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

1.1 Product identifier

Fluoro Standard

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

1.2.1 Relevant uses

Analytics

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company

BioAnalyt GmbH
Rheinstr. 17
14513 Teltow / GERMANY
Phone +49 (0)3328-35150-00
Fax +49 (0)3328-35150-29
Homepage www.bioanalyt.com
E-mail contact@bioanalyt.com

Address enquiries to

Technical information contact@bioanalyt.com

Safety Data Sheet sdb@chemiebuero.de (No dispatch of safety data sheets)

Safety data sheets are available from the supplier.

1.4 Emergency telephone number

Company +49 (0)3328-35150-00 Mo-Fr 8:30 - 17:30

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture [REGULATION (GB) CLP]

Met. Corr. 1: H290 May be corrosive to metals.
Skin Irrit. 2: H315 Causes skin irritation.
Eye Irrit. 2: H319 Causes serious eye irritation.

2.2 Label elements

The product is required to be labelled in accordance with regulation CLP.

Hazard pictograms

Signal word WARNING

Hazard statements

H290 May be corrosive to metals.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

Precautionary statements

P264 Wash hands thoroughly after handling.
P280 Wear protective gloves / eye protection / face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical advice / attention.
P390 Absorb spillage to prevent material damage.

2.3 Other hazards

Environmental hazards

Does not contain any PBT or vPvB substances.
Contains no ingredients with endocrine-disrupting properties.

Other hazards Further hazards were not determined with the current level of knowledge.

SECTION 3: Composition / Information on ingredients

3.1 Substances

not applicable

3.2 Mixtures

The product is a mixture.

Range [%]	Substance
5 - < 10	Sulphuric acid
	CAS: 7664-93-9, EINECS/ELINCS: 231-639-5, EU-INDEX: 016-020-00-8
	GHS/CLP: Skin Corr. 1A: H314 - Eye Dam. 1: H318 - Met. Corr. 1: H290
	SCL [%]: >= 15: Skin Corr. 1A: H314, 5 - <15: Eye Irrit. 2: H319, 5 - <15: Skin Irrit. 2: H315

Comment on component parts Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.
For full text of H-statements: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information Take off contaminated clothing and wash before reuse.

Inhalation Ensure supply of fresh air.
In the event of symptoms seek medical treatment.

Skin contact In case of contact with skin wash off immediately with water.
Consult a doctor if skin irritation persists.

Eye contact Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

Ingestion Do not induce vomiting.
Rinse out mouth and give plenty of water to drink.
Get medical advice.

4.2 Most important symptoms and effects, both acute and delayed

Irritant effects

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media Product itself is non-combustible. Fire extinguishing method of surrounding areas must be considered.

Extinguishing media that must not be used Full water jet.

5.2 Special hazards arising from the substance or mixture

Risk of formation of toxic pyrolysis products.
Sulphur oxides (SOx).
Irritant gases/vapours.

5.3 Advice for firefighters

Use self-contained breathing apparatus.

Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.
Use personal protective equipment (protective gloves, safety glasses, protective clothing).

6.2 Environmental precautions

Prevent spread over a wide area (e.g. by containment or oil barriers).
Do not discharge into the drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Take up with absorbent material (e.g. acid binder).
Dispose of absorbed material in accordance within the regulations.

6.4 Reference to other sections

See SECTION 8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Use only in well-ventilated areas.
Avoid spilling or spraying in enclosed areas.
Open and handle container with care.
Place the container in an upright position and protect it against falling over.

Do not eat or drink when working.
Wash hands before breaks and after work.
Take off contaminated clothing and wash before reuse.
Use barrier skin cream.

7.2 Conditions for safe storage, including any incompatibilities

Prevent penetration into the ground.
Provide acid-resistant floor.
Keep only in original container.

Do not store together with oxidizing agents.
Do not store with alkalies.
Do not store together with metals.
Do not store together with food and animal food/diet.

Keep container in a well-ventilated place.
Keep container tightly closed.
Keep in a cool place.

7.3 Specific end use(s)

See product use, SECTION 1.2

SECTION 8: Exposure controls / personal protection

8.1 Control parameters

Ingredients with occupational exposure limits to be monitored (GB)

Substance
Sulphuric acid
CAS: 7664-93-9, EINECS/ELINCS: 231-639-5, EU-INDEX: 016-020-00-8
Long-term exposure: 0,05 mg/m³, mist; The mist is defined as the thoracic fraction

Ingredients with occupational exposure limits to be monitored (EU)

Substance / EC LIMIT VALUES
Sulphuric acid
CAS: 7664-93-9, EINECS/ELINCS: 231-639-5, EU-INDEX: 016-020-00-8
Eight hours: 0,05 mg/m³, thoracic fraction

8.2 Exposure controls

Additional advice on system design
Ensure adequate ventilation on workstation.
Measurement methods for taking workplace measurements must meet the performance requirements of DIN EN 482. For example, recommendations are given in the IFA's list of hazardous substances.

Eye protection
safety glasses (EN 166:2001)

Hand protection
The details concerned are recommendations. Please contact the glove supplier for further information.
> 0.11 mm. Butyl rubber, >480 min (EN 374-1/-2/-3).
> 0.11 mm. Nitrile rubber, >480 min (EN 374-1/-2/-3).

Skin protection
Acid-resistant protective clothing (EN 340)

Other
Do not breathe vapour/spray.
Avoid contact with eyes and skin.
Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier.

Respiratory protection
Not required under normal conditions.
In the event of occupational exposure limits being exceeded or of inadequate ventilation: wear appropriate respiratory protection.
Short term: filter apparatus, filter E (DIN EN 14387).

Thermal hazards
not applicable

Delimitation and monitoring of the environmental exposition
Comply with applicable environmental regulations limiting discharge to air, water and soil.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid
Color	colourless
Odor	No information available.
Odour threshold	No information available.
pH-value	acidic
pH-value [1%]	No information available.
Boiling point [°C]	No information available.
Flash point [°C]	not applicable
Flammability (solid, gas) [°C]	not applicable
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Oxidising properties	no
Vapour pressure/gas pressure [kPa]	No information available.
Density [g/cm³]	ca. 1
Relative density	not determined
Bulk density [kg/m³]	not applicable
Solubility in water	soluble
Solubility other solvents	No information available.
Partition coefficient [n-octanol/water]	No information available.
Kinematic viscosity	No information available.
Relative vapour density	No information available.
Evaporation speed	No information available.
Melting point [°C]	No information available.
Auto-ignition temperature	not self-igniting
Decomposition temperature [°C]	No information available.
Particle characteristics	No information available.

9.2 Other information

none

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reactions known if used as directed.

10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).

10.3 Possibility of hazardous reactions

Reactions with alkalies (lyes).
Reactions with oxidizing agents.
Corrosive to metals.
Reactions with metals, with evolution of hydrogen.

10.4 Conditions to avoid

No information available.

10.5 Incompatible materials

See SECTION 10.3.

10.6 Hazardous decomposition products

No dangerous reactions known if used as directed.

SECTION 11: Toxicological information

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

Acute oral toxicity Based on available data, the classification criteria are not met.

Substance
Sulphuric acid, CAS: 7664-93-9
LD50, oral, Rat, 2140 mg/kg

Acute dermal toxicity Based on available data, the classification criteria are not met.

Acute inhalational toxicity Based on available data, the classification criteria are not met.

Substance
Sulphuric acid, CAS: 7664-93-9
LC50, inhalative, Rat, 0.375 mg/l (OECD TG 403 aerosols)

Serious eye damage/irritation Irritant
Classification was carried out based on substance-specific concentration limits.

Substance
Sulphuric acid, CAS: 7664-93-9
corrosive

Skin corrosion/irritation Irritant
Classification was carried out based on substance-specific concentration limits.

Substance
Sulphuric acid, CAS: 7664-93-9
corrosive

Respiratory or skin sensitisation Based on the available information, the classification criteria are not fulfilled.

Substance
Sulphuric acid, CAS: 7664-93-9
no adverse effect observed

Specific target organ toxicity — single exposure Based on the available information, the classification criteria are not fulfilled.

Specific target organ toxicity — repeated exposure Based on the available information, the classification criteria are not fulfilled.

Mutagenicity Based on the available information, the classification criteria are not fulfilled.

Reproduction toxicity Based on the available information, the classification criteria are not fulfilled.

Carcinogenicity Based on the available information, the classification criteria are not fulfilled.

Aspiration hazard Based on the available information, the classification criteria are not fulfilled.

General remarks After swallowing: damage to the affected mucous membranes possible.

Toxicological data of complete product are not available.

11.2 Information on other hazards

Endocrine disrupting properties Contains no ingredients with endocrine-disrupting properties.

Other information none

SECTION 12: Ecological information

12.1 Toxicity

Substance
Sulphuric acid, CAS: 7664-93-9
LC50, (48h), Brachidanio rerio, > 500 mg/l (Lit.)
LC50, (96h), Lepomis macrochirus, 16-29 mg/l
EC50, (24h), Daphnia magna, 29 mg/l
LC0, (96h), Carassius auratus, 134 mg/l (Lit.)

12.2 Persistence and degradability

Behaviour in environment compartments not determined

Behaviour in sewage plant Neutralization is normally necessary before a waste water is discharged into sewage treatment plants.

Biological degradability The methods for determining the boilogical degradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

Based on all available information not to be classified as PBT or vPvB respectively.

12.6 Endocrine disrupting properties

Contains no ingredients with endocrine-disrupting properties.

12.7 Other adverse effects

Harmful effect due to pH shift.
Ecological data of complete product are not available.
Do not discharge product unmonitored into the environment or into the drainage.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

Product

Dispose of as hazardous waste.

Waste no. (recommended) 060101*

Contaminated packaging

Uncontaminated packaging may be taken for recycling.
Packaging that cannot be cleaned should be disposed of as for product.

Waste no. (recommended) 150110* packaging containing residues of or contaminated by hazardous substances

SECTION 14: Transport information

14.1 UN number or ID number

Transport by land according to ADR/RID	3264
Inland navigation (ADN)	3264
Marine transport in accordance with IMDG	3264
Air transport in accordance with IATA	3264

14.2 UN proper shipping name

Transport by land according to ADR/RID	Corrosive liquid, acidic, inorganic, n.o.s. (contains Sulphuric acid)
- Classification Code	C1
- Label	
- ADR LQ	5 l
- ADR 1.1.3.6 (8.6)	Transport category (tunnel restriction code) 3 (E)
Inland navigation (ADN)	Corrosive liquid, acidic, inorganic, n.o.s. (contains Sulphuric acid)
- Classification Code	C1
- Label	
Marine transport in accordance with IMDG	Corrosive liquid, acidic, inorganic, n.o.s. (contains Sulphuric acid)
- EMS	F-A, S-B
- Label	
- IMDG LQ	5 l
Air transport in accordance with IATA	Corrosive liquid, acidic, inorganic, n.o.s. (contains Sulphuric acid)
- Label	

14.3 Transport hazard class(es)

Transport by land according to ADR/RID	8
Inland navigation (ADN)	8
Marine transport in accordance with IMDG	8
Air transport in accordance with IATA	8

14.4 Packing group

Transport by land according to ADR/RID	III
Inland navigation (ADN)	III
Marine transport in accordance with IMDG	III
Air transport in accordance with IATA	III

14.5 Environmental hazards

Transport by land according to ADR/RID	no
Inland navigation (ADN)	no
Marine transport in accordance with IMDG	no
Air transport in accordance with IATA	no

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

14.7 Maritime transport in bulk according to IMO instruments

No information available.

SECTION 15: Regulatory information

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

EEC-REGULATIONS	2008/98/EC 2000/532/EC); 2010/75/EU; 2004/42/EC; (EC) 648/2004; (EC) 1907/2006 (REACH); (EU) 1272/2008; 75/324/EEC ((EC) 2016/2037); (EU) 2020/878; (EU) 2016/131; (EU) 517/2014
TRANSPORT-REGULATIONS	ADR (2021); IMDG-Code (2021, 40. Amdt.); IATA-DGR (2022)
NATIONAL REGULATIONS (GB):	EH40/2005 Workplace exposure limits (Second edition, published December 2011); UK REACH; GB CLP.
- Observe employment restrictions for people	Observe employment restrictions for young people.
- VOC (2010/75/CE)	0 %

15.2 Chemical safety assessment

No information available.

SECTION 16: Other information

16.1 Hazard statements (SECTION 3)

H290 May be corrosive to metals.
H318 Causes serious eye damage.
H314 Causes severe skin burns and eye damage.

16.2 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
ATE = acute toxicity estimate
CAS = Chemical Abstracts Service
CLP = Classification, Labelling and Packaging
DMEL = Derived Minimum Effect Level
DNEL = Derived No Effect Level
EC50 = Median effective concentration
ECB = European Chemicals Bureau
EEC = European Economic Community
EINECS = European Inventory of Existing Commercial Chemical Substances
EL50 = Median effective loading
ELINCS = European List of Notified Chemical Substances
EmS = Emergency Schedules
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IC50 = Inhibition concentration, 50%
IMDG = International Maritime Code for Dangerous Goods
IUCLID = International Uniform ChemicaL Information Database
IVIS = In vitro irritation score
LC50 = Lethal concentration, 50%
LD50 = Median lethal dose
LC0 = lethal concentration, 0%
LOAEL = lowest-observed-adverse-effect level
LL50 = Median lethal loading
LQ = Limited Quantities
MARPOL = International Convention for the Prevention of Marine Pollution from Ships
NOAEL = No Observed Adverse Effect Level
NOEC = No Observed Effect Concentration
PBT = Persistent, Bioaccumulative and Toxic substance
PNEC = Predicted No-Effect Concentration
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
STP = Sewage Treatment Plant
TLV®/TWA = Threshold limit value – time-weighted average
TLV®STEL = Threshold limit value – short-time exposure limit
VOC = Volatile Organic Compounds
vPvB = very Persistent and very Bioaccumulative

16.3 Other information

Classification procedure

Met. Corr. 1: H290 May be corrosive to metals. (Expert judgement)
Skin Irrit. 2: H315 Causes skin irritation. (Calculation method)
Eye Irrit. 2: H319 Causes serious eye irritation. (Calculation method)

Modified position

SECTION 2 been added: Contains no ingredients with endocrine-disrupting properties.

SECTION 2 been added: Does not contain any PBT or vPvB substances.

SECTION 5 been added: Irritant gases/vapours.

SECTION 6 been added: Use personal protective equipment (protective gloves, safety glasses, protective clothing).

SECTION 7 been added: Do not store together with food and animal food/diet.

SECTION 11 been added: Contains no ingredients with endocrine-disrupting properties.

SECTION 11 been added: Classification was carried out based on substance-specific concentration limits.

SECTION 11 deleted: Calculation method

SECTION 11 been added: Classification was carried out based on substance-specific concentration limits.

SECTION 11 deleted: Calculation method

SECTION 11 been added: Based on available data, the classification criteria are not met.

SECTION 11 been added: Based on available data, the classification criteria are not met.

SECTION 11 been added: Based on available data, the classification criteria are not met.

SECTION 12 been added: Contains no ingredients with endocrine-disrupting properties.

SECTION 12 been added: Based on all available information not to be classified as PBT or vPvB respectively.