

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 18.08.2023

Version number 16 (replaces version 15)

Revision: 18.08.2023

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

- **1.1 Product identifier**
- **Trade name: Avesta Pickling Bath 305 1:1**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** Surface treatment of stainless and high alloyed steels
- **Uses advised against** Other materials than stainless and high alloyed steels
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
-  
voestalpine Böhler weldCare AB  
Stenåldersgatan 7  
213 76 Malmö, Sweden  
Tel: +46 (0)40 - 28 83 00  
[www.voestalpine.com/welding](http://www.voestalpine.com/welding)  
-
- **Further information obtainable from:**  
Mats Lundahl  
+46 (0) 40 28 83 00; [Mats.Lundahl@voestalpine.com](mailto:Mats.Lundahl@voestalpine.com)
- **1.4 Emergency telephone number:**

Carechem24

+44 1235 239670

## SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**  
Met. Corr. 1 H290 May be corrosive to metals.  
Acute Tox. 3 H301 Toxic if swallowed.  
Acute Tox. 2 H310 Fatal in contact with skin.  
Acute Tox. 2 H330 Fatal if inhaled.  
Skin Corr. 1A H314 Causes severe skin burns and eye damage.  
Eye Dam. 1 H318 Causes serious eye damage.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS05 GHS06

- **Signal word** Danger
- **Hazard statements**  
H290 May be corrosive to metals.  
H301 Toxic if swallowed.

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H310+H330 Fatal in contact with skin or if inhaled.

H314 Causes severe skin burns and eye damage.

**Precautionary statements**

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P284 Wear respiratory protection.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P311 Call a POISON CENTER/doctor.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P321 Specific treatment (Calciumgluconate gel).

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**Additional information:**

EUH071 Corrosive to the respiratory tract.

**2.3 Other hazards****Results of PBT and vPvB assessment**

PBT: Not applicable.

vPvB: Not applicable.

**SECTION 3: Composition/information on ingredients****3.2 Mixtures**

Description: Mixture of substances listed below with nonhazardous additions.

**Dangerous components:**

CAS: 7697-37-2 EINECS: 231-714-2 Index number: 007-004-00-1 Reg.nr.: 01-2119487297-23	nitric acid Ox. Liq. 2, H272 Acute Tox. 1, H330 Met. Corr. 1, H290; Skin Corr. 1A, H314 EUH071 Specific concentration limits: Ox. Liq. 2; H272: C ≥ 99 % Ox. Liq. 3; H272: 70 % ≤ C < 99 %	25-50%
CAS: 7664-39-3 EINECS: 231-634-8 Index number: 009-003-00-1 Reg.nr.: 01-2119458860-33	hydrofluoric acid Acute Tox. 2, H300; Acute Tox. 1, H310; Acute Tox. 2, H330 Skin Corr. 1A, H314 Specific concentration limits: Skin Corr. 1A; H314: C ≥ 7 % Skin Corr. 1B; H314: 1 % ≤ C < 7 % Eye Dam. 1; H318: C ≥ 1 % Eye Irrit. 2; H319: 0.1 % ≤ C < 1 %	5-12.5%

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

**SECTION 4: First aid measures****4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

**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.

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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.  
Drink plenty of water and provide fresh air. Call for a doctor immediately.  
Seek medical treatment.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Suitable to surrounding conditions.
- **5.2 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)
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear fully protective suit.

### SECTION 6: Accidental release measures

- **6.1 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.
- **6.2 Environmental precautions:**  
Dilute with plenty of water.  
Not applicable  
Do not allow to enter sewers/ surface or ground water.
- **6.3 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.
- **6.4 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.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**  
Open and handle receptacle with care.

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- Ensure that suitable extractors are available on processing machines
- **Information about fire - and explosion protection:** The product is not flammable.
- **7.2 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.
- **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.
- **7.3 Specific end use(s)** No further relevant information available.

## SECTION 8: Exposure controls/personal protection

### · 8.1 Control parameters

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

##### **7697-37-2 nitric acid**

IOELV Short-term value: 2.6 mg/m<sup>3</sup>, 1 ppm

##### **7664-39-3 hydrofluoric acid**

IOELV Short-term value: 2.5 mg/m<sup>3</sup>, 3 ppm  
Long-term value: 1.5 mg/m<sup>3</sup>, 1.8 ppm

- **Additional information:** The lists valid during the making were used as basis.

### · 8.2 Exposure controls

#### · **Individual protection measures, such as 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.

Do not inhale gases / fumes / aerosols.

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

#### · **Hand protection**



Protective gloves

Neoprene gloves

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- **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/face protection**

Safety glasses



Tightly sealed goggles

- **Body protection:**

Protective work clothing

Use protective suit.

## SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Physical state**

Fluid

- **Colour:**

Colourless

- **Odour:**

Pungent

- **Odour threshold:**

Not determined.

- **Flammability**

Not applicable.

- **Lower and upper explosion limit**

- **Lower:**

Not determined.

- **Upper:**

Not determined.

- **Flash point:**

Not applicable.

- **Decomposition temperature:**

Not determined.

- **pH**

Not determined.

- **Kinematic viscosity**

Not determined.

- **Dynamic at 20 °C:**

10,000 mPas

- **water:**

Fully miscible.

- **Partition coefficient n-octanol/water (log value)**

Not determined.

- **Density and/or relative density**

- **Density at 20 °C:**

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

- **Relative density**

Not determined.

- **Vapour density**

Not determined.

- **9.2 Other information**

- **Appearance:**

- **Form:**

Fluid

- **Important information on protection of health and environment, and on safety.**

- **Auto-ignition temperature:**

Product is not selfigniting.

- **Explosive properties:**

Product does not present an explosion hazard.

- **Evaporation rate**

Not determined.

- **Information with regard to physical hazard classes**

- **Explosives**

Void

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· <b>Flammable gases</b>	Void
· <b>Aerosols</b>	Void
· <b>Oxidising gases</b>	Void
· <b>Gases under pressure</b>	Void
· <b>Flammable liquids</b>	Void
· <b>Flammable solids</b>	Void
· <b>Self-reactive substances and mixtures</b>	Void
· <b>Pyrophoric liquids</b>	Void
· <b>Pyrophoric solids</b>	Void
· <b>Self-heating substances and mixtures</b>	Void
· <b>Substances and mixtures, which emit flammable gases in contact with water</b>	Void
· <b>Oxidising liquids</b>	Void
· <b>Oxidising solids</b>	Void
· <b>Organic peroxides</b>	Void
· <b>Corrosive to metals</b>	May be corrosive to metals.
· <b>Desensitised explosives</b>	Void

## SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions**  
Reacts with various metals.  
Develops corrosive gases/fumes.
- **10.4 Conditions to avoid** Attacks materials containing glass and silicate.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**  
Nitrogen oxides  
Hydrogen fluoride  
Nitrogen oxides (NOx)

## SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity**  
Toxic if swallowed.  
Fatal in contact with skin or if inhaled.

### 7664-39-3 hydrofluoric acid

Oral	Calculation method	6.67 mg/l (Human Being)
Dermal	Calculation method	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 2,240 ppm (rat) (Water free preparation)

- **Skin corrosion/irritation** Causes severe skin burns and eye damage.
- **Serious eye damage/irritation** Causes serious eye damage.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.
- **11.2 Information on other hazards**

· **Endocrine disrupting properties**

None of the ingredients is listed.

**SECTION 12: Ecological information**· **12.1 Toxicity**· **Aquatic toxicity:****7697-37-2 nitric acid**

LC50 100 mg/l (Fish) (96 H)

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** Not known to be bioaccumulative
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties**
- **12.7 Other adverse effects**
- **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.

**SECTION 13: Disposal considerations**· **13.1 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.

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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.

## SECTION 14: Transport information

- **14.2 UN proper shipping name**

- **ADR, IMDG, IATA**

UN2922

- **ADR, IMDG, IATA**

CORROSIVE LIQUID, TOXIC, N.O.S. (HYDROFLUORIC ACID, NITRIC ACID)

- **14.3 Transport hazard class(es)**

- **ADR**



- **Class**

8 Corrosive substances.

- **Label**

8+6.1

- **IMDG**



- **Class**

8 Corrosive substances.

- **Label**

8/6.1

- **IATA**



- **Class**

8 Corrosive substances.

- **Label**

8 (6.1)

- **14.4 Packing group**

- **ADR, IMDG, IATA**

II

- **14.5 Environmental hazards:**

Not applicable.

- **14.6 Special precautions for user**

Warning: Corrosive substances.

- **Hazard identification number (Kemler code):** 86

- **EMS Number:**

F-A,S-B

- **14.7 Maritime transport in bulk according to IMO instruments**

Not applicable.

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· **Transport/Additional information:**

· **ADR**

· **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

## SECTION 15: Regulatory information

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

No further relevant information available.

· **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

· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

· **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

None of the ingredients is listed.

· **REGULATION (EU) 2019/1148**

· **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**

7697-37-2	nitric acid	Limit value: >3-≤10 %	25-50%
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· **Annex II - REPORTABLE EXPLOSIVES PRECURSORS**

None of the ingredients is listed.

· **Regulation (EC) No 273/2004 on drug precursors**

None of the ingredients is listed.

· **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**

None of the ingredients is listed.

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- **National regulations:**
- **Other regulations, limitations and prohibitive regulations**  
*Enskildas förvärv, införsel innehav och användning av denna produkt omfattas av restriktioner enligt förordning (EU) 2019/1148. Alla misstänkta transaktioner och betydande stölder och försvinnanden ska rapporteras till polisen.*
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 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**
  - H272 May intensify fire; oxidiser.
  - 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.
  - EUH071 Corrosive to the respiratory tract.
- **Training hints -**
- **Date of previous version:** 03.01.2023
- **Version number of previous version:** 15
- **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
  - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  - 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)
  - 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
  - Ox. Liq. 2: Oxidizing liquids – Category 2
  - Met. Corr. 1: Corrosive to metals – Category 1
  - Acute Tox. 2: Acute toxicity – Category 2
  - Acute Tox. 3: Acute toxicity – Category 3
  - Acute Tox. 1: Acute toxicity – 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.**