

# Material Safety Data Sheet

## According to 91/155 EEC

Printing date 18.02.2004

Reviewed on 18.02.2004




### 1 Identification of the substance/preparation and of the company/undertaking

- **Product details**
- **Trade name:** Antox 71 E plus
- **Article number:** 02.0012
- **Application of the substance / the preparation** Metal surface treatment
- **Manufacturer/Supplier:**  
Chemetall (Schweiz) AG  
Silostrasse 7  
CH-5606 Dintikon  
Tel. ++41(0)56 616 90 30  
Fax ++41(0)56 616 90 40
- **Further information obtainable from:**  
Chemetall (Schweiz) AG  
Product safety department
- **Information in case of emergency:**  
Schweiz / Suisse / Switzerland  
Schweiz. Toxikologisches Informationszentrum Zürich (STIZ)  
Tel. ++41(0)1 251 51 51  
Tel. 145 (24 h)  
www.toxi.ch

### 2 Composition/information on ingredients

- **Chemical characterization**
- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 7697-37-2 EINECS: 231-714-2	nitric acid	 C; R 35	10-25%
CAS: 7664-39-3 EINECS: 231-634-8	hydrofluoric acid	 T+,  C; R 26/27/28-35	2.5-10.0%

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

### 3 Hazards identification

- **Hazard description:**



T Toxic  
C Corrosive

- **Information concerning particular hazards for human 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.

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- **After inhalation:**  
Supply fresh air or oxygen; call for doctor.  
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**  
Immediately rinse with water.  
Call a doctor immediately.  
Rub in Ca-gluconate solution or Ca-gluconate gel immediately.
- **After eye contact:**  
Rinse opened eye for several minutes under running water. Then consult a doctor.  
Call a doctor immediately.
- **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.
- **Protective equipment:**  
No special measures required.  
Mouth respiratory protective device.

### 6 Accidental release measures

- **Person-related safety precautions:** Wear protective equipment. Keep unprotected persons away.
- **Measures for environmental protection:**  
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.  
Prevent formation of aerosols.
- **Information about fire - and explosion protection:** Keep respiratory protective device available.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Provide acid-resistant floor.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.

### 8 Exposure controls/personal protection

- **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:**

**7697-37-2 nitric acid**

OES Short-term value: 10 mg/m<sup>3</sup>, 4 ppm

Long-term value: 5.2 mg/m<sup>3</sup>, 2 ppm

**7664-39-3 hydrofluoric acid**

OES Short-term value: 2.5 mg/m<sup>3</sup>, 3 ppm

Long-term value: 1.5 mg/m<sup>3</sup>, 1.8 ppm

as F; IOELV

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

· **Personal protective equipment:**

· **General protective and hygienic measures:**

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:** Use suitable respiratory protective device only when aerosol or mist is formed.

· **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

· **Body protection:** Protective work clothing

## 9 Physical and chemical properties

· **General Information**

<b>Form:</b>	Fluid
<b>Colour:</b>	Colourless
<b>Odour:</b>	Pungent

· **Change in condition**

**Melting point/Melting range:** Undetermined.

**Boiling point/Boiling range:** Undetermined.

· **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>	1.25 g/cm <sup>3</sup>
· <b>Solubility in / Miscibility with water:</b>	Fully miscible.
· <b>pH-value at 20°C:</b>	< 2
· <b>Organic solvents:</b>	0.0 %

### 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Dangerous reactions** No dangerous reactions known.
- **Dangerous decomposition products:** No dangerous decomposition products known.

### 11 Toxicological information

- **Acute toxicity:**

- **LD/LC50 values relevant for classification:**

7664-39-3 hydrofluoric acid

Oral LD50 1276 mg/kg (rat)

- **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:**

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**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- **European waste catalogue**

06 00 00 WASTES FROM INORGANIC CHEMICAL PROCESSES

06 01 00 wastes from the manufacture, formulation, supply and use (MFSU) of acids

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06 01 03	hydrofluoric acid
06 00 00	WASTES FROM INORGANIC CHEMICAL PROCESSES
06 01 00	wastes from the manufacture, formulation, supply and use (MFSU) of acids
06 01 05	nitric acid and nitrous acid

- **Uncleaned packaging:**
- **Recommendation:** Packaging may be reused or recycled after cleaning.
- **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, NITRIC 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, NITRIC 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, NITRIC ACID)

### 15 Regulatory information

- **Labelling according to EU guidelines:**  
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

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

T Toxic  
C Corrosive

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

hydrofluoric acid  
nitric acid

· **Risk phrases:**

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

· **Safety phrases:**

20 When using do not eat or drink.  
23 Do not breathe fumes/aerosol.  
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
27/28 After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water.  
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.

· **National regulations:**

· **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**

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

· **Contact:**

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