

Safety Data Sheet

according to WHS Regulations

Printing date 08.02.2021

Version number 8

Revision: 08.02.2021

Trade name: Avesta RedOne Pickling Spray 240

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hydrofluoric acid

- **Hazard statements**

- May be corrosive to metals.

- Toxic if swallowed.

- Fatal in contact with skin.

- Toxic if inhaled.

- Causes severe skin burns and eye damage.

- **Precautionary statements**

- Wear protective gloves/protective clothing/eye protection/face protection.

- IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

- Continue rinsing.

- Specific measures (see on this label).

- Store locked up.

- Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Other hazards**

- The mixture contains non hazardous sulphates which in the acidic environment can form sulphuric acid.

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

3 Composition and Information on Ingredients

- **Chemical characterisation: Mixtures**

- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

7697-37-2	nitric acid	12.5-25%
	<ul style="list-style-type: none"> ☠ Acute Tox. 2, H330 ☠ Met. Corr. 1, H290; Skin Corr. 1, H314 	
7664-39-3	hydrofluoric acid	2.5-5%
	<ul style="list-style-type: none"> ☠ Acute Tox. 2, H300; Acute Tox. 1, H310; Acute Tox. 2, H330 ☠ Skin Corr. 1A, H314 	

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

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.

- Remove breathing equipment only after contaminated clothing have been completely removed.

- In case of irregular breathing or respiratory arrest provide artificial respiration.

- Seek medical treatment.

- **After inhalation:** Supply fresh air or oxygen; call for doctor.

- **After skin contact:**

- Immediately wash with water and soap and rinse thoroughly.

- Seek immediate medical advice.

- After rinsing, 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.

- **After swallowing:**

- Do not induce vomiting; call for medical help immediately.

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Drink plenty of water and provide fresh air. Call for a doctor immediately.
Seek medical treatment.

- **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.

5 Fire Fighting Measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Suitable to surrounding conditions.
- **Special hazards arising from the substance or mixture**
Hydrogen fluoride (HF)
During heating or in case of fire poisonous gases are produced.
Nitrogen oxides (NOx)
Sulphur dioxide (SO2)
- **Advice for firefighters**
- **Protective equipment:** Wear fully protective suit.

6 Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures**
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Use respiratory protective device against the effects of fumes/dust/aerosol.
- **Environmental precautions:**
Dilute with plenty of water.
Not applicable
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 neutralising 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.

7 Handling and Storage

- **Handling:**
- **Precautions for safe handling**
Open and handle receptacle with care.
Prevent formation of aerosols.
Ensure that suitable extractors are available on processing machines
- **Information about fire - and explosion protection:** The product is not flammable.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Store only in the original receptacle.
Prevent any seepage into the ground.

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- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store under lock and key and with access restricted to technical experts or their assistants only.
Store in 5-35° C. Heat and sunlight will increase pressure and may lead to the bottle to swell.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls and personal protection

- **Control parameters**

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

7697-37-2 nitric acid

WES Short-term value: 10 mg/m³, 4 ppm
Long-term value: 5.2 mg/m³, 2 ppm

7664-39-3 hydrofluoric acid

WES Peak limitation: 2.6 mg/m³, 3 ppm

- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals.
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.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
- **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
Filter BE P3
- **Protection of hands:**
PVC or PE gloves



Protective gloves

Neoprene gloves

- **Penetration time of glove material**

≥ 8 h

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**

Safety glasses



Tightly sealed goggles

- **Body protection:**

Protective work clothing

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Use protective suit.

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9 Physical and Chemical Properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form: Liquid

Colour: Red

· Odour: Pungent

· Odour threshold: Not determined.

· pH-value at 20 °C: 0

· Flash point: Not applicable.

· Flammability (solid, gas): Not applicable.

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Product is not selfigniting.

· Explosive properties: Product does not present an explosion hazard.

· Explosion limits:

Lower: Not determined.

Upper: Not determined.

· Density at 20 °C: 1.25 g/cm³

· Relative density: Not determined.

· Vapour density: Not determined.

· Evaporation rate: Not determined.

· water: Fully miscible.

· Partition coefficient: n-octanol/water: Not determined.

· Dynamic at 20 °C: 10000 mPas

· Kinematic: Not determined.

· Solvent separation test:

Solids content: 10.0 %

· Other information: No further relevant information available.

10 Stability and Reactivity

· **Reactivity** No further relevant information available.

· Chemical stability

· Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

· Possibility of hazardous reactions

Reacts with various metals.

Develops corrosive gases/fumes.

When diluting, always add acid to water, never vice versa.

Reacts with alkali and metals.

· **Conditions to avoid** Attacks materials containing glass and silicate.

· **Incompatible materials:** No further relevant information available.

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- **Hazardous decomposition products:**

Nitrogen oxides
Hydrogen fluoride
Nitrogen oxides (NOx)

11 Toxicological Information

- **Information on toxicological effects**

- **Acute toxicity**

7664-39-3 hydrofluoric acid

Oral	Beräkningsmetod	6.67 mg/l (Human Being)
Dermal	Beräkningsmetod	6.67 mg/kg (Human Being)

- **LD/LC50 values relevant for classification:**

7697-37-2 nitric acid

Inhalative	LC50/4 h	1.56 mg/l (rat) (OECD 403)
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7664-39-3 hydrofluoric acid

Inhalative	LC50/1h	2240 ppm (rat) (Water free preparation)
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- **Primary irritant effect:**

- **Skin corrosion/irritation** Strong caustic effect on skin and mucous membranes.

- **Serious eye damage/irritation**

Strong caustic effect.
Strong irritant with the danger of severe eye injury.

- **Respiratory or skin sensitisation** No sensitising effects known.

- **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Toxic
Corrosive
Irritant

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

12 Ecological Information

- **Toxicity**

- **Aquatic toxicity:**

7697-37-2 nitric acid

LC50	100 mg/l (Fish) (96 H)
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- **Persistence and degradability** No further relevant information available.

- **Behaviour in environmental systems:**

- **Bioaccumulative potential** Not known to be bioaccumulative

- **Mobility in soil** No further relevant information available.

- **Additional ecological information:**

- **General notes:**

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Must not reach sewage water or drainage ditch undiluted or unneutralised.
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.

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- **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 together with household garbage. Do not allow product to reach sewage system.
Must be specially treated adhering to official regulations.
After prior treatment product has to be landfilled or incinerated adhering to the regulations pertaining to the disposal of especially hazardous waste.
- **Uncleaned packaging:**
- **Recommendation:**
Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.
Packagings that may not be cleansed are to be disposed of in the same manner as the product.
- **Recommended cleansing agents:**
Water, if necessary together with cleansing agents.
Diluted caustic solution.

14 Transport information

- | | |
|---|---|
| · ADG, IMDG, IATA | UN2922 |
| · UN proper shipping name
· ADG, IMDG, IATA | CORROSIVE LIQUID, TOXIC, N.O.S. (HYDROFLUORIC ACID, NITRIC ACID) |
| · Transport hazard class(es) | |
| · ADG | |
|  |  |
| · Class | 8 Corrosive substances. |
| · Label | 8+6.1 |
| · IMDG | |
|  |  |
| · Class | 8 Corrosive substances. |
| · Label | 8/6.1 |

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· IATA



· Class	8 Corrosive substances.
· Label	8 (6.1)
· Packing group	II
· ADG, IMDG, IATA	II
· Environmental hazards:	Not applicable.
· Special precautions for user	Warning: Corrosive substances.
· Hazard identification number (Kemler code):	86
· EMS Number:	F-A, S-B
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category	2
· Tunnel restriction code	E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	- UN 2922 CORROSIVE LIQUID, TOXIC, N.O.S. (HYDROFLUORIC ACID, NITRIC ACID), 8 (6.1), II

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.

- **Australian Inventory of Industrial Chemicals**

7697-37-2 | nitric acid

- **Standard for the Uniform Scheduling of Medicines and Poisons**

7697-37-2 | nitric acid

S5, S6

- **Australia: Priority Existing Chemicals**

None of the ingredients is listed.

- **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).

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- **Hazard pictograms**



GHS05 GHS06

- **Signal word** Danger

- **Hazard-determining components of labelling:**

nitric acid

hydrofluoric acid

- **Hazard statements**

May be corrosive to metals.

Toxic if swallowed.

Fatal in contact with skin.

Toxic if inhaled.

Causes severe skin burns and eye damage.

- **Precautionary statements**

Wear protective gloves/protective clothing/eye protection/face protection.

IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Specific measures (see on this label).

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Directive 2012/18/EU**

- **Named dangerous substances - ANNEX I** None of the ingredients is listed.

- **Seveso category** H2 ACUTE TOXIC

- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 50 t

- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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.

- **Additional information:**

.

- **Relevant phrases**

H290 May be corrosive to metals.

H300 Fatal if swallowed.

H310 Fatal in contact with skin.

H314 Causes severe skin burns and eye damage.

H330 Fatal if inhaled.

- **Training hints -**

- **Contact:**

- **Abbreviations and acronyms:**

NCEC - National Chemical Emergency Centre (=Carechem24)

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

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TRGS: Technische Regeln für Gefahrstoffe (Technical Rules for Dangerous Substances, BAuA, Germany)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Met. Corr. 1: Corrosive to metals – Category 1

Acute Tox. 3: Acute toxicity – Category 3

Acute Tox. 1: Acute toxicity – Category 1

Acute Tox. 2: Acute toxicity – Category 2

Skin Corr. 1: Skin corrosion/irritation – Category 1

Skin Corr. 1A: Skin corrosion/irritation – Category 1A

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

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

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