

# Material Safety Data Sheet

## According to 91/155 EEC

Printing date 20.02.2004

Reviewed on 20.02.2004

### 1 Identification of substance:

· **Product details:**

· **Trade name:** VITA CERAMICS ETCH

· **Article number:** FCE3, FCE6

· **Manufacturer/Supplier:**

VITA Zahnfabrik

H. Rauter GmbH & Co. KG

Postfach 1338

D 79704 Bad Säckingen

· **Information in case of emergency:** Tel.: ++49-(0)761-19240

Tel.: ++49/(0)7761/562-0

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### 2 Composition/Data on components:

· **Chemical characterization**

· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 7664-93-9 EINECS: 231-639-5	sulphuric acid	 C; R 35	2.5-10%
CAS: 7664-39-3 EINECS: 231-634-8	hydrofluoric acid	 T+,  C; R 26/27/28-35	2.5-10%
CAS: 64-17-5 EINECS: 200-578-6	ethanol	 F; R 11	2.5-10%

· **Additional information** For the wording of the listed risk phrases refer to section 16.

### 3 Hazard identification

· **Hazard description:**



T Toxic

C Corrosive

· **Information concerning to particular hazards to man and environment**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

R 23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

R 35 Causes severe burns.

· **Classification system**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

### 4 First aid measures

· **General information**

Immediately remove any clothing soiled by the product.

Remove breathing equipment only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· **After inhalation**

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

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- **After skin contact**  
Immediate medical treatment necessary. Failure to treat burns can prevent wounds from healing.  
Immediately wash with water and soap and rinse thoroughly.
- **After eye contact** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing**  
Do not induce vomiting; call for medical help immediately.  
Drink plenty of water and provide fresh air. Call for a doctor immediately.

### 5 Fire fighting measures

- **Suitable extinguishing agents**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards caused by the substance, its products of combustion or resulting gases:**  
Formation of toxic gases is possible during heating or in case of fire.
- **Protective equipment:** Mount respiratory protective device.

### 6 Accidental release measures

- **Person-related safety precautions:**  
Use respiratory protective device against the effects of fumes/dust/aerosol.  
Avoid contact with substance.  
Wear protective equipment. Keep unprotected persons away.
- **Measures for environmental protection:**  
Do not allow product to reach sewage system or any water course.  
Inform respective authorities in case of seepage into water course or sewage system.  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Use neutralizing agent.  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.

### 7 Handling and storage

- **Handling**
- **Information for safe handling:**  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.
- **Information about fire - and explosion protection:** Keep respiratory protective device available.
- **Storage**
- **Requirements to be met by storerooms and receptacles:**  
Store in cool, dry place in tightly closed receptacles.  
Store only in the original receptacle.
- **Information about storage in one common storage facility:**  
do not store in the presence of dangerous materials
- **Further information about storage conditions:**  
Store under lock and key and with access restricted to technical experts or their assistants only.  
Keep receptacle tightly sealed.

### 8 Exposure controls and personal protection gear

- **Additional information about design of technical facilities:** No further data; see item 7.

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· **Ingredients with limit values that require monitoring at the workplace:**

**7664-39-3 hydrofluoric acid**

OEL Short-term value: 2.5 mg/m<sup>3</sup>, 3 ppm  
as F

**7664-93-9 sulphuric acid**

OES Long-term value: 1 mg/m<sup>3</sup>

· **Additional information:** The lists valid during the making were used as basis.

· **Personal protective equipment**

· **General protective and hygienic measures**

Use skin protection cream for skin protection.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes and skin.

· **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

gas filter E2

· **Protection of hands:**



Protective gloves.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles.

**9 Physical and chemical properties:**

· **General Information**

**Form:** Fluid  
**Colour:** Light red  
**Odour:** Nearly odourless

· **Change in condition**

**Melting point/Melting range:** undetermined

**Boiling point/Boiling range:** 100°C

· **Flash point:** Not applicable

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· <b>Self-igniting:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
· <b>Vapour pressure at 20°C:</b>	23 hPa
· <b>Density at 20°C:</b>	1.06 g/cm <sup>3</sup>
· <b>Solubility in / Miscibility with Water:</b>	Fully miscible
· <b>pH-value at 20°C:</b>	2
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	3.2 %
<b>Water:</b>	82.6 %
· <b>Solids content:</b>	1.5 %

### 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used and stored according to specifications.
- **Dangerous reactions** corrosive reactions
- **Dangerous decomposition products:** toxic and caustic fumes

### 11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** Strong caustic effect on skin and mucous membranes.
- **on the eye:** Strong caustic effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.  
Toxic  
Corrosive  
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

### 12 Ecological information:

- **General notes:**  
At present there are no ecotoxicological assessments.  
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water.  
Do not allow product to reach ground water, water course or sewage system.  
Must not reach sewage water or drainage ditch undiluted or unneutralized.  
Danger to drinking water if even small quantities leak into the ground.

### 13 Disposal considerations

- **Product:**
- **Recommendation**  
Disposal must be made according to official regulations.  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

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· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### 14 Transport information

· **Land transport ADR/RID (cross-border)**



- **ADR/RID class:** 8 Corrosive substances.
- **Danger code (Kemler):** 86
- **UN-Number:** 2922
- **Packaging group:** II
- **Hazard label:** 8+6.1
- **Description of goods:** 2922 CORROSIVE LIQUID, TOXIC, N.O.S. (HYDROFLUORIC ACID, SULPHURIC ACID)

· **Maritime transport IMDG:**



- **IMDG Class:** 8
- **UN Number:** 2922
- **Label:** 8+6.1
- **Packaging group:** II
- **EMS Number:** F-A,S-B
- **Marine pollutant:** No
- **Proper shipping name:** CORROSIVE LIQUID, TOXIC, N.O.S. (HYDROFLUORIC ACID, SULPHURIC ACID)

· **Air transport ICAO-TI and IATA-DGR:**



- **ICAO/IATA Class:** 8
- **UN/ID Number:** 2922
- **Label:** 8+6.1
- **Packaging group:** II
- **Proper shipping name:** CORROSIVE LIQUID, TOXIC, N.O.S. (HYDROFLUORIC ACID, SULPHURIC ACID)

### 15 Regulations

· **Labelling according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

· **Code letter and hazard designation of product:**

T Toxic  
C Corrosive

· **Hazard-determining components of labelling:**

hydrofluoric acid  
sulphuric acid

· **Risk phrases:**

23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

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35 Causes severe burns.

· **Safety phrases:**

4 Keep away from living quarters.

9 Keep container in a well-ventilated place.

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

60 This material and its container must be disposed of as hazardous waste.

23 Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).

· **National regulations**· **Technical instructions (air):**

Class	Share in %
III	2,5-10

· **Waterhazard class:** Water hazard class 2 (Self-assessment): hazardous for water.

### 16 Other information:

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

· **Relevant R-phrases**

11 Highly flammable.

26/27/28 Very toxic by inhalation, in contact with skin and if swallowed.

35 Causes severe burns.

· **\* Data compared to the previous version altered.**

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