VITA Zahnfabrik H.Rauter GmbH & Co.KG

Safety Data Sheet

according to Regulation (EC) No 1907/2006

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

1.1. Product identifier

VITA CERAMICS ETCH

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

Use of the substance/mixture
Use as laboratory reagent

1.3. Details of the supplier of the safety data sheet

Company name: VITA Zahnfabrik H.Rauter GmbH & Co.KG
Post-office box: 1338
79704 Bad Säckingen
Telephone: +49(0)7761-562-0
Telefax: +49(0)7761-562-299
E-mail: info@vita-zahnfabrik.com
Internet: www.vita-zahnfabrik.com

1.4. Emergency telephone number:
+49-(0)761-19240

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008
Hazard categories:
- Substance or mixture corrosive to metals: Met. Corr. 1
- Acute toxicity: Acute Tox. 2
- Acute toxicity: Acute Tox. 3
- Acute toxicity: Acute Tox. 4
- Skin corrosion/irritation: Skin Corr. 1A
- Serious eye damage/eye irritation: Eye Dam. 1
Hazard Statements:
- May be corrosive to metals.
- Fatal in contact with skin.
- Toxic if swallowed.
- Harmful if inhaled.
- Causes severe skin burns and eye damage.
- Causes serious eye damage.

2.2. Label elements

Regulation (EC) No. 1272/2008
Hazard components for labelling
- Sulphuric acid ... %
- Hydrofluorid acid

Signal word: Danger

Pictograms:

Hazard statements
- H301 Toxic if swallowed.
- H310 Fatal in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H332 Harmful if inhaled.
Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P405 Store locked up.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>EC No</th>
<th>Index No</th>
<th>REACH No</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>7664-93-9</td>
<td>Sulphuric acid ... %</td>
<td>231-639-5</td>
<td>016-020-00-8</td>
<td>5 - &lt; 10 %</td>
<td></td>
</tr>
<tr>
<td>7664-39-3</td>
<td>hydrofluorid acid</td>
<td>231-634-8</td>
<td>009-002-00-6</td>
<td>1 - &lt; 5 %</td>
<td></td>
</tr>
<tr>
<td>64-17-5</td>
<td>ethyl alcohol</td>
<td>200-578-6</td>
<td>803-002-00-5</td>
<td>1 - &lt; 5 %</td>
<td></td>
</tr>
</tbody>
</table>

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General information
First aider: Pay attention to self-protection! Remove affected person from the danger area and lay down.

After inhalation
Provide fresh air. Medical treatment necessary. IF INHALED: Call a POISON CENTER/doctor// if you feel unwell.

After contact with skin
After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. Call a physician immediately. After contact with skin, wash immediately with plenty of water and soap. IF ON SKIN (or hair): Ca-Gluconate solution Immediately call a POISON CENTER/doctor/.

After contact with eyes
In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Immediately call a POISON CENTER/doctor/. Ca-Gluconate solution

After ingestion
Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Adverse human health effects and symptoms: Gastric perforation. Call a physician immediately.
4.2. Most important symptoms and effects, both acute and delayed
No information available.

4.3. Indication of any immediate medical attention and special treatment needed
Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media
Co-ordinate fire-fighting measures to the fire surroundings.

5.2. Special hazards arising from the substance or mixture
Non-flammable.

5.3. Advice for firefighters
Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

Additional information
Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately.
Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

6.2. Environmental precautions
Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up
Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections
Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Advice on safe handling
If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Advice on protection against fire and explosion
No special fire protection measures are necessary.

7.2. Conditions for safe storage, including any incompatibilities
Requirements for storage rooms and vessels
Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaustion at critical locations.

Hints on joint storage
No special measures are necessary.

7.3. Specific end use(s)
Use as laboratory reagent

SECTION 8: Exposure controls/personal protection
8.1. Control parameters

Occupational exposure limit values

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Name of agent</th>
<th>ppm</th>
<th>mg/m³</th>
<th>fib/cm³</th>
<th>Category</th>
<th>Origin</th>
</tr>
</thead>
<tbody>
<tr>
<td>7664-39-3</td>
<td>Hydrogen fluoride</td>
<td>1.8</td>
<td>1.5</td>
<td></td>
<td>TWA (8 h)</td>
<td></td>
</tr>
<tr>
<td>7664-93-9</td>
<td>Sulphuric acid (mist)</td>
<td>3</td>
<td>2.5</td>
<td>-</td>
<td>STEL (15 min)</td>
<td></td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Appropriate engineering controls
If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Protective and hygiene measures
Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff.

Eye/face protection
Suitable eye protection: goggles. Wear eye/face protection.

Hand protection
When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Recommended glove articles KCL Dermatril P Wearing time with occasional contact (splashes):  480 min

Skin protection
Wear suitable protective clothing.

Respiratory protection
If handled uncovered, arrangements with local exhaust ventilation have to be used.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:
Colour: light red
Odour: characteristic
pH-Value: 2,0

Changes in the physical state
Melting point: not determined
Initial boiling point and boiling range: 100 °C

Flammability
Solid: not applicable
Gas: not applicable

Explosive properties
The product is not: Explosive.
Lower explosion limits:
Upper explosion limits:

**Auto-ignition temperature**
- Solid: not applicable
- Gas: not applicable

**Decomposition temperature:** not determined

**Oxidizing properties**
- Not oxidising.

**Vapour pressure:**
(at 50 °C) <=1100 hPa

**Density:** 1,06000 g/cm³

**Solubility in other solvents**
- not determined

**Partition coefficient:**
- not determined

**Vapour density:**
- not determined

**Evaporation rate:**
- not determined

**9.2. Other information**
- Solid content: 1,5 %

### SECTION 10: Stability and reactivity

**10.1. Reactivity**
- No hazardous reaction when handled and stored according to provisions.

**10.2. Chemical stability**
- The product is stable under storage at normal ambient temperatures.

**10.3. Possibility of hazardous reactions**
- No known hazardous reactions.

**10.4. Conditions to avoid**
- none

**10.5. Incompatible materials**
- No information available.

**10.6. Hazardous decomposition products**
- No known hazardous decomposition products.

### SECTION 11: Toxicological information

**11.1. Information on toxicological effects**
- **Acute toxicity**
  - Based on available data, the classification criteria are not met.

**ATEmix calculated**
- ATE (oral) 104,2 mg/kg; ATE (dermal) 104,2 mg/kg; ATE (inhalation vapour) 10,42 mg/l; ATE (inhalation aerosol) 1,042 mg/l
### Chemical name and CAS No

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Exposure route</th>
<th>Dose</th>
<th>Species</th>
<th>Source</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>7664-39-3</td>
<td>hydrofluoric acid</td>
<td>oral</td>
<td>ATE</td>
<td>5 mg/kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>dermal</td>
<td>ATE</td>
<td>5 mg/kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>inhalation vapour</td>
<td>ATE</td>
<td>0,5 mg/l</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>inhalation aerosol</td>
<td>ATE</td>
<td>0,05 mg/l</td>
<td></td>
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<tr>
<td>64-17-5</td>
<td>ethyl alcohol</td>
<td>dermal</td>
<td>LD50</td>
<td>7060 mg/kg</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Irritation and corrosivity**

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

**Sensitising effects**

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

**Carcinogenic/mutagenic/toxic effects for reproduction**

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

**STOT-single exposure**

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

**STOT-repeated exposure**

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

**Aspiration hazard**

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

**Additional information on tests**

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP]. Special hazards arising from the substance or mixture!

### SECTION 12: Ecological information

**12.1. Toxicity**

The product is not: Ecotoxic.

**12.2. Persistence and degradability**

The product has not been tested.

**12.3. Bioaccumulative potential**

The product has not been tested.

**12.4. Mobility in soil**

The product has not been tested.

**12.5. Results of PBT and vPvB assessment**

The product has not been tested.

**12.6. Other adverse effects**

No information available.

**Further information**

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

### SECTION 13: Disposal considerations

**13.1. Waste treatment methods**

**Disposal recommendations**

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.
### Contaminated packaging

Hazardous waste according to Directive 2008/98/EC (waste framework directive). Handle contaminated packages in the same way as the substance itself.

### SECTION 14: Transport information

#### Land transport (ADR/RID)

<table>
<thead>
<tr>
<th><strong>14.1. UN number:</strong></th>
<th>UN 2922</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>14.2. UN proper shipping name:</strong></td>
<td>CORROSIVE LIQUID, TOXIC, N.O.S. (Wasser)</td>
</tr>
<tr>
<td><strong>14.3. Transport hazard class(es):</strong></td>
<td>8</td>
</tr>
<tr>
<td><strong>14.4. Packing group:</strong></td>
<td>II</td>
</tr>
<tr>
<td><strong>Hazard label:</strong></td>
<td>8+6.1</td>
</tr>
</tbody>
</table>

| **Classification code:** | CT1 |
| **Special Provisions:** | 274 |
| **Limited quantity:** | 1 L |
| **Excepted quantity:** | E2 |
| **Transport category:** | 2 |
| **Hazard No:** | 86 |
| **Tunnel restriction code:** | E |

#### Inland waterways transport (ADN)

<table>
<thead>
<tr>
<th><strong>14.1. UN number:</strong></th>
<th>UN 2922</th>
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<td>II</td>
</tr>
<tr>
<td><strong>Hazard label:</strong></td>
<td>8+6.1</td>
</tr>
</tbody>
</table>

| **Classification code:** | CT1 |
| **Special Provisions:** | 274 802 |
| **Limited quantity:** | 1 L |
| **Excepted quantity:** | E2 |

#### Marine transport (IMDG)

<table>
<thead>
<tr>
<th><strong>14.1. UN number:</strong></th>
<th>UN 2922</th>
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<td>II</td>
</tr>
<tr>
<td><strong>Hazard label:</strong></td>
<td>8+6.1</td>
</tr>
</tbody>
</table>

| **Special Provisions:** | 274 |
| **Limited quantity:** | 1 L |
| **Excepted quantity:** | E2 |
| **EmS:** | F-A, S-B |

### Air transport (ICAO-TI/IATA-DGR)
14.1. UN number: UN 2922
14.2. UN proper shipping name: CORROSIVE LIQUID, TOXIC, N.O.S. (Wasser)
14.3. Transport hazard class(es): 8
14.4. Packing group: II

Hazard label: 8+6.1

Special Provisions: A3 A803
Limited quantity Passenger: 0.5 L
Passenger LQ: Y840
Excepted quantity: E2

IATA-packing instructions - Passenger: 851
IATA-max. quantity - Passenger: 1 L
IATA-packing instructions - Cargo: 855
IATA-max. quantity - Cargo: 30 L

14.5. Environmental hazards
ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user
Warning: Toxic. strongly corrosive.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
not applicable

SECTION 15: Regulatory information

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

EU regulatory information
Information according to 2012/18/EU (SEVESO III): H2 ACUTE TOXIC

National regulatory information
Employment restrictions:
Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water hazard class (D):
Skin resorption/Sensitization:
2 - obviously hazardous to water
Permeates easily through outer skin and causes poisoning.

15.2. Chemical safety assessment
Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Abbreviations and acronyms
ADR: Accord européen sur le transport des marchandises dangereuses par Route
( European Agreement concerning the International Carriage of Dangerous Goods by Road )
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%
CLP: Classification, labelling and Packaging
REACH: Registration, Evaluation and Authorization of Chemicals
GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
UN: United Nations
DNEL: Derived No Effect Level
DMEL: Derived Minimal Effect Level
PNEC: Predicted No Effect Concentration
ATE: Acute toxicity estimate
LL50: Lethal loading, 50%
EL50: Effect loading, 50%
EC50: Effective Concentration 50%
ErC50: Effective Concentration 50%, growth rate
NOEC: No Observed Effect Concentration
BCF: Bio-concentration factor
PBT: persistent, bioaccumulative, toxic
vPvB: very persistent, very bioaccumulative
RID: Regulations concerning the international carriage of dangerous goods by rail
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
( Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)
EmS: Emergency Schedules
MFAG: Medical First Aid Guide
ICAO: International Civil Aviation Organization
MARPOL: International Convention for the Prevention of Marine Pollution from Ships
IBC: Intermediate Bulk Container
SVHC: Substance of Very High Concern
For abbreviations and acronyms, see table at http://abbrev.esdscom.eu

Classification for mixtures and used evaluation method according to regulation (EC) No. 1272/2008 [CLP]

<table>
<thead>
<tr>
<th>Classification</th>
<th>Classification procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Met. Corr. 1; H290</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Acute Tox. 2; H310</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Acute Tox. 3; H301</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Acute Tox. 4; H332</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Skin Corr. 1A; H314</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Eye Dam. 1; H318</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

Relevant H and EUH statements (number and full text)

H225 Highly flammable liquid and vapour.
H290 May be corrosive to metals.
H300 Fatal if swallowed.
H301 Toxic if swallowed.
H310 Fatal in contact with skin.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H330 Fatal if inhaled.
H332 Harmful if inhaled.

Further Information
The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.
(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor’s safety data sheet.)