Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 01/11/2013 Reviewed on 01/11/2013

*
1 Identification of the substance/mixture and of the company/undertaking

· **Product identifier**

· **Trade name: Antox 76 E**
· **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
· **Application of the substance / the preparation** Metal surface treatment

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Chemetall GmbH
Zweigniederlassung Schweiz
Aarauerstrasse 51
CH-5200 Brugg
Tel. ++41(0)56 616 90 30
Fax ++41(0)56 616 90 40

Quality Welding Products
Division of Dynaflux
241 Brown Farm Rd
US - Cartersville, Georgia 30120
Phone 770-382-8843
Fax 770-382-8319

· **Information department:**
Mark Redmon
mredmon@dynaflux.com
· **Emergency telephone number:**
CHEMTREC
Company code CCN205573
Domestic North America 800-424-9300
International, call 703-527-3887 (collect calls accepted)

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2 Hazards identification

· **Classification of the substance or mixture**


GHS06 Skull and crossbones

Acute Tox. 3 H311 Toxic in contact with skin.


GHS05 Corrosion

Skin Corr. 1A H314 Causes severe skin burns and eye damage.

· **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**


C; Corrosive

R35: Causes severe burns.


Xn; Harmful

R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.


Xi; Irritant

R37: Irritating to respiratory system.
· **Information concerning particular hazards for human and environment:**
The product has to be labelled due to the calculation procedure of international guidelines.

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· **Classification system:**
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

· **Label elements**

· **Labelling according to EU guidelines:**

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

C Corrosive

· **Hazard-determining components of labelling:**
hydrofluoric acid
nitric acid
phosphoric acid

· **Risk phrases:**
20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
35 Causes severe burns.
37 Irritating to respiratory system.

· **Safety phrases:**
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.
· **Classification system:**
· **NFPA ratings (scale 0 - 4)**

Health = 4
Fire = 0
Reactivity = 0

Void
· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

7697-37-2	nitric acid C R35 Ox. Liq. 3, H272 Skin Corr. 1A, H314	10-25%

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7664-38-2	phosphoric acid C R34 Skin Corr. 1B, H314	10-25%
7664-39-3	hydrofluoric acid T+ R26/27/28 C R35 Acute Tox. 2, H300; Acute Tox. 1, H310; Acute Tox. 2, H330 Skin Corr. 1A, H314	0.25-1.0%

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

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4 First aid measures

· **Description of first aid measures**
· **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
· **After inhalation:**
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
In case of unconsciousness place patient stably in side position for transportation.
· **After skin contact:**
Immediately rinse with water.
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:**
Immediately call a doctor.
Drink copious amounts of water and provide fresh air. Immediately call a doctor.
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

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5 Firefighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**
CO_2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
· **Advice for firefighters**
· **Protective equipment:**
Mouth respiratory protective device.
Do not inhale explosion gases or combustion gases.

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6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.

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· **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
· **Methods and material for containment and cleaning up:**
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.
· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

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7 Handling and storage

· **Handling:**
· **Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
· **Information about protection against explosions and fires:** No special measures required.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Provide acid-resistant floor.
Use only receptacles specifically permitted for this substance/product.
· **Information about storage in one common storage facility:**
Do not store together with alkalis (caustic solutions).
· **Further information about storage conditions:** Protect from frost.
· **Specific end use(s)** No further relevant information available.

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8 Exposure controls/personal protection

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

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
7697-37-2 nitric acid	
PEL	5 mg/m³, 2 ppm
REL	Short-term value: 10 mg/m³, 4 ppm Long-term value: 5 mg/m³, 2 ppm
TLV	Short-term value: 10 mg/m³, 4 ppm Long-term value: 5.2 mg/m³, 2 ppm
7664-38-2 phosphoric acid	
PEL	1 mg/m³
REL	Short-term value: 3 mg/m³ Long-term value: 1 mg/m³
TLV	Short-term value: 3 mg/m³ Long-term value: 1 mg/m³
7664-39-3 hydrofluoric acid	
PEL	3 ppm as F

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REL	Short-term value: C 5* mg/m³, C 6* ppm Long-term value: 2.5 mg/m³, 3 ppm *15-min, as F
TLV	Short-term value: C 1.64 mg/m³, C 2 ppm Long-term value: 0.41 mg/m³, 0.5 ppm as F; Skin

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

· **Exposure controls**
· **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.
Avoid contact with the eyes and skin.
· **Breathing equipment:** Not necessary if room is well-ventilated.
· **Protection of hands:**
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Protective gloves

Neoprene gloves
Acid resistant gloves
Only use chemical-protective gloves with CE-labelling of category III.
· **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 trough 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:** Acid resistant protective clothing

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9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Fluid
Color:	Yellowish
· **Odor:**	Pungent
· **Odour threshold:**	Not determined.
· **pH-value at 20 °C (68 °F):**	<1.0 (Konz.)
· **Change in condition**	
Melting point/Melting range:	Undetermined.

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Boiling point/Boiling range:	Undetermined.
· **Flash point:**	Not applicable.
· **Flammability (solid, gaseous):**	Not applicable.
· **Ignition temperature:**	
Decomposition temperature:	Not determined.
· **Auto igniting:**	Product is not selfigniting.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	Not determined.
Upper:	Not determined.
· **Vapor pressure at 20 °C (68 °F):**	23 hPa (17 mm Hg)
· **Density at 20 °C (68 °F):**	1.22 g/cm³ (10.181 lbs/gal)
· **Relative density**	Not determined.
· **Vapour density**	Not determined.
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with**	
Water:	Fully miscible.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Solvent content:**	
Organic solvents:	0.0 %
· **Other information**	No further relevant information available.

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10 Stability and reactivity

· **Reactivity**
· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
· **Possibility of hazardous reactions** Reacts with metals to form nitrous fumes and hydrogen.
· **Conditions to avoid** No further relevant information available.
· **Incompatible materials:** No further relevant information available.
· **Hazardous decomposition products:** Corrosive gases/vapors

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11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**		
7697-37-2 nitric acid		
Inhalative	LC50/4 h	67 mg/l (rat)
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.

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· **on the eye:** Strong caustic effect.
· **Sensitization:** No sensitizing effects known.
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Corrosive
Irritant
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**
None of the ingredients is listed.

· **NTP (National Toxicology Program)**
None of the ingredients is listed.

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12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.
· **Behavior in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Water hazard class 2 (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
Danger to drinking water if even small quantities leak into the ground.
Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **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.

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14 Transport information

· **UN-Number**	
· **DOT, ADR, IMDG, IATA**	UN3264
· **UN proper shipping name**	
· **DOT**	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (PHOSPHORIC ACID, SOLUTION, NITRIC ACID)
· **ADR**	3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (PHOSPHORIC ACID, SOLUTION, NITRIC ACID)
· **IMDG, IATA**	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID, HYDROFLUORIC ACID)
· **Transport hazard class(es)**	
· **DOT**	
· **Class**	8 Corrosive substances.
· **Label**	8
· **ADR, IMDG, IATA**	
· **Class**	8 Corrosive substances
· **Label**	8
· **Packing group**	
· **DOT, ADR, IMDG, IATA**	II
· **Environmental hazards:**	
· **Marine pollutant:**	No
· **Special precautions for user**	Warning: Corrosive substances
· **Danger code (Kemler):**	80
· **EMS Number:**	F-A,S-B
· **Segregation groups**	Acids
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **Transport/Additional information:**	Not dangerous according to the above specifications.
· **UN "Model Regulation":**	UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (PHOSPHORIC ACID, SOLUTION, NITRIC ACID), 8, II

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15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Section 313 (Specific toxic chemical listings):**	
7697-37-2	nitric acid
7664-38-2	phosphoric acid

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7664-39-3	hydrofluoric acid

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

7697-37-2	nitric acid
7664-38-2	phosphoric acid
7664-39-3	hydrofluoric acid
7732-18-5	water, distilled, conductivity or of similar purity

· **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.

· **Cancerogenity categories**

· **EPA (Environmental Protection Agency)**
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.

· **National regulations:**

· **Water hazard class:** Water hazard class 2 (Self-assessment): hazardous for water.
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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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.

· **Abbreviations and acronyms:**
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organization
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
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
NFPA: National Fire Protection Association (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

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