1. Identification

Product identifier

VITA CERAMICS ETCH

Recommended use of the chemical and restrictions on use

Use of the substance/mixture

Use as laboratory reagent

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

Emergency phone number: +49-(0)761-19240

2. Hazard(s) identification

Classification of the chemical

29 CFR Part 1910.1200

Acute toxicity: Acute Tox. 2 (dermal)
Acute toxicity: Acute Tox. 3 (oral)
Acute toxicity: Acute Tox. 4 (inhalation)
Skin corrosion/irritation: Skin Corr. 1A
Serious eye damage/eye irritation: Eye Dam. 1

Label elements

29 CFR Part 1910.1200

Signal word: Danger

Pictograms:

Hazard statements

Toxic if swallowed
Fatal in contact with skin
Causes severe skin burns and eye damage
Harmful if inhaled

Precautionary statements

Do not breathe dust/fume/gas/mist/vapors/spray.
Do not get in eyes, on skin, or on clothing.
Wash ... thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Rinse mouth. Do NOT induce vomiting.
Immediately call a poison center/doctor.
Specific treatment (see ... on this label).
If on skin: Wash with plenty of water.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
Immediately call a poison center/doctor.
Specific treatment (see ... on this label).
Take off immediately all contaminated clothing and wash it before reuse.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
Immediately call a poison center/doctor.
Specific treatment (see ... on this label).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
Immediately call a poison center/doctor.
Store locked up.
Dispose of contents/container to ....

Hazard not otherwise classified
No information available.

3. Composition/information on ingredients

Mixtures

Hazardous components

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Components</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>7864-93-9</td>
<td>Sulphuric acid</td>
<td>7.84 %</td>
</tr>
<tr>
<td>7664-39-3</td>
<td>hydrofluoric acid</td>
<td>4.8 %</td>
</tr>
<tr>
<td>64-17-5</td>
<td>ethyl alcohol</td>
<td>3.19 %</td>
</tr>
</tbody>
</table>

4. First-aid measures

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.

Most important symptoms and effects, both acute and delayed
No information available.

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

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media
Co-ordinate fire-fighting measures to the fire surroundings.
## Specific hazards arising from the chemical

Non-flammable.

### Special protective equipment and precautions for fire-fighters

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.

### 6. Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation. Do not breathe gas/fume/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

#### Environmental precautions

Do not allow to enter into surface water or drains.

#### 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.

### Reference to other sections

- Safe handling: see section 7
- Personal protection equipment (PPE): see section 8
- Disposal: see section 13

### 7. Handling and storage

#### Precautions for safe handling

- **Advice on safe handling**
  
  If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fume/vapour/spray.

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

#### 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.

### 8. Exposure controls/personal protection

#### Control parameters
Exposure limits

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Substance</th>
<th>ppm</th>
<th>mg/m³</th>
<th>f/cc</th>
<th>Category</th>
<th>Origin</th>
</tr>
</thead>
<tbody>
<tr>
<td>64-17-5</td>
<td>Ethyl alcohol (Ethanol)</td>
<td>1000</td>
<td>1900</td>
<td></td>
<td>TWA (8 h)</td>
<td>PEL</td>
</tr>
<tr>
<td>64-17-5</td>
<td>Ethyl alcohol</td>
<td>1000</td>
<td>1900</td>
<td></td>
<td>TWA (8 h)</td>
<td>REL</td>
</tr>
<tr>
<td>7664-39-3</td>
<td>Hydrogen fluoride (as F)</td>
<td>3</td>
<td>-</td>
<td>2.5</td>
<td>TWA (8 h)</td>
<td>REL</td>
</tr>
<tr>
<td>7664-39-3</td>
<td>Hydrogen fluoride</td>
<td></td>
<td></td>
<td></td>
<td>Ceiling</td>
<td>REL</td>
</tr>
<tr>
<td>7664-93-9</td>
<td>Sulfuric acid</td>
<td>-</td>
<td>1</td>
<td></td>
<td>TWA (8 h)</td>
<td>PEL</td>
</tr>
</tbody>
</table>

Exposure controls

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

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state:
Color: light red
Odor: characteristic
pH-Value: 2.0

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

Flammability
### Explosive properties
The product is not: Explosive.

- **Lower explosion limits**: not applicable
- **Upper explosion limits**: not applicable

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

### Decomposition temperature:
- **Solid**: not determined
- **Gas**: not determined

### Oxidizing properties
- **Not oxidising.**
- **Vapor pressure**: <=1100 hPa
- **Density**: 1,06000 g/cm³

### Solubility in other solvents
- **not determined**
- **Partition coefficient**: not determined
- **Vapor density**: not determined
- **Evaporation rate**: not determined

### Other information
- **Solid content**: 1,5 %

### 10. Stability and reactivity

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

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

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

**Conditions to avoid**
- none/none

**Incompatible materials**
- No information available.

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

### 11. Toxicological information

**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
<table>
<thead>
<tr>
<th>CAS No</th>
<th>Components</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>
<td></td>
</tr>
<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.

**Sensitizing 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.

**Specific target organ toxicity (STOT) - single exposure**
Based on available data, the classification criteria are not met.

**Specific target organ toxicity (STOT) - repeated exposure**
Based on available data, the classification criteria are not met.

Carcinogenicity (OSHA): No ingredient of this mixture is listed.

Carcinogenicity (IARC): Sulfuric Acid (CAS 7664-93-9) is listed in group 1. Ethanol in alcoholic beverages (CAS 64-17-5) is listed in group 1.

Carcinogenicity (NTP): Sulfuric Acid (CAS 7664-93-9) is listed in group Known.

**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]. Specific hazards arising from the chemical!

**12. Ecological information**

**Ecotoxicity**
The product is not: Ecotoxic.

**Persistence and degradability**
The product has not been tested.

**Bioaccumulative potential**
The product has not been tested.

**Mobility in soil**
The product has not been tested.

**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.

**13. Disposal considerations**

**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.

14. Transport information

Marine transport (IMDG)

UN number: UN 2922
UN proper shipping name: CORROSIVE LIQUID, TOXIC, N.O.S. (Wasser)
Transport hazard class(es): 8
Packing group: II
Hazard label: 8+6.1
Special Provisions:
Limited quantity: 1 L
Excepted quantity: E2
EmS: F-A, S-B

Air transport (ICAO-TI/IATA-DGR)

UN number: UN 2922
UN proper shipping name: CORROSIVE LIQUID, TOXIC, N.O.S. (Wasser)
Transport hazard class(es): 8
Packing group: II
Hazard label: 8+6.1
Special Provisions:
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

Environmental hazards
ENVIRONMENTALLY HAZARDOUS: no

Special precautions for user
Warning: Toxic. strongly corrosive.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
not applicable

15. Regulatory information

U.S. Regulations
National regulatory information

SARA Section 302 Extremely hazardous substances:
- Sulfuric acid (aerosol forms only) (7664-93-9): Reportable quantity = 1,000 lbs., Threshold planning quantity = 1,000 lbs.
- Hydrofluoric acid (conc. < 50%) (7664-39-3): Reportable quantity = 100 lbs., Threshold planning quantity = 100 lbs.

SARA Section 304 CERCLA:
- Sulfuric acid (aerosol forms only) (7664-93-9): Reportable quantity = 1,000 (454) lbs. (kg)
- Hydrofluoric acid (conc. < 50%) (7664-39-3): Reportable quantity = 100 (45.4) lbs. (kg)

SARA Section 311/312 Hazards:
- Sulfuric acid (aerosol forms only) (7664-93-9): Immediate (acute) health hazard
- Hydrofluoric acid (conc. < 50%) (7664-39-3): Immediate (acute) health hazard
- Ethyl alcohol (64-17-5): Fire hazard, Immediate (acute) health hazard

SARA Section 313 Toxic release inventory:
- Sulfuric acid (aerosol forms only) (7664-93-9): De minimis limit = 1.0 %, Reportable threshold = Standard
- Hydrofluoric acid (conc. < 50%) (7664-39-3): De minimis limit = 1.0 %, Reportable threshold = Standard

Clean Air Act Section 112(b):
- Hydrofluoric acid (conc. < 50%) (7664-39-3)

State Regulations

Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65, State of California)
This product can not expose you to chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

16. Other information

Revision date: 12.02.2020
Revision No: 2

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

Other data
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.)