SECTION 3. Composition/information on ingredients

Chemical nature

Mixture of inorganic and organic compounds

3.1 Substance

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Not applicable

3.2 Mixture

Hazardous components (REGULATION (EC) No 1272/2008)

Chemical name (Concentration)

CAS-No.	Registration number	Classification
<i>acetone (>= 50 % - < 80 %)</i> <i>Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.</i>		
67-64-1	01-2119471330-49-XXXX	Flammable liquid, Category 2, H225 Eye irritation, Category 2, H319 Specific target organ toxicity - single exposure, Category 3, H336
<i>acetic acid (>= 1 % - < 5 %)</i> <i>Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.</i>		
64-19-7	01-2119475328-30-XXXX	Flammable liquid, Category 3, H226 Skin corrosion, Category 1A, H314

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4. First aid measures

4.1 Description of first aid measures

After inhalation: fresh air. Call in physician.

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

After swallowing: caution if victim vomits. Risk of aspiration! Keep airways free. Pulmonary failure possible after aspiration of vomit. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

irritant effects, somnolence, Drowsiness, Repeated exposure may cause skin dryness or cracking.

Dizziness, narcosis, Nausea, Vomiting, Stomach/intestinal disorders, Headache

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

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SECTION 5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO₂), Foam, Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Combustible.

Pay attention to flashback.

Vapours are heavier than air and may spread along floors.

Development of hazardous combustion gases or vapours possible in the event of fire.

Forms explosive mixtures with air at ambient temperatures.

5.3 Advice for firefighters

Special protective equipment for firefighters

In the event of fire, wear self-contained breathing apparatus.

Further information

Remove container from danger zone and cool with water. Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

6.2 Environmental precautions

Do not let product enter drains. Risk of explosion.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10).

Take up with liquid-absorbent and neutralising material (e.g. Chemizorb® H⁺, Merck Art. No. 101595). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

Indications about waste treatment see section 13.

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SECTION 7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Observe label precautions.

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Hygiene measures

Change contaminated clothing. Preventive skin protection recommended. Wash hands after working with substance.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition.

Recommended storage temperature see product label.

The data applies to the entire pack.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8. Exposure controls/personal protection

8.1 Control parameters

Derived No Effect Level (DNEL)

acetone (67-64-1)

Worker DNEL, acute	Local effects	inhalation	2420 mg/m ³
Worker DNEL, longterm	Systemic effects	dermal	186 mg/kg Body weight
Worker DNEL, longterm	Systemic effects	inhalation	1210 mg/m ³
Consumer DNEL, longterm	Systemic effects	dermal	62 mg/kg Body weight
Consumer DNEL, longterm	Systemic effects	inhalation	200 mg/m ³
Consumer DNEL, longterm	Systemic effects	oral	62 mg/kg Body weight

acetic acid (64-19-7)

Worker DNEL, acute	Local effects	inhalation	25 mg/m ³
Worker DNEL, longterm	Local effects	inhalation	25 mg/m ³
Consumer DNEL, acute	Local effects	inhalation	25 mg/m ³

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Consumer DNEL, Local effects inhalation 25 mg/m³
longterm

Predicted No Effect Concentration (PNEC)

acetone (67-64-1)

PNEC Fresh water	10,6 mg/l
PNEC Marine water	1,06 mg/l
PNEC Fresh water sediment	30,4 mg/kg
PNEC Marine sediment	3,04 mg/kg
PNEC Soil	29,5 mg/kg
PNEC Sewage treatment plant	100 mg/l

acetic acid (64-19-7)

PNEC Fresh water	3,058 mg/l
PNEC Fresh water sediment	11,36 mg/kg
PNEC Marine water	0,3058 mg/l
PNEC Marine sediment	1,136 mg/kg
PNEC Aquatic intermittent release	30,58 mg/l
PNEC Sewage treatment plant	85 mg/l

8.2 Exposure controls

Engineering measures

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

See section 7.1.

Individual protection measures

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Eye/face protection

Safety glasses

Hand protection

full contact:

Glove material:	butyl-rubber
Glove thickness:	0,7 mm
Break through time:	480 min

splash contact:

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Glove material: natural latex
Glove thickness: 0,6 mm
Break through time: 10 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 898 Butoject® (full contact), KCL 706 Lapren® (splash contact).

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. 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

Flame retardant antistatic protective clothing.

Respiratory protection

required when vapours/aerosols are generated.

Recommended Filter type: Filter AX (EN 371)

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

Environmental exposure controls

Do not let product enter drains.

Risk of explosion.

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	liquid
Colour	colourless
Odour	of solvents
Odour Threshold	No information available.
pH	4 - 5 at 25 °C
Melting point	No information available.
Boiling point	No information available.
Flash point	-6 °C
Evaporation rate	No information available.

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Flammability (solid, gas)	No information available.
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Vapour pressure	No information available.
Relative vapour density	No information available.
Density	0,895 g/cm ³ at 20 °C
Relative density	No information available.
Water solubility	at 25 °C soluble
Partition coefficient: n-octanol/water	No information available.
Auto-ignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	No information available.
Explosive properties	Not classified as explosive.
Oxidizing properties	none

9.2 Other data

none

SECTION 10. Stability and reactivity

10.1 Reactivity

Vapours may form explosive mixture with air.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

Risk of explosion with:

nonmetallic oxyhalides, halogen-halogen compounds, Chloroform, nitrating acid, nitrosyl compounds, hydrogen peroxide, halogen oxides, organic nitro compounds, peroxi compounds

Exothermic reaction with:

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Bromine, Alkali metals, alkali hydroxides, Halogenated hydrocarbon, Sulphur dichloride, phosphorous oxichloride

Risk of ignition or formation of inflammable gases or vapours with:

Activated charcoal, chromosulfuric acid, chromyl chloride, ethanolamine, Fluorine, Strong oxidizing agents, strong reducing agents, Nitric acid, chromium(VI) oxide

10.4 Conditions to avoid

Warming.

10.5 Incompatible materials

rubber, various plastics

10.6 Hazardous decomposition products

no information available

SECTION 11. Toxicological information

11.1 Information on toxicological effects

Mixture

Acute oral toxicity

Symptoms: Stomach/intestinal disorders, Risk of aspiration upon vomiting., Aspiration may cause pulmonary oedema and pneumonitis.

Acute inhalation toxicity

Symptoms: Possible symptoms: , mucosal irritations

Acute dermal toxicity

This information is not available.

Skin irritation

Repeated exposure with the mixture may cause skin dryness or cracking.

Eye irritation

Mixture causes serious eye irritation.

Sensitisation

This information is not available.

Germ cell mutagenicity

This information is not available.

Carcinogenicity

This information is not available.

Reproductive toxicity

This information is not available.

Teratogenicity

This information is not available.

Specific target organ toxicity - single exposure

Mixture may cause drowsiness or dizziness. Target Organs: Central nervous system

Specific target organ toxicity - repeated exposure

This information is not available.

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Aspiration hazard

This information is not available.

11.2 Further information

After absorption:

Headache, Salivation, Nausea, Vomiting, Dizziness, narcosis, Coma

Handle in accordance with good industrial hygiene and safety practice.

Other dangerous properties can not be excluded.

Components

acetone

Acute oral toxicity

LD50 Rat: 5.800 mg/kg (ECHA)

Acute inhalation toxicity

LC50 Rat: 76 mg/l; 4 h ; vapour (Lit.)

Acute dermal toxicity

LD50 Rabbit: 20.000 mg/kg (IUCLID)

Skin irritation

Rabbit

Result: No irritation

(External MSDS)

Eye irritation

Rabbit

Result: Eye irritation

(External MSDS)

Sensitisation

Maximisation Test Guinea pig

Result: negative

(ECHA)

Germ cell mutagenicity

Genotoxicity in vivo

Micronucleus test

Result: negative

(National Toxicology Program)

Genotoxicity in vitro

Mutagenicity (mammal cell test): chromosome aberration.

Result: negative

Method: OECD Test Guideline 473

Ames test

Salmonella typhimurium

Result: negative

Method: OECD Test Guideline 471

Carcinogenicity

Did not show carcinogenic effects in animal experiments. (IUCLID)

acetic acid

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Acute oral toxicity

LD50 Rat: 3.310 mg/kg (RTECS)

Acute inhalation toxicity

LCLO Rat: 39,95 mg/l; 4 h (RTECS)

Skin irritation

Rabbit
Result: Causes burns.
(IUCLID)

Eye irritation

Rabbit
Result: Causes burns.
(IUCLID)

Germ cell mutagenicity

Genotoxicity in vitro

Ames test
Salmonella typhimurium
Result: negative
Method: OECD Test Guideline 471

Mutagenicity (mammal cell test): chromosome aberration.

Result: negative
Method: OECD Test Guideline 473

Teratogenicity

Did not show teratogenic effects in animal experiments. (IUCLID)

SECTION 12. Ecological information

Mixture

12.1 Toxicity

No information available.

12.2 Persistence and degradability

No information available.

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6 Other adverse effects

Discharge into the environment must be avoided.

Components

acetone

Toxicity to fish

LC50 *Oncorhynchus mykiss* (rainbow trout): 5.540 mg/l; 96 h (Lit.)

Toxicity to daphnia and other aquatic invertebrates

EC50 *Daphnia magna* (Water flea): 6.100 mg/l; 48 h (Lit.)

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EC5 E.sulcatum: 28 mg/l; 72 h (maximum permissible toxic concentration) (Lit.)

Toxicity to algae

NOEC M.aeruginosa: 530 mg/l; 8 d
Analytical monitoring: no
DIN 38412 (maximum permissible toxic concentration) (IUCLID)

Toxicity to bacteria

EC50 activated sludge: 59 - 67,4 mg/l; 30 min (Lit.)

EC5 Pseudomonas putida: 1.700 mg/l; 16 h (maximum permissible toxic concentration) (IUCLID)

Biodegradability

91 %; 28 d
(IUCLID)
Readily biodegradable

Biochemical Oxygen Demand (BOD)

1.850 mg/g (5 d)
(IUCLID)

Chemical Oxygen Demand (COD)

2.070 mg/g
(IUCLID)

Theoretical oxygen demand (ThOD)

2.200 mg/g
(Lit.)

Partition coefficient: n-octanol/water

log Pow: -0,24
(experimental)
Bioaccumulation is not expected. (Lit.)

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

acetic acid

Toxicity to fish

semi-static test LC50 Oncorhynchus mykiss (rainbow trout): > 300,8 mg/l; 96 h
OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates

EC5 E.sulcatum: 78 mg/l; 72 h neutral (maximum permissible toxic concentration) (Lit.)

EC50 Daphnia magna (Water flea): 47 mg/l; 24 h (Lit.)

Toxicity to algae

IC5 Scenedesmus quadricauda (Green algae): 4.000 mg/l; 16 h (maximum permissible toxic concentration) (Lit.)

Toxicity to bacteria

EC5 Pseudomonas putida: 2.850 mg/l; 16 h neutral (maximum permissible toxic concentration) (Lit.)

microtox test EC50 Photobacterium phosphoreum: 11 mg/l; 15 min (IUCLID)

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Biodegradability

99 %; 30 d
OECD Test Guideline 301D
(HSDB)
Readily biodegradable

95 %; 5 d
OECD Test Guideline 302B
Readily eliminated from water

Biochemical Oxygen Demand (BOD)

880 mg/g (5 d)
(Lit.)

Ratio BOD/ThBOD

BOD5 76 %
(IUCLID)

Partition coefficient: n-octanol/water

log Pow: -0,17 (25 °C)
(experimental)
(ECHA) Bioaccumulation is not expected.

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

SECTION 13. Disposal considerations

Waste treatment methods

See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14. Transport information

Land transport (ADR/RID)

14.1 UN number	UN 1090
14.2 Proper shipping name	ACETONE SOLUTION
14.3 Class	3
14.4 Packing group	II
14.5 Environmentally hazardous	--
14.6 Special precautions for user	yes
Tunnel restriction code	D/E

Inland waterway transport (ADN)

Not relevant

Air transport (IATA)

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14.1 UN number UN 1090
14.2 Proper shipping name ACETONE SOLUTION
14.3 Class 3
14.4 Packing group II
14.5 Environmentally hazardous --
14.6 Special precautions for user no

Sea transport (IMDG)

14.1 UN number UN 1090
14.2 Proper shipping name ACETONE SOLUTION
14.3 Class 3
14.4 Packing group II
14.5 Environmentally hazardous --
14.6 Special precautions for user yes

EmS F-E S-D

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant

THIS TRANSPORT DATA APPLIES TO THE ENTIRE PACK!

SECTION 15. Regulatory information

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

EU regulations

Major Accident Hazard 96/82/EC
Legislation Highly flammable
7b
Quantity 1: 5.000 t
Quantity 2: 50.000 t

SEVESO III
FLAMMABLE LIQUIDS
P5c
Quantity 1: 5.000 t
Quantity 2: 50.000 t

Occupational restrictions Take note of Dir 94/33/EC on the protection of young people at work.

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Regulation (EC) No 1005/2009 on substances not regulated
that deplete the ozone layer

Regulation (EC) No 850/2004 of the not regulated
European Parliament and of the Council of 29
April 2004 on persistent organic pollutants
and amending Directive 79/117/EEC

Substances of very high concern (SVHC) This product does not contain
substances of very high concern
according to Regulation (EC) No
1907/2006 (REACH), Article 57
above the respective regulatory
concentration limit of $\geq 0.1\%$
(w/w).

National legislation

Storage class 3

The data applies to the entire pack.

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

SECTION 16. Other information

Full text of H-Statements referred to under sections 2 and 3.

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H314	Causes severe skin burns and eye damage.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

Training advice

Provide adequate information, instruction and training for operators.

Labelling

Hazard pictograms



Signal word

Danger

Hazard statements

H225 Highly flammable liquid and vapour.

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H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
EUH066 Repeated exposure may cause skin dryness or cracking.

Precautionary statements

Prevention

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P240 Ground/bond container and receiving equipment.

Response

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

Storage

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

Contains: acetone

Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

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

The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we transition our branding. However, all of the information in the document regarding the product remains unchanged and matches the product ordered. For further information please contact mlsbranding@sial.com.

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Revision Date 20.05.2019

Version 10.2

SECTION 1. Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

Catalogue No.	114598
Product name	Fluoride Test Method: photometric 0.10 - 20.0 mg/l F Spectroquant®
	F-2
REACH Registration Number	This product is a mixture. REACH Registration Number see section 3.

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

Identified uses	Reagent for analysis For additional information on uses please refer to the Merck Chemicals portal (www.merckgroup.com).
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1.3 Details of the supplier of the safety data sheet

Company	Merck KGaA * 64271 Darmstadt * Germany * Phone: +49 6151 72-0
Responsible Department	LS-QHC * e-mail: prodsafe@merckgroup.com

1.4 Emergency telephone number **Please contact the regional company representation in your country.****SECTION 2. Hazards identification****2.1 Classification of the substance or mixture**

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.2 Label elements**Labelling.(REGULATION (EC) No 1272/2008)**

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.3 Other hazards

None known.

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SECTION 3. Composition/information on ingredients

Chemical nature Mixture of organic compounds

3.1 Substance

Not applicable

3.2 Mixture

Remarks No disclosure requirement according to Regulation (EC) No. 1907/2006.

SECTION 4. First aid measures

4.1 Description of first aid measures

After inhalation: fresh air.

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

After eye contact: rinse out with plenty of water. Remove contact lenses.

After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

4.2 Most important symptoms and effects, both acute and delayed

We have no description of any symptoms of toxicity.

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water, Foam, Carbon dioxide (CO₂), Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Combustible.

Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

Special protective equipment for firefighters

In the event of fire, wear self-contained breathing apparatus.

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Further information

Suppress (knock down) gases/vapours/mists with a water spray jet.

SECTION 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

6.2 Environmental precautions

No special precautionary measures necessary.

6.3 Methods and materials for containment and cleaning up

Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections

Indications about waste treatment see section 13.

SECTION 7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Observe label precautions.

Hygiene measures

Change contaminated clothing. Wash hands after working with substance.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition.

Recommended storage temperature see product label.

The data applies to the entire pack.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8. Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls

Engineering measures

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

See section 7.1.

Individual protection measures

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Eye/face protection

Safety glasses

Hand protection

full contact:

Glove material:	Nitrile rubber
Glove thickness:	0,11 mm
Break through time:	480 min

splash contact:

Glove material:	Nitrile rubber
Glove thickness:	0,11 mm
Break through time:	480 min

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

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. 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).

Respiratory protection

required when dusts are generated.

Recommended Filter type: Filter P 1 (acc. to DIN 3181) for solid particles of inert substances

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

Environmental exposure controls

No special precautionary measures necessary.

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form granular

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 114598
Product name Fluoride Test Method: photometric 0.10 - 20.0 mg/l F Spectroquant® F-2

Colour	yellow-orange
Odour	odourless
Odour Threshold	Not applicable
pH	No information available.
Melting point	No information available.
Boiling point	No information available.
Flash point	No information available.
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Vapour pressure	No information available.
Relative vapour density	No information available.
Density	No information available.
Relative density	No information available.
Water solubility	at 25 °C soluble
Partition coefficient: n-octanol/water	No information available.
Auto-ignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	No information available.
Explosive properties	Not classified as explosive.
Oxidizing properties	none

9.2 Other data

none

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

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Product name Fluoride Test Method: photometric 0.10 - 20.0 mg/l F
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SECTION 10. Stability and reactivity

10.1 Reactivity

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

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

Violent reactions possible with:

Strong oxidizing agents, Strong acids, strong alkalis

10.4 Conditions to avoid

no information available

10.5 Incompatible materials

no information available

10.6 Hazardous decomposition products

no information available

SECTION 11. Toxicological information

11.1 Information on toxicological effects

Mixture

Acute oral toxicity

This information is not available.

Acute inhalation toxicity

This information is not available.

Acute dermal toxicity

This information is not available.

Skin irritation

This information is not available.

Eye irritation

This information is not available.

Sensitisation

This information is not available.

Germ cell mutagenicity

This information is not available.

Carcinogenicity

This information is not available.

Reproductive toxicity

This information is not available.

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Teratogenicity

This information is not available.

Specific target organ toxicity - single exposure

This information is not available.

Specific target organ toxicity - repeated exposure

This information is not available.

Aspiration hazard

This information is not available.

11.2 Further information

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

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12. Ecological information

Mixture

12.1 Toxicity

No information available.

12.2 Persistence and degradability

No information available.

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6 Other adverse effects

Discharge into the environment must be avoided.

SAFETY DATA SHEET
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Product name Fluoride Test Method: photometric 0.10 - 20.0 mg/l F
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SECTION 13. Disposal considerations

Waste treatment methods

See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14. Transport information

Land transport (ADR/RID)

14.1 UN number UN 1090
14.2 Proper shipping name ACETONE SOLUTION
14.3 Class 3
14.4 Packing group II
14.5 Environmentally hazardous --
14.6 Special precautions for user yes
Tunnel restriction code D/E

Inland waterway transport (ADN)

Not relevant

Air transport (IATA)

14.1 UN number UN 1090
14.2 Proper shipping name ACETONE SOLUTION
14.3 Class 3
14.4 Packing group II
14.5 Environmentally hazardous --
14.6 Special precautions for user no

Sea transport (IMDG)

14.1 UN number UN 1090
14.2 Proper shipping name ACETONE SOLUTION
14.3 Class 3
14.4 Packing group II
14.5 Environmentally hazardous --
14.6 Special precautions for user yes
EmS F-E S-D

SAFETY DATA SHEET

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14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant

THIS TRANSPORT DATA APPLIES TO THE ENTIRE PACK!

SECTION 15. Regulatory information

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

EU regulations

Major Accident Hazard 96/82/EC
Legislation Directive 96/82/EC does not apply

SEVESO III
Not applicable

Regulation (EC) No 1005/2009 on substances not regulated
that deplete the ozone layer

Regulation (EC) No 850/2004 of the not regulated
European Parliament and of the Council of 29
April 2004 on persistent organic pollutants
and amending Directive 79/117/EEC

Substances of very high concern (SVHC) This product does not contain
substances of very high concern
according to Regulation (EC) No
1907/2006 (REACH), Article 57
above the respective regulatory
concentration limit of $\geq 0.1\%$
(w/w).

National legislation

Storage class 3
The data applies to the entire pack.

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

SECTION 16. Other information

Full text of H-Statements referred to under sections 2 and 3.

Training advice

Provide adequate information, instruction and training for operators.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No.	114598
Product name	Fluoride Test Method: photometric 0.10 - 20.0 mg/l F Spectroquant® F-2

Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

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

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