



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH) and Regulation (EU) No 2020/878

Chloride 21 FS R2

Material number 1 1221 R2

Revision date: 20.12.2022

Version: 5.1

Replaces version: 5.0

Language: en-DE

Date of print: 11.1.2023

Page: 1 of 7

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

1.1 Product identifier

Trade name: Chloride 21 FS R2

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

General use: Reagent for in-vitro diagnostics in human samples

1.3 Details of the supplier of the safety data sheet

Company name: DiaSys Diagnostic Systems GmbH

Street/POB-No.: Alte Strasse 9

Postal Code, city: DE-65558 Holzheim

WWW: <http://www.diasys.de>

E-mail: mail@diasys.de

Telephone: +49 (0) 6432-9146-0

Telefax: +49 (0) 6432-9146-32

Department responsible for information:

Corporate headquarters, Telephone: +49 (0) 6432-9146-0, Email: mail@diasys.de

1.4 Emergency telephone number

Infraserv, Telephone: +49 (0) 69-305-6418

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to EC regulation 1272/2008 (CLP)

This mixture is classified as not hazardous.

2.2 Label elements

Labelling (CLP)

Hazard statements: not applicable

Precautionary statements: not applicable

Special labelling

EUH210 Safety data sheet available on request.

2.3 Other hazards

No risks worthy of mention.

Endocrine disrupting properties, Results of PBT and vPvB assessment:

No data available

SECTION 3: Composition/information on ingredients

3.1 Substances: not applicable

3.2 Mixtures

Chemical characterisation: Aqueous solution

Hazardous ingredients:

Identifiers	Designation Classification	Content
EC No. 232-151-5 CAS 7789-23-3	Potassium fluoride Acute Tox. 3; H301. Acute Tox. 3; H311. Acute Tox. 3; H331.	< 3 %

Full text of H- and EUH-statements: see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information:	In all cases of doubt, or when symptoms persist, seek medical advice.
In case of inhalation:	Provide fresh air. Seek medical treatment in case of troubles.
Following skin contact:	Remove residues with soap and water. Change contaminated clothing. In case of skin reactions, consult a physician.
After eye contact:	Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. In case of eye irritation consult an ophthalmologist.
After swallowing:	Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Immediately get medical attention.

4.2 Most important symptoms and effects, both acute and delayed

No data available

4.3 Indication of any immediate medical attention and special treatment needed

If swallowed or in the event of vomiting, risk of entering the lungs.
Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media: Use extinguishing material as appropriate for the surrounding area.

5.2 Special hazards arising from the substance or mixture

Not combustible.
Fires in the immediate vicinity may cause the development of dangerous vapours.
In case of fire may be liberated: hydrogen fluoride.

5.3 Advice for firefighters

Special protective equipment for firefighters:	Wear a self-contained breathing apparatus and chemical protective clothing.
Additional information:	Do not allow fire water to penetrate into surface or ground water. Use water spray jet to knock down vapours.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with the substance. Provide adequate ventilation. Wear appropriate protective equipment.

6.2 Environmental precautions

Do not allow to penetrate into soil, waterbodies or drains.

6.3 Methods and material for containment and cleaning up

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Final cleaning.

6.4 Reference to other sections

Refer additionally to section 8 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advices on safe handling: Provide adequate ventilation, and local exhaust as needed. Do not breathe vapour/aerosol. Avoid contact with skin and eyes. Wash hands thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers:

Keep container in a well-ventilated place. Keep containers tightly closed and at a temperature between 2 °C and 8 °C.

Hints on joint storage:

Do not store together with acids or strong oxidizing agents.

Storage class:

12 = Non-combustible liquids

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
7789-23-3	Potassium fluoride	Europe: IOELV: TWA	2,5 mg/m ³ (Fluorides, inorganic)
		Germany: TRGS 900 Kurzzeit	4 mg/m ³ (Fluorides, calculated as F; inhalable fraction), may be absorbed through the skin
		Germany: TRGS 900 Langzeit	1 mg/m ³ (Fluorides, calculated as F; inhalable fraction), may be absorbed through the skin

Biological limit values:

CAS No.	Designation	Type	Limit value	Parameter	Sampling
7789-23-3	Potassium fluoride	Germany: TRGS 903, urine	4 mg/g creatinine	Fluorides	before next shift
		Germany: TRGS 903, urine	7 mg/g creatinine	Fluorides	end of exposure or end of shift

8.2 Exposure controls

When vapours form: Withdraw by suction.

Personal protection equipment

Occupational exposure controls

Respiratory protection: Respiratory protection must be worn whenever the WEL levels have been exceeded.

Hand protection:

Protective gloves according to EN 374
Glove material: nitrile rubber - Layer thickness: 0,11 mm.
Breakthrough time: >480 min.
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Eye protection:

Tightly sealed goggles according to EN 166

Body protection:

Wear suitable protective clothing.

General protection and hygiene measures:

Avoid contact with skin and eyes. Do not breathe vapour/aerosol. Change contaminated clothing. Wash hands thoroughly after handling.

Environmental exposure controls

Refer to "6.2 Environmental precautions".

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state at 20 °C and 101.3 kPa	liquid
Colour:	clear, colourless
Odour:	odourless
Odour threshold:	No data available
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	approx. 100 °C
Flammability:	No data available
Upper/lower flammability or explosive limits:	No data available
Flash point/flash point range:	not combustible
Decomposition temperature:	No data available
pH:	at 23 °C: 7,3
Viscosity, kinematic:	No data available
Water solubility:	completely miscible
Partition coefficient: n-octanol/water:	No data available
Vapour pressure:	No data available
Density:	at 20 °C: 1,021 g/mL
Vapour density:	No data available
Particle characteristics:	Not applicable

9.2 Other information

Explosive properties:	No data available
Oxidizing characteristics:	No data available
Auto-ignition temperature:	No data available
Evaporation rate:	No data available
Additional information:	No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

refer to 10.3

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Reacts with strong oxidizing agents, acids. Release of: hydrogen fluoride.

10.4 Conditions to avoid

Protect against heat /sun rays.

10.5 Incompatible materials

Acids, strong oxidizing agents

10.6 Hazardous decomposition products

	No decomposition when used properly.
Thermal decomposition:	No data available

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Toxicological effects: Acute toxicity (oral): Based on available data, the classification criteria are not met. May be harmful if swallowed.

Acute toxicity (dermal): Based on available data, the classification criteria are not met. May be harmful in contact with skin.

Acute toxicity (inhalative): Based on available data, the classification criteria are not met. May be harmful if inhaled.

Skin corrosion/irritation: Lack of data.

Serious eye damage/irritation: Lack of data.

Sensitisation to the respiratory tract: Lack of data.

Skin sensitisation: Lack of data.

Germ cell mutagenicity/Genotoxicity: Lack of data.

Carcinogenicity: Lack of data.

Reproductive toxicity: Lack of data.

Effects on or via lactation: Lack of data.

Specific target organ toxicity (single exposure): Lack of data.

Specific target organ toxicity (repeated exposure): Lack of data.

Aspiration hazard: Lack of data.

11.2 Information on other hazards

Endocrine disrupting properties: No data available

Other information: Information about potassium fluoride
LD50 Rat, oral: 148,5 mg/kg
After resorption: unconsciousness, cardiac arrhythmias, apnea, shock.
At long term exposure bone marrow damage.
The following applies to soluble inorganic fluoride in general: irritant up to corrosive.
Systemic effects: decrease of the blood-calcium-concentration, spasms, agitation, cardiovascular disorders, CNS disorders.
Mutagenicity mammalian cell test: positive

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: Information about potassium fluoride
Fish toxicity: LC50 > 2,3 mg/L
Protozoa Acute toxicity: EC5 Entosiphon sulcatum: 101 mg/L

Water Hazard Class: 1 = slightly hazardous to water

12.2 Persistence and degradability

Further details: Methods for the determination of biodegradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water:
No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

No data available



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH) and Regulation (EU) No 2020/878

Chloride 21 FS R2

Material number 1 1221 R2

Revision date: 20.12.2022

Version: 5.1

Replaces version: 5.0

Language: en-DE

Date of print: 11.1.2023

Page: 6 of 7

12.6 Endocrine disrupting properties

No data available

12.7 Other adverse effects

General information: Do not allow to penetrate into soil, waterbodies or drains.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Waste key number: 16 05 06* = Laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals.

* = Evidence for disposal must be provided.

Recommendation: Special waste. Dispose of waste according to applicable legislation.

Package

Waste key number: 15 01 02 = Plastic packaging

Recommendation: Dispose of waste according to applicable legislation.

Non-contaminated packages may be recycled.

SECTION 14: Transport information

14.1 UN number or ID number

ADR/RID, ADN, IMDG, IATA-DGR:

not applicable

14.2 UN proper shipping name

ADR/RID, ADN, IMDG, IATA-DGR:

Not restricted

14.3 Transport hazard class(es)

ADR/RID, ADN, IMDG, IATA-DGR:

not applicable

14.4 Packing group

ADR/RID, ADN, IMDG, IATA-DGR:

not applicable

14.5 Environmental hazards

Dangerous for the environment: Substance/mixture is not environmentally hazardous according to the criteria of the UN model regulations.

Marine pollutant - IMDG:

no

14.6 Special precautions for user

No dangerous good in sense of these transport regulations.

14.7 Maritime transport in bulk according to IMO instruments

No data available

SECTION 15: Regulatory information

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

National regulations - Germany

Storage class: 12 = Non-combustible liquids

Water Hazard Class: 1 = slightly hazardous to water

Technical guidance air: 5.2.2 Class III

Further regulations, limitations and legal requirements:
No data available

National regulations - EC member states

Further regulations, limitations and legal requirements:
No data available

15.2 Chemical Safety Assessment

For this mixture a chemical safety assessment is not required.

SECTION 16: Other information

Wording of the H-phrases under paragraph 2 and 3:

H301 = Toxic if swallowed.

H311 = Toxic in contact with skin.

H331 = Toxic if inhaled.

EUH210 = Safety data sheet available on request.

Reason of change: General revision

Date of first version: 16.9.2011

Department issuing data sheet: see section 1: Department responsible for information

Abbreviations and acronyms:

- Acute Tox.: Acute toxicity
- ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- AS/NZS: Australian Standards/New Zealand Standards
- CAS: Chemical Abstracts Service
- CFR: Code of Federal Regulations
- CLP: Classification, Labelling and Packaging
- CNS: Central Nervous System
- DMEL: Derived minimal effect level
- DNEL: Derived no-effect level
- EC: European Community
- EN: European Standard
- EQ: Excepted quantities
- EU: European Union
- IATA: International Air Transport Association
- IATA-DGR: International Air Transport Association – Dangerous Goods Regulations
- IBC Code: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
- IMDG Code: International Maritime Dangerous Goods Code
- LC50: Median lethal concentration
- LD50: Lethal dose 50%
- MARPOL: Maritime Pollution: The International Convention for the Prevention of Pollution from Ships
- OEL: Occupational Exposure Limit Value
- OSHA: Occupational Safety and Health Administration
- PBT: Persistent, bioaccumulative and toxic
- PNEC: Predicted no-effect concentration
- RID: Regulations Concerning the International Carriage of Dangerous Goods by Rail
- TLV: Threshold Limit Value
- TRGS: Technical Rules for Hazardous Substances
- vPvB: Very persistent and very bioaccumulative
- WEL: Workplace Exposure Limit

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.