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Reviewed on 06/13/2006

1 Identification of substance· **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**Quality Welding Products**20837 Valley Forge Circle**US-King of Prussia, PA 19406**Phone 610-331-1607**Fax 610-783-0446*· **Information department:** *Quality Welding Products Inc*· **Emergency information:***CHEMTREC**Company code D762**Domestic North America 800-424-9300**International, call 703-527-3887 (collect calls accepted)***2 Composition/Data on components**· **Chemical characterization**· **Description:** *Mixture of the substances listed below with nonhazardous additions.*· **Dangerous components:**

7697-37-2	nitric acid	10-25%
7664-39-3	hydrofluoric acid	2.5-10%

· **Additional information:** *For the wording of the listed risk phrases refer to section 16.***3 Hazards identification**· **Hazard description:***T Toxic**C Corrosive*· **Information pertaining to particular dangers for man and environment:***The product has to be labelled due to the calculation procedure of international guidelines.**Toxic by inhalation, in contact with skin and if swallowed.**Causes severe burns.**Irritating to respiratory system.*· **Classification system:***The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.*

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· **NFPA ratings (scale 0 - 4)**

Health = 4

Fire = 0

Reactivity = 0

4 First aid measures· **General information:***Immediately remove any clothing soiled by the product.**Remove breathing apparatus 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.*· **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; immediately call for medical help.**Drink copious amounts of water and provide fresh air. Immediately call a doctor.***5 Fire fighting measures**· **Suitable extinguishing agents:***CO₂, extinguishing 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 protection against explosions and fires:** *Keep respiratory protective device available.*

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- **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 receptacle tightly sealed.

8 Exposure controls and personal protection

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

- **Components with limit values that require monitoring at the workplace:**

7697-37-2 nitric acid

PEL	5 mg/m ³ , 2 ppm
REL	Short-term value: 10 mg/m ³ , 4 ppm Long-term value: 5 mg/m ³ , 2 ppm
TLV	Short-term value: 10 mg/m ³ , 4 ppm Long-term value: 5.2 mg/m ³ , 2 ppm

7664-39-3 hydrofluoric acid

REL	Short-term value: C 5* mg/m ³ , C 6* ppm Long-term value: 2.5 mg/m ³ , 3 ppm *15-min
TLV	Short-term value: C 2.3 mg/m ³ , C 3 ppm as F

- **Additional information:** The lists that were valid during the creation 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.
 - Do not inhale gases / fumes / aerosols.
 - Avoid contact with the eyes and skin.
- **Breathing equipment:** Use suitable respiratory protective device only when aerosol or mist is formed.
- **Protection of hands:**
 - 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



Protective gloves

Solvent resistant gloves

- **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.

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· Eye protection:



Tightly sealed goggles

· Body protection: Protective work clothing

* 9 Physical and chemical properties

· General Information

Form: Fluid
Color: Colorless
Odor: Pungent

· Change in condition

Melting point/Melting range: Undetermined.
Boiling point/Boiling range: Undetermined.

· Flash point: Not applicable.

· Auto igniting: Product is not selfigniting.

· Danger of explosion: Product does not present an explosion hazard.

· Vapor pressure at 20°C (68°F): 23 hPa (17 mm Hg)

· Density at 20°C (68°F): 1.250 g/cm³

· Solubility in / Miscibility with

Water: Fully miscible.

· pH-value at 20°C (68°F): < 2

· Solvent content:

Organic solvents: 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 products of decomposition: No dangerous decomposition products known.

* 11 Toxicological information

· Acute toxicity:

· LD/LC50 values that are 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:

Toxic

Corrosive

Irritant

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Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

The product shows the following dangers according to internally approved calculation methods for preparations:

12 Ecological information

· General notes:

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

Water hazard class 2 (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

13 Disposal considerations

· Product:

· Recommendation:

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

· Uncleaned packagings:

· Recommendation: Packaging can be reused or recycled after cleaning.

· Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

· DOT regulations:



· Hazard class:

8

· Identification number:

UN2922

· Packing group:

II

· Proper shipping name (technical name): CORROSIVE LIQUID, TOXIC, N.O.S. (HYDROFLUORIC ACID, NITRIC ACID)

· Label

8+6.1

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



· ADR/RID class:

8 Corrosive substances

· Danger code (Kemler):

86

· UN-Number:

2922

· Packaging group:

II

· Description of goods:

2922 CORROSIVE LIQUID, TOXIC, N.O.S. (HYDROFLUORIC, NITRIC ACID)

· Maritime transport IMDG:



· IMDG Class:

8

· UN Number:

2922

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· **Label** 8+6.1
 · **Packaging group:** II
 · **EMS Number:** F-A,S-B
 · **Marine pollutant:** No
 · **Propper 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
 · **Propper shipping name:** CORROSIVE LIQUID, TOXIC, N.O.S. (HYDROFLUORIC ACID, NITRIC ACID)

15 Regulations

· **Section 313 (Specific toxic chemical listings):**

7697-37-2	nitric acid
7664-39-3	hydrofluoric acid

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogeny categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

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· Product related hazard informations:**· Hazard symbols:**

T Toxic
C Corrosive

· Hazard-determining components of labelling:

hydrofluoric acid
nitric acid

· Risk phrases:

Toxic by inhalation, in contact with skin and if swallowed.
Causes severe burns.
Irritating to respiratory system.

· Safety phrases:

Keep away from living quarters.
Keep container tightly closed and in a well-ventilated place.
When using do not eat or drink.
Do not breathe fumes/aerosol.
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Wear suitable protective clothing, gloves and eye/face protection.
In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
This material and its container must be disposed of as hazardous waste.

· National regulations:

· **Water hazard 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.

· **Contact:** Mr. John Corrado

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

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