

# BATCH No. - 1431659/1431660 26-08-14

## SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

SUPPLIED BY ELMER WALLACE LTD

**Chemetall**  
expect more<sup>+</sup>

### ANTOX 71 E PLUS

Version: 1.2

Revision Date 13.09.2012

Print Date 13.03.2013

#### 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.

## ANTOX 71 E PLUS

Version: 1.2

Revision Date 13.09.2012

Print Date 13.03.2013

### 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)

**ANTOX 71 E PLUS**

Version: 1.2

Revision Date 13.09.2012

Print Date 13.03.2013

Hazard pictograms :



Toxic



Corrosive

R-phrases(s) :

R23/24/25

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

R35

Causes severe burns.

R37

Irritating to respiratory system.

S-phrases(s) :

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

**ANTOX 71 E PLUS**

Version: 1.2

Revision Date 13.09.2012

Print Date 13.03.2013

	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.

## ANTOX 71 E PLUS

Version: 1.2

Revision Date 13.09.2012

Print Date 13.03.2013

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.

## ANTOX 71 E PLUS

Version: 1.2

Revision Date 13.09.2012

Print Date 13.03.2013

### 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

**ANTOX 71 E PLUS**

Version: 1.2

Revision Date 13.09.2012

Print Date 13.03.2013

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 <sup>3</sup>	2006-02-09	2006/15/EC
Further information	: Indicative				
	7697-37-2	STEL	1 ppm 2.6 mg/m <sup>3</sup>	2007-08-01	GB EH40
Magnesium fluoride	7783-40-6	TWA	2.5 mg/m <sup>3</sup>	2000-06-16	2000/39/EC
Further information	: Indicative				
	7783-40-6	TWA	2.5 mg/m <sup>3</sup> 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 <sup>3</sup>	2000-06-16	2000/39/EC
Further information	: Indicative				
	7664-39-3	STEL	3 ppm 2.5 mg/m <sup>3</sup>	2000-06-16	2000/39/EC
Further information	: Indicative				
	7664-39-3	TWA	1.8 ppm Fluorine 1.5 mg/m <sup>3</sup> Fluorine	2005-04-06	GB EH40

**ANTOX 71 E PLUS**

Version: 1.2

Revision Date 13.09.2012

Print Date 13.03.2013

Further information	:	Fluorine				
		7664-39-3	STEL	3 ppm Fluorine 2.5 mg/m <sup>3</sup> 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/m<sup>3</sup>

End Use: DNEL, Workers  
Exposure routes: Inhalation  
Potential health effects: Long-term local effects  
Value: 1.3 mg/m<sup>3</sup>

**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)



# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**Chemetall**  
expect more<sup>+</sup>

## ANTOX 71 E PLUS

Version: 1.2

Revision Date 13.09.2012

Print Date 13.03.2013

**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

## ANTOX 71 E PLUS

Version: 1.2

Revision Date 13.09.2012

Print Date 13.03.2013

at 20 °C

Density : 1.25 g/cm<sup>3</sup>  
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

## ANTOX 71 E PLUS

Version: 1.2

Revision Date 13.09.2012

Print Date 13.03.2013

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.

## ANTOX 71 E PLUS

Version: 1.2

Revision Date 13.09.2012

Print Date 13.03.2013

### 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

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## ANTOX 71 E PLUS

Version: 1.2

Revision Date 13.09.2012

Print Date 13.03.2013

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

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**Chemetall**  
expect more<sup>+</sup>

## ANTOX 71 E PLUS

Version: 1.2

Revision Date 13.09.2012

Print Date 13.03.2013

### 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.

## ANTOX 71 E PLUS

Version: 1.2

Revision Date 13.09.2012

Print Date 13.03.2013

### 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.