

Antox 71 E Plus

Version: 1.2

Revision Date 13.09.2012

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : Antox 71 E Plus

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Sub- : Treatment of metal surfaces.
stance/Mixture

Recommended restrictions : None known.
on use

1.3 Details of the supplier of the safety data sheet

Company : Chemetall GmbH
Aarauerstrasse 51
CH-5200 Brugg
Contact person : franz.braun@chemetall.com
Telephone : ++41(0)56 616 90 30
Telefax : ++41(0)56 616 90 40

Contact person product safety
Telephone : +49(0)6971653381
E-mail address : msds.de@chemetall.com

1.4 Emergency telephone number

Schweiz / Suisse / Switzer- : Schweiz. Toxikologisches Informationszentrum Zürich (STIZ)
land TEL. ++41(0) 44 251 51 51
TEL. 145 (24 H)
www.toxi.ch

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 3	H301: Toxic if swallowed.
Acute toxicity, Category 3	H331: Toxic if inhaled.
Acute toxicity, Category 2	H310: Fatal in contact with skin.
Skin corrosion, Category 1A	H314: Causes severe skin burns and eye damage.

Classification (67/548/EEC, 1999/45/EC)

toxic	R23/24/25: Toxic by inhalation, in contact with skin and if swallowed.
Corrosive	R35: Causes severe burns.

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2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Danger

Hazard statements : H301 + H331 Toxic if swallowed or if inhaled
H310 Fatal in contact with skin.
H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.

Precautionary statements : **Prevention:**
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P262 Do not get in eyes, on skin, or on clothing.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/ physician.

Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:

- 7697-37-2 Nitric Acid
- 7664-39-3 Hydrofluoric Acid

Labelling according to EC Directives (1999/45/EC)

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Hazard pictograms :



Toxic



Corrosive

R-phrases :

R23/24/25

Toxic by inhalation, in contact with skin and if swallowed.

R35

Causes severe burns.

R37

Irritating to respiratory system.

S-phrases :

S23

Do not breathe gas/fumes/vapour/spray.

S24/25

Avoid contact with skin and eyes.

S26

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

S36/37/39

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

S45

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

S60

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

Hazardous components which must be listed on the label:

- 7697-37-2 Nitric Acid
- 7664-39-3 Hydrofluoric Acid

2.3 Other hazards

The information required is contained in this Material Safety Data Sheet.

SECTION 3: Composition/information on ingredients

3.1 Substances

not applicable

3.2 Mixtures

Chemical nature : Aqueous solution
 inorganic acids

Hazardous components

Chemical Name	CAS-No. EC-No. Registration number	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration [%]
Nitric Acid	7697-37-2	O; R 8	Ox. Liq. 3;	>= 20 - < 25

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	231-714-2 01-2119487297-23	C; R35 Nota B	H272 Skin Corr. 1A; H314	
Magnesium fluoride	7783-40-6 231-995-1	Xi; R36/37/38	Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335	>= 10 - < 20
Hydrofluoric Acid	7664-39-3 231-634-8 01-2119458860-33	T+; R26/27/28 C; R35 Nota B	Acute Tox. 2; H330 Acute Tox. 1; H310 Acute Tox. 2; H300 Skin Corr. 1A; H314	>= 5 - < 7

For the full text of the R-phrases mentioned in this Section, see Section 16.
For the full text of the H-Statements mentioned in this Section, see Section 16.
For the full text of the Notas mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : Take off contaminated clothing and shoes immediately.
First-aid crew: Ensure self-protection.
Move out of dangerous area.
- If inhaled : Move to fresh air.
If symptoms persist, call a physician.
- In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes.
Call a physician immediately.
First treatment with calcium gluconate paste.

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- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Call a physician immediately.
- If swallowed : Rinse mouth with water.
Immediately drink calcium solution (calcium tablets dissolved in water).
Do NOT induce vomiting.
Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : Erythema
Pain
- Risks : corrosive effects
Watch victim for several hours because of possible delayed signs of poisoning.
If swallowed, severe burns in the oral cavity and throat as well as danger of perforation of the digestive tract and stomach.

4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : First treatment with calcium gluconate paste.
Immediately drink calcium solution (calcium tablets dissolved in water).
For specialist advice physicians should contact the Poisons Information Service.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

- Specific hazards during fire-fighting : May form toxic gases on heating or in case of fire.

5.3 Advice for firefighters

- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
- Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Use water spray to cool unopened containers.

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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Wear personal protective equipment.
Evacuate personnel to safe areas.

6.2 Environmental precautions

Environmental precautions : Do not flush into surface water or sanitary sewer system.
Avoid subsoil penetration.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up : Ensure adequate ventilation.
Soak up with liquid binder (sand, kieselguhr, acid binder, universal binder).
Sweep up and shovel into suitable containers for disposal.

6.4 Reference to other sections

See chapter 8 and 13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Provide sufficient air exchange and/or exhaust in work rooms.
Have eye wash bottle or eye rinse ready at the work place.
Avoid contact with skin and eyes.
Do not breathe vapours, aerosols.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store in a place accessible by authorized persons only.
Store at room temperature in the original container.
Keep container tightly closed in a dry and well-ventilated place.

Further information on storage conditions : Avoid contact with metals.

Advice on common storage : Incompatible with bases.

Storage temperature : 0 - 40 °C

7.3 Specific end uses

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Specific use(s) : Treatment of metal surfaces.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components	CAS-No.	Value	Control parameters	Update	Basis
Nitric Acid	7697-37-2	STEL	1 ppm 2.6 mg/m ³	2006-02-09	2006/15/EC
Further information	: Indicative				
	7697-37-2	STEL	1 ppm 2.6 mg/m ³	2007-08-01	GB EH40
Magnesium fluoride	7783-40-6	TWA	2.5 mg/m ³	2000-06-16	2000/39/EC
Further information	: Indicative				
	7783-40-6	TWA	2.5 mg/m ³ Fluorine	2007-08-01	GB EH40
Further information	: 2: Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used Fluorine				
Hydrofluoric Acid	7664-39-3	TWA	1.8 ppm 1.5 mg/m ³	2000-06-16	2000/39/EC
Further information	: Indicative				
	7664-39-3	STEL	3 ppm 2.5 mg/m ³	2000-06-16	2000/39/EC
Further information	: Indicative				
	7664-39-3	TWA	1.8 ppm Fluorine 1.5 mg/m ³ Fluorine	2005-04-06	GB EH40

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Further information	:	Fluorine				
		7664-39-3	STEL	3 ppm Fluorine 2.5 mg/m ³ Fluorine	2005-04-06	GB EH40
Further information	:	Fluorine				

DNEL/DMEL

Nitric Acid

: End Use: DNEL, Workers
 Exposure routes: Inhalation
 Potential health effects: Acute local effects
 Value: 2.6 mg/m³

End Use: DNEL, Workers
 Exposure routes: Inhalation
 Potential health effects: Long-term local effects
 Value: 1.3 mg/m³

8.2 Exposure controls

Engineering measures

Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Respiratory protection : In case of insufficient ventilation wear suitable respiratory equipment.
 Recommended Filter type:
 B-P3

Hand protection : Viton (R)
 butyl-rubber
 Protective gloves complying with EN 374.
 The exact break through time can be obtained from the protective glove producer and this has to be observed.
 Protective gloves have to be replaced at the first sign of deterioration.

Eye protection : Tightly fitting safety goggles
 Eye protection (EN 166)

Skin and body protection : Chemical resistant protective clothing according to DIN EN 13034 (Type 6)

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Hygiene measures : Do not breathe vapours, aerosols.
Take off contaminated clothing and shoes immediately.
Avoid contact with the skin and the eyes.
Keep away from food, drink and animal feedingstuffs.
Wash hands before breaks and immediately after handling the product.

Protective measures : Avoid formation of aerosol.
Always have on hand a first-aid kit, together with proper instructions.
Handle in accordance with good industrial hygiene and safety practice.
Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower.

Environmental exposure controls

General advice : Do not flush into surface water or sanitary sewer system.
Avoid subsoil penetration.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : paste

Colour : colourless

Odour : stinging

Flash point : not applicable

Ignition temperature : not applicable

Autoignition temperature : not auto-flammable

pH : < 2
at
20 °C
(undiluted)

Melting point/range : not determined

Boiling point/boiling range : no data available

Vapour pressure : 23 hPa

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at 20 °C

Density : 1.25 g/cm³
at 20 °C

Water solubility : completely miscible

Viscosity, dynamic : not determined

9.2 Other information

Explosivity : no explosion risk

SECTION 10: Stability and reactivity

10.1 Reactivity

Contact with light-metals liberates hydrogen.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : Gives off hydrogen by reaction with metals.

10.4 Conditions to avoid

Conditions to avoid : To avoid thermal decomposition, do not overheat.

10.5 Incompatible materials

Materials to avoid : Incompatible with bases.

10.6 Hazardous decomposition products

Risk of decomposition. : Hydrogen fluoride

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity : Acute toxicity estimate: 79.37 mg/kg
Method: Calculation method

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Acute oral toxicity
Hydrofluoric Acid : Acute toxicity estimate: 5 mg/kg
Method: Converted acute toxicity point estimate

Acute inhalation toxicity : Acute toxicity estimate: 7.94 mg/l
vapour
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: 79.37 mg/kg
Method: Calculation method

Acute dermal toxicity
Hydrofluoric Acid : Acute toxicity estimate: 5 mg/kg
Method: Converted acute toxicity point estimate

Skin corrosion/irritation

Skin irritation : Causes severe burns.

Serious eye damage/eye irritation

Eye irritation : Causes serious eye damage.

Respiratory or skin sensitization

Sensitisation : no data available

Toxicology Assessment

Acute effects : If swallowed, severe burns in the oral cavity and throat as well as danger of perforation of the digestive tract and stomach., Toxic if swallowed or in contact with skin, Fatal in contact with skin., May cause respiratory irritation.

SECTION 12: Ecological information

12.1 Toxicity

Ecotoxicology studies for the product are not available.

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12.2 Persistence and degradability

Biodegradability : no data available

12.3 Bioaccumulative potential

Bioaccumulation : Bioaccumulation is unlikely.

12.4 Mobility in soil

Mobility : no data available

12.5 Results of PBT and vPvB assessment

This mixture does not contain substances considered to be persistent, bioaccumulating and toxic (PBT)., This mixture does not contain substances considered to be very persistent and very bioaccumulating (vPvB).

12.6 Other adverse effects

Additional ecological information : Do not flush into surface water or sanitary sewer system.
Avoid subsoil penetration.
Even leakage of small amounts in the subsoil can contaminate drinking water.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Dispose of as hazardous waste in compliance with local and national regulations.

Contaminated packaging : Dispose of as hazardous waste in compliance with local and national regulations.

Waste Code : Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

SECTION 14: Transport information

ADR

UN number : 2922
UN proper shipping name : CORROSIVE LIQUID, TOXIC, N.O.S. Hydrofluoric Acid, Nitric Acid
Transport hazard class(es) : 8
Packing group : II
Classification Code : CT1

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Hazard identification No : 86
Packing instruction (LQ) : LQ22
Limited Quantity (LQ) Inner : 1.00 L
Packaging
Labels : 8 (6.1)
Tunnel restriction code : (E)
Environmentally hazardous : no

IATA

UN number : 2922
Description of the goods : CORROSIVE LIQUID, TOXIC, N.O.S. Hydrofluoric Acid, Nitric Acid
Class : 8
Packing group : II
Labels : 8 (6.1)

IATA_C

Packing instruction (cargo aircraft) : 855
Environmentally hazardous : no

IATA_P

Packing instruction (passenger aircraft) : 851
Environmentally hazardous : no

IMDG

UN number : 2922
Description of the goods : CORROSIVE LIQUID, TOXIC, N.O.S. Hydrofluoric Acid, Nitric Acid
Class : 8
Packing group : II
Labels : 8 (6.1)
EmS Number 1 : F-A
EmS Number 2 : S-B
Marine pollutant : no

RID

UN number : 2922
Description of the goods : CORROSIVE LIQUID, TOXIC, N.O.S. Hydrofluoric Acid , Nitric Acid
Transport hazard class(es) : 8
Packing group : II
Classification Code : CT2
Hazard identification No : 86
Labels : 8 (6.1)
Packing instruction (LQ) : LQ22
Environmentally hazardous : no

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SECTION 15: Regulatory information

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

Candidate List of Substances of Very High Concern for Authorisation : This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).

Water contaminating class (Germany) : WGK 2 water endangering
VWVWS A4

Other regulations : The product is classified and labelled in accordance with EC directives or respective national laws.
Regional or national implementations of GHS may not implement all hazard classes and categories.

15.2 Chemical Safety Assessment

A Chemical Safety Assessment has been carried out for one or more substance(s) of the mixture. For the lead substance(s) in the mixture, there is no exposure scenario available. The necessary safety - related information is stated in the first 16 sections. For a mixture it is not mandatory to include an exposure scenario in the material safety data sheet.

SECTION 16: Other information

Full text of R-phrases referred to under sections 2 and 3

R 8	Contact with combustible material may cause fire.
R23/24/25	Toxic by inhalation, in contact with skin and if swallowed.
R26/27/28	Very toxic by inhalation, in contact with skin and if swallowed.
R35	Causes severe burns.
R36/37/38	Irritating to eyes, respiratory system and skin.
R37	Irritating to respiratory system.

Full text of H-Statements referred to under sections 2 and 3.

H272	May intensify fire; oxidiser.
H300	Fatal if swallowed.
H301	Toxic if swallowed.
H301 + H331	Toxic if swallowed or if inhaled
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.

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Full text of Notas referred to under section 3

Nota B Some substances (acids, bases, etc.) are placed on the market in aqueous solutions at various concentrations and, therefore, these solutions require different labelling since the hazards vary at different concentrations. In Annex I entries with Note B have a general designation of the following type: nitric acid ...%. In this case the manufacturer or any other person who markets such a substance in aqueous solution must state the percentage concentration of the solution on the label. Example: nitric acid 45 %. Unless otherwise stated, it is assumed that the percentage concentration is calculated on a weight/weight basis. The use of additional data (e.g. specific gravity, degrees Baumé) or descriptive phrases (e.g. fuming or glacial) is permissible.

Further information

The information provided is based on our current knowledge and experience and apply to the product as delivered. Regarding the product properties, these are not guaranteed. The delivery of this safety datasheet does not free the recipient of the product from his own responsibility to follow the relevant rules and regulations concerning this product.