# Safety Data Sheet
## ANTOX 73 E PLUS



## 1. Identification

### Product identifier used on the label

# ANTOX 73 E PLUS

### Recommended use of the chemical and restriction on use

Recommended use*: Treatment of metal surfaces.
Unsuitable for use: None known

* The “Recommended use” identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

### Details of the supplier of the safety data sheet

Company:
Chemetall GmbH
Trakehner Straße, 3
60487, Frankfurt am Main
Germany
+49(0)69 7165-0
sds.global-chemetall@basf.com

Contact address:
Chemetall Canada Limited.
1 Kenview Blvd. Unit 110
Brampton, ON L6T 5E6
Canada
Telephone: +1 905 791-1628
E-mail address: sds.na-chemetall@basf.com

### Emergency telephone number

CHEMTREC: 1-800-424-9300
BASF HOTLINE: (800) 454-COPE (2673)

Canada
CANUTEC (24 H)
TEL. (613)996-6666

### Other means of identification

## 2. Hazards Identification

**According to Hazardous Products Regulations (HPR) (SOR/2015-17)**

### Classification of the product

| | | |
|---|---|---|
| Acute Tox. | 3 (oral) | Acute toxicity |
| Acute Tox. | 2 (dermal) | Acute toxicity |
| Acute Tox. | 3 (Inhalation - vapour) | Acute toxicity |
| Skin Corr./Irrit. | 1 | Skin corrosion/irritation |
| Eye Dam./Irrit. | 1 | Serious eye damage/eye irritation |
| Met. Corr. | 1 | Corrosive to metals |

### Label elements

Pictogram:

Signal Word:
Danger

Hazard Statement:

| | |
|---|---|
| H314 | Causes severe skin burns and eye damage. |
| H310 | Fatal in contact with skin. |
| H331 | Toxic if inhaled. |
| H301 | Toxic if swallowed. |
| H290 | May be corrosive to metals. |

Precautionary Statements (Prevention):

| | |
|---|---|
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P261 | Avoid breathing dust/fume/gas/mist/vapours/spray. |
| P260 | Do not breathe dust or mist. |
| P270 | Do not eat, drink or smoke when using this product. |
| P262 | Do not get in eyes, on skin, or on clothing. |
| P234 | Keep only in original packaging. |
| P264 | Wash with plenty of water and soap thoroughly after handling. |

Precautionary Statements (Response):

| | |
|---|---|
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P304 + P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| P303 + P361 + P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. |
| P301 + P310 | IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. |
| P301 + P330 + P331 | IF SWALLOWED: rinse mouth. Do NOT induce vomiting. |
| P310 | Immediately call a POISON CENTER or doctor/physician. |
| P330 | Rinse mouth. |
| P363 | Wash contaminated clothing before reuse. |
| P390 | Absorb spillage to prevent material damage. |
| P302 + P352 | IF ON SKIN: Wash with plenty of soap and water. |
| P361 + P364 | Take off immediately all contaminated clothing and wash it before reuse. |

Precautionary Statements (Storage):

| | |
|---|---|
| P403 + P233 | Store in a well-ventilated place. Keep container tightly closed. |
| P406 | Store in corrosive resistant container with a resistant inner liner. |
| P405 | Store locked up. |

Precautionary Statements (Disposal):

| | |
|---|---|
| P501 | Dispose of contents/container to hazardous or special waste collection point. |

### Hazards not otherwise classified

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

## 3. Composition / Information on Ingredients

**According to Hazardous Products Regulations (HPR) (SOR/2015-17)**

| CAS Number | Weight % | Chemical name |
|---|---|---|
| 7664-39-3 | >= 5.0 - < 7.0% | Hydrofluoric acid |
| 7783-40-6 | >= 5.0 - < 7.0% | magnesium fluoride |
| 7697-37-2 | >= 20.0 - < 25.0% | Nitric acid |

The product contains:

Hydrofluoric acid

## 4. First-Aid Measures

### Description of first aid measures

**General advice:**
Immediately remove contaminated clothing. Remove affected person from danger area. Keep warm, calm and covered up. First aid personnel should pay attention to their own safety. Symptoms of poisoning may occur even after several hours, continue medical observation for at least 48 hours after the accident. Show container, label and/or safety data sheet to physician.

**If inhaled:**
Remove affected person from danger area. Fresh air. Immediate medical attention required.

**If on skin:**
Remove contaminated clothing immediately and clean before re-use or dispose it if necessary. Flush with copious amounts of water for at least 15 minutes. Apply calcium gluconate gel. Immediate medical attention required.

**If in eyes:**
Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist. Immediate medical attention required.

**If swallowed:**
Immediately rinse mouth and then drink milk or a magnesium hydroxide/calcium carbonate suspension, do not induce vomiting, seek medical attention. Do not induce vomiting. Summon medical aid without delay.

### Most important symptoms and effects, both acute and delayed

Symptoms: Additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11.
Hazards: Symptoms of poisoning may only appear after several hours. May cause severe burns of the mouth and throat if orally ingested, as well as a danger of perforation of the oesophagus and the stomach.

### Indication of any immediate medical attention and special treatment needed

Note to physician
Antidote: Administration of calcium gluconate.

## 5. Fire-Fighting Measures

### Extinguishing media

Suitable extinguishing media:
carbon dioxide, dry powder, alcohol-resistant foam, water spray

Unsuitable extinguishing media for safety reasons:
water jet

### Special hazards arising from the substance or mixture

Hazards during fire-fighting:
fluorinated compounds, nitrogen oxides

### Advice for fire-fighters

Protective equipment for fire-fighting:
Appropriate breathing apparatus may be required.

**Further information:**
Cool closed containers in the vicinity of the source of fire. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations. Product itself is non-combustible; fire extinguishing method of surrounding areas must be considered. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Use personal protective clothing. Advice on product handling can be found in sections 7 and 8 of this safety data sheet.

### Environmental precautions

Do not allow to enter drains or waterways. Do not discharge into the subsoil/soil. If the product enters drains or sewers, the local water company should be contacted immediately; in the case of contamination of streams, rivers or lakes, the Environment Agency.

### Methods and material for containment and cleaning up

For large amounts: Use chemical neutralizing agents.
Ensure adequate ventilation. Pick up with inert absorbent material (e.g. sand, earth etc.). Take up mechanically and collect in suitable container (adequately labelled) for disposal.

## 7. Handling and Storage

### Precautions for safe handling

Do not return residues to the storage containers. Provide good ventilation of working area (local exhaust ventilation if necessary). Avoid inhalation of vapour and spray mist. The workplace should be equipped with an emergency shower and eye-rinsing facility. Avoid contact with skin and eyes. Keep away from food, drink and animal feeding stuffs. Warn users about safety measures and precautions to prevent accidents.

Protection against fire and explosion:
The substance/product is non-combustible. The relevant fire protection measures should be noted.

### Conditions for safe storage, including any incompatibilities

Segregate from bases.

Suitable materials for containers: High density polyethylene (HDPE), Low density polyethylene (LDPE), Polyethylenetherephtalate (PET), Polypropylene (PP)

Further information on storage conditions: The entrance to storage rooms is to be granted only to appropriately trained personnel. Keep only in the original container. Keep in a cool, well-ventilated place. Avoid direct sunlight. avoid contact with metals

Storage stability:
Storage temperature: 0 - 40 °C
Protect from temperatures below: 0 °C
Protect from temperatures above: 40 °C

## 8. Exposure Controls/Personal Protection

**Components with occupational exposure limits**

| | | |
|---|---|---|
| Nitric acid | OSHA PEL | PEL 2 ppm 5 mg/m3 ; STEL value 4 ppm 10 mg/m3 ; TWA value 2 ppm 5 mg/m3 ; |
| | ACGIH TLV | TWA value 2 ppm ; STEL value 4 ppm ; |
| Hydrofluoric acid | OSHA PEL | TWA value 3 ppm (fluorine (F)); STEL value 6 ppm (fluorine (F)); TWA value 3 ppm ; |
| | ACGIH TLV | TWA value 0.5 ppm (fluorine (F)); CLV 2 ppm (fluorine (F)); Skin Designation (fluorine (F)); The substance can be absorbed through the skin. |
| magnesium fluoride | OSHA PEL | PEL 2.5 mg/m3 (fluorine (F)); TWA value 2.5 mg/m3 (fluorine (F)); TWA value 2.5 mg/m3 dust ; |
| | ACGIH TLV | TWA value 2.5 mg/m3 (fluorine (F)); |

**Advice on system design:**
Use only in well-ventilated areas.

**Personal protective equipment**

**Respiratory protection:**
Self-contained breathing apparatus.

**Hand protection:**
polyvinylchloride (Pylox), chloroprene rubber (Neoprene), Suitable chemical resistant safety gloves (EN 374) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm) etc., Further information on penetration time is available from the manufacturer of the glove., The protection glove should be tested for its specific suitability (e.g. mechanical strength, product compatibility, anti-static properties)., The gloves should be replaced immediately in case of damage or signs of wear. It is recommended to use preventative skin protection (skin cream).

**Eye protection:**
Tightly fitting safety goggles (splash goggles) (e.g. EN 166)

**Body protection:**
Chemical resistant protective clothing according to DIN EN 13034 (Type 6)

**General safety and hygiene measures:**
Handle in accordance with good industrial hygiene and safety practice. Eye wash fountains and safety showers must be easily accessible. Avoid contact with the skin, eyes and clothing. Take off immediately all contaminated clothing. Keep away from food, drink and animal feeding stuffs. Hands and/or face should be washed before breaks and at the end of the shift.

## 9. Physical and Chemical Properties

| | | |
|---|---|---|
| Form: | viscous | |
| Odour: | pungent | |
| Colour: | colourless | |
| pH value: | < 2.0<br>( 20 °C)<br>(undiluted) | |
| Melting point: | not determined | |
| onset of boiling: | not determined | |
| Flash point: | not applicable | |
| Flammability: | not applicable | |
| Lower explosion limit: | not determined | |
| Autoignition: | not determined | |
| Vapour pressure: | ( 20 °C)<br>not determined | |
| Density: | 1.210 g/cm3<br>( 20 °C) | (DIN 51757) |
| Self-ignition temperature: | not self-igniting | |
| Viscosity, dynamic: | not determined | |
| Solubility in water: | completely miscible | |
| Miscibility with water: | miscible | |

## 10. Stability and Reactivity

### Reactivity
No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals:
Corrosive effect on metals.

Oxidizing properties:
not fire-propagating

### Chemical stability
The product is stable if stored and handled as prescribed/indicated.

### Possibility of hazardous reactions
In aqueous solution, evolves hydrogen on contact with metals.

### Conditions to avoid
Protect from sunlight.

### Incompatible materials
glass, metal, bases

### Hazardous decomposition products

Decomposition products:
When exposed to high temperatures hazardous decomposition products such as carbon monoxide, carbon dioxide, smoke, oxides of nitrogen may be produced., No hazardous decomposition products if stored and handled as prescribed/indicated.

## 11. Toxicological information

### Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

### Acute Toxicity/Effects

Oral
Type of value: ATE
Value: 100.0000 mg/kg

Inhalation
Type of value: ATE
Value: 3.0000 mg/l
Determined for vapor

Dermal
Type of value: ATE
Value: 50.0000 mg/kg

### Chronic Toxicity/Effects

### Symptoms of Exposure

Additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11.

## 12. Ecological Information

### Bioaccumulative potential

Bioaccumulation potential
No data available.

### Mobility in soil

Assessment transport between environmental compartments
No data available.

## 13. Disposal considerations

**Waste disposal of substance:**
Observe national and local legal requirements.

**Container disposal:**
Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.

## 14. Transport Information

**Land transport**
TDG

| | |
|---|---|
| Hazard class: | 8 |
| Packing group: | II |
| ID number: | UN 2922 |
| Hazard label: | 8, 6.1 |
| Proper shipping name: | CORROSIVE LIQUID, TOXIC, N.O.S. (contains HYDROFLUORIC ACID, NITRIC ACID) |

**Sea transport**
IMDG

| | |
|---|---|
| Hazard class: | 8 |
| Packing group: | II |
| ID number: | UN 2922 |
| Hazard label: | 8, 6.1 |
| Marine pollutant: | NO |
| Proper shipping name: | CORROSIVE LIQUID, TOXIC, N.O.S. (contains HYDROFLUORIC ACID, NITRIC ACID) |

**Air transport**
IATA/ICAO

| | |
|---|---|
| Hazard class: | 8 |
| Packing group: | II |
| ID number: | UN 2922 |
| Hazard label: | 8, 6.1 |
| Proper shipping name: | CORROSIVE LIQUID, TOXIC, N.O.S. (contains HYDROFLUORIC ACID, NITRIC ACID) |

## 15. Regulatory Information

**Federal Regulations**

**Registration status:**
Chemical DSL, CA released / listed

**NFPA Hazard codes:**
Health: 3 Fire: 0 Reactivity: 0 Special:

## 16. Other Information

**SDS Prepared by:**
Chemetall (now part of BASF Group) NA Product Regulations
SDS Prepared on: 2019/10/04

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

END OF DATA SHEET

# Safety Data Sheet
## ANTOX 73 E PLUS



## 1. Identification

### Product identifier used on the label

# ANTOX 73 E PLUS

### Recommended use of the chemical and restriction on use

Recommended use*: Treatment of metal surfaces.
Unsuitable for use: None known

* The “Recommended use” identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

### Details of the supplier of the safety data sheet

Company:
Chemetall GmbH
Trakehner Straße, 3
60487, Frankfurt am Main
Germany
+49(0)69 7165-0
sds.global-chemetall@basf.com

Contact address:
Chemetall Canada Limited.
1 Kenview Blvd. Unit 110
Brampton, ON L6T 5E6
Canada
Telephone: +1 905 791-1628
E-mail address: sds.na-chemetall@basf.com

### Emergency telephone number

CHEMTREC: 1-800-424-9300
BASF HOTLINE: (800) 454-COPE (2673)

Canada
CANUTEC (24 H)
TEL. (613)996-6666

### Other means of identification

## 2. Hazards Identification

**According to Hazardous Products Regulations (HPR) (SOR/2015-17)**

### Classification of the product

| | | |
|---|---|---|
| Acute Tox. | 3 (oral) | Acute toxicity |
| Acute Tox. | 2 (dermal) | Acute toxicity |
| Acute Tox. | 3 (Inhalation - vapour) | Acute toxicity |
| Skin Corr./Irrit. | 1 | Skin corrosion/irritation |
| Eye Dam./Irrit. | 1 | Serious eye damage/eye irritation |
| Met. Corr. | 1 | Corrosive to metals |

### Label elements

Pictogram:

Signal Word:
Danger

Hazard Statement:

| | |
|---|---|
| H314 | Causes severe skin burns and eye damage. |
| H310 | Fatal in contact with skin. |
| H331 | Toxic if inhaled. |
| H301 | Toxic if swallowed. |
| H290 | May be corrosive to metals. |

Precautionary Statements (Prevention):

| | |
|---|---|
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P261 | Avoid breathing dust/fume/gas/mist/vapours/spray. |
| P260 | Do not breathe dust or mist. |
| P270 | Do not eat, drink or smoke when using this product. |
| P262 | Do not get in eyes, on skin, or on clothing. |
| P234 | Keep only in original packaging. |
| P264 | Wash with plenty of water and soap thoroughly after handling. |

Precautionary Statements (Response):

| | |
|---|---|
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P304 + P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| P303 + P361 + P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. |
| P301 + P310 | IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. |
| P301 + P330 + P331 | IF SWALLOWED: rinse mouth. Do NOT induce vomiting. |
| P310 | Immediately call a POISON CENTER or doctor/physician. |
| P330 | Rinse mouth. |
| P363 | Wash contaminated clothing before reuse. |
| P390 | Absorb spillage to prevent material damage. |
| P302 + P352 | IF ON SKIN: Wash with plenty of soap and water. |
| P361 + P364 | Take off immediately all contaminated clothing and wash it before reuse. |

Precautionary Statements (Storage):

| | |
|---|---|
| P403 + P233 | Store in a well-ventilated place. Keep container tightly closed. |
| P406 | Store in corrosive resistant container with a resistant inner liner. |
| P405 | Store locked up. |

Precautionary Statements (Disposal):

| | |
|---|---|
| P501 | Dispose of contents/container to hazardous or special waste collection point. |

### Hazards not otherwise classified

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

## 3. Composition / Information on Ingredients

**According to Hazardous Products Regulations (HPR) (SOR/2015-17)**

| CAS Number | Weight % | Chemical name |
|---|---|---|
| 7664-39-3 | >= 5.0 - < 7.0% | Hydrofluoric acid |
| 7783-40-6 | >= 5.0 - < 7.0% | magnesium fluoride |
| 7697-37-2 | >= 20.0 - < 25.0% | Nitric acid |

The product contains:

Hydrofluoric acid

## 4. First-Aid Measures

### Description of first aid measures

**General advice:**
Immediately remove contaminated clothing. Remove affected person from danger area. Keep warm, calm and covered up. First aid personnel should pay attention to their own safety. Symptoms of poisoning may occur even after several hours, continue medical observation for at least 48 hours after the accident. Show container, label and/or safety data sheet to physician.

**If inhaled:**
Remove affected person from danger area. Fresh air. Immediate medical attention required.

**If on skin:**
Remove contaminated clothing immediately and clean before re-use or dispose it if necessary. Flush with copious amounts of water for at least 15 minutes. Apply calcium gluconate gel. Immediate medical attention required.

**If in eyes:**
Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist. Immediate medical attention required.

**If swallowed:**
Immediately rinse mouth and then drink milk or a magnesium hydroxide/calcium carbonate suspension, do not induce vomiting, seek medical attention. Do not induce vomiting. Summon medical aid without delay.

### Most important symptoms and effects, both acute and delayed

Symptoms: Additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11.
Hazards: Symptoms of poisoning may only appear after several hours. May cause severe burns of the mouth and throat if orally ingested, as well as a danger of perforation of the oesophagus and the stomach.

### Indication of any immediate medical attention and special treatment needed

Note to physician
Antidote: Administration of calcium gluconate.

## 5. Fire-Fighting Measures

### Extinguishing media

Suitable extinguishing media:
carbon dioxide, dry powder, alcohol-resistant foam, water spray

Unsuitable extinguishing media for safety reasons:
water jet

### Special hazards arising from the substance or mixture

Hazards during fire-fighting:
fluorinated compounds, nitrogen oxides

### Advice for fire-fighters

Protective equipment for fire-fighting:
Appropriate breathing apparatus may be required.

**Further information:**
Cool closed containers in the vicinity of the source of fire. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations. Product itself is non-combustible; fire extinguishing method of surrounding areas must be considered. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Use personal protective clothing. Advice on product handling can be found in sections 7 and 8 of this safety data sheet.

### Environmental precautions

Do not allow to enter drains or waterways. Do not discharge into the subsoil/soil. If the product enters drains or sewers, the local water company should be contacted immediately; in the case of contamination of streams, rivers or lakes, the Environment Agency.

### Methods and material for containment and cleaning up

For large amounts: Use chemical neutralizing agents.
Ensure adequate ventilation. Pick up with inert absorbent material (e.g. sand, earth etc.). Take up mechanically and collect in suitable container (adequately labelled) for disposal.

## 7. Handling and Storage

### Precautions for safe handling

Do not return residues to the storage containers. Provide good ventilation of working area (local exhaust ventilation if necessary). Avoid inhalation of vapour and spray mist. The workplace should be equipped with an emergency shower and eye-rinsing facility. Avoid contact with skin and eyes. Keep away from food, drink and animal feeding stuffs. Warn users about safety measures and precautions to prevent accidents.

Protection against fire and explosion:
The substance/product is non-combustible. The relevant fire protection measures should be noted.

### Conditions for safe storage, including any incompatibilities

Segregate from bases.

Suitable materials for containers: High density polyethylene (HDPE), Low density polyethylene (LDPE), Polyethylenetherephtalate (PET), Polypropylene (PP)

Further information on storage conditions: The entrance to storage rooms is to be granted only to appropriately trained personnel. Keep only in the original container. Keep in a cool, well-ventilated place. Avoid direct sunlight. avoid contact with metals

Storage stability:
Storage temperature: 0 - 40 °C
Protect from temperatures below: 0 °C
Protect from temperatures above: 40 °C

## 8. Exposure Controls/Personal Protection

**Components with occupational exposure limits**

| | | |
|---|---|---|
| Nitric acid | OSHA PEL | PEL 2 ppm 5 mg/m3 ; STEL value 4 ppm 10 mg/m3 ; TWA value 2 ppm 5 mg/m3 ; |
| | ACGIH TLV | TWA value 2 ppm ; STEL value 4 ppm ; |
| Hydrofluoric acid | OSHA PEL | TWA value 3 ppm (fluorine (F)); STEL value 6 ppm (fluorine (F)); TWA value 3 ppm ; |
| | ACGIH TLV | TWA value 0.5 ppm (fluorine (F)); CLV 2 ppm (fluorine (F)); Skin Designation (fluorine (F)); The substance can be absorbed through the skin. |
| magnesium fluoride | OSHA PEL | PEL 2.5 mg/m3 (fluorine (F)); TWA value 2.5 mg/m3 (fluorine (F)); TWA value 2.5 mg/m3 dust ; |
| | ACGIH TLV | TWA value 2.5 mg/m3 (fluorine (F)); |

**Advice on system design:**
Use only in well-ventilated areas.

**Personal protective equipment**

**Respiratory protection:**
Self-contained breathing apparatus.

**Hand protection:**
polyvinylchloride (Pylox), chloroprene rubber (Neoprene), Suitable chemical resistant safety gloves (EN 374) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm) etc., Further information on penetration time is available from the manufacturer of the glove., The protection glove should be tested for its specific suitability (e.g. mechanical strength, product compatibility, anti-static properties)., The gloves should be replaced immediately in case of damage or signs of wear. It is recommended to use preventative skin protection (skin cream).

**Eye protection:**
Tightly fitting safety goggles (splash goggles) (e.g. EN 166)

**Body protection:**
Chemical resistant protective clothing according to DIN EN 13034 (Type 6)

**General safety and hygiene measures:**
Handle in accordance with good industrial hygiene and safety practice. Eye wash fountains and safety showers must be easily accessible. Avoid contact with the skin, eyes and clothing. Take off immediately all contaminated clothing. Keep away from food, drink and animal feeding stuffs. Hands and/or face should be washed before breaks and at the end of the shift.

## 9. Physical and Chemical Properties

| | | |
|---|---|---|
| Form: | viscous | |
| Odour: | pungent | |
| Colour: | colourless | |
| pH value: | < 2.0<br>( 20 °C)<br>(undiluted) | |
| Melting point: | not determined | |
| onset of boiling: | not determined | |
| Flash point: | not applicable | |
| Flammability: | not applicable | |
| Lower explosion limit: | not determined | |
| Autoignition: | not determined | |
| Vapour pressure: | ( 20 °C)<br>not determined | |
| Density: | 1.210 g/cm3<br>( 20 °C) | (DIN 51757) |
| Self-ignition temperature: | not self-igniting | |
| Viscosity, dynamic: | not determined | |
| Solubility in water: | completely miscible | |
| Miscibility with water: | miscible | |

## 10. Stability and Reactivity

### Reactivity
No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals:
Corrosive effect on metals.

Oxidizing properties:
not fire-propagating

### Chemical stability
The product is stable if stored and handled as prescribed/indicated.

### Possibility of hazardous reactions
In aqueous solution, evolves hydrogen on contact with metals.

### Conditions to avoid
Protect from sunlight.

### Incompatible materials
glass, metal, bases

### Hazardous decomposition products

Decomposition products:
When exposed to high temperatures hazardous decomposition products such as carbon monoxide, carbon dioxide, smoke, oxides of nitrogen may be produced., No hazardous decomposition products if stored and handled as prescribed/indicated.

## 11. Toxicological information

### Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

### Acute Toxicity/Effects

Oral
Type of value: ATE
Value: 100.0000 mg/kg

Inhalation
Type of value: ATE
Value: 3.0000 mg/l
Determined for vapor

Dermal
Type of value: ATE
Value: 50.0000 mg/kg

### Chronic Toxicity/Effects

### Symptoms of Exposure

Additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11.

## 12. Ecological Information

### Bioaccumulative potential

Bioaccumulation potential
No data available.

### Mobility in soil

Assessment transport between environmental compartments
No data available.

## 13. Disposal considerations

**Waste disposal of substance:**
Observe national and local legal requirements.

**Container disposal:**
Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.

## 14. Transport Information

**Land transport**
TDG

| | |
|---|---|
| Hazard class: | 8 |
| Packing group: | II |
| ID number: | UN 2922 |
| Hazard label: | 8, 6.1 |
| Proper shipping name: | CORROSIVE LIQUID, TOXIC, N.O.S. (contains HYDROFLUORIC ACID, NITRIC ACID) |

**Sea transport**
IMDG

| | |
|---|---|
| Hazard class: | 8 |
| Packing group: | II |
| ID number: | UN 2922 |
| Hazard label: | 8, 6.1 |
| Marine pollutant: | NO |
| Proper shipping name: | CORROSIVE LIQUID, TOXIC, N.O.S. (contains HYDROFLUORIC ACID, NITRIC ACID) |

**Air transport**
IATA/ICAO

| | |
|---|---|
| Hazard class: | 8 |
| Packing group: | II |
| ID number: | UN 2922 |
| Hazard label: | 8, 6.1 |
| Proper shipping name: | CORROSIVE LIQUID, TOXIC, N.O.S. (contains HYDROFLUORIC ACID, NITRIC ACID) |

## 15. Regulatory Information

**Federal Regulations**

**Registration status:**
Chemical DSL, CA released / listed

**NFPA Hazard codes:**
Health: 3 Fire: 0 Reactivity: 0 Special:

## 16. Other Information

**SDS Prepared by:**
Chemetall (now part of BASF Group) NA Product Regulations
SDS Prepared on: 2019/10/04

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

END OF DATA SHEET