

# Safety data sheet

## according to WHS Regulations

Printing date 19.01.2016



Version number 1

Revision: 19.01.2016

### 1 Identification

- **Product identifier**
- **Trade name: Avesta Pickling Bath 302**
- **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
- **Details of the supplier of the safety data sheet**
- **Manufacturer:**  
voestalpine Böhler Welding Nordic AB  
Lodgatan 14 SE-211 24 Malmö, Sweden  
Tel: +46 (0)40 - 28 83 00 Fax: +46 (0)40 - 93 94 24 [www.voestalpine.com/welding](http://www.voestalpine.com/welding)
- **Supplier and further information available from:**  
MidwayMetals Pty Ltd  
Woody Colling  
+61 403 059 629  
[woody@midwaymetals.co.au](mailto:woody@midwaymetals.co.au)
- **Emergency telephone number:** Tel: +44-8701906800 (English)  
Midway Metals Pty Ltd +61 7 3287 2811 (Aust EST Mo-Fr 7:30am to 5pm)

### 2 Hazard Identification

- **Classification of the substance or mixture**  
Acute Tox. 1 H310 Fatal in contact with skin.  
Acute Tox. 3 H331 Toxic if inhaled.  
Skin Corr. 1A H314 Causes severe skin burns and eye damage.  
Eye Dam. 1 H318 Causes serious eye damage.
- **Label elements -**
- **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).
- **Hazard pictograms**  

  
 GHS05 GHS06
- **Signal word** Danger
- **Hazard-determining components of labelling:**  
nitric acid  
hydrogen fluoride
- **Hazard statements**  
Fatal in contact with skin.  
Toxic if inhaled.  
Causes severe skin burns and eye damage.
- **Precautionary statements**  
Do not breathe mist/vapours/spray.  
IF ON SKIN (or hair): 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.  
Immediately call a POISON CENTER/doctor.  
Store locked up.  
Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.

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· **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	25-50%
	<ul style="list-style-type: none"> <li>⚠ Ox. Liq. 3, H272</li> <li>⚠ Met. Corr. 1, H290; Skin Corr. 1A, H314</li> </ul>	
7664-39-3	hydrogen fluoride	12.5-25%
	<ul style="list-style-type: none"> <li>⚠ Acute Tox. 2, H300; Acute Tox. 1, H310; Acute Tox. 2, H330</li> <li>⚠ Met. Corr. 1, H290; Skin Corr. 1A, H314</li> </ul>	

- **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.  
In case of unconsciousness place patient stably in side position for transportation.
- **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.
- **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**  
Nitrogen oxides (NOx)  
Hydrogen fluoride (HF)
- **Advice for firefighters**
- **Protective equipment:**  
Mouth respiratory protective device.  
Wear fully protective suit.

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### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
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.  
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Use neutralising agent.  
Dispose contaminated material as waste according to item 13.  
Pick up mechanically.  
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**  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.  
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.
- **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**

NES Short-term value: 10 mg/m<sup>3</sup>, 4 ppm  
Long-term value: 5.2 mg/m<sup>3</sup>, 2 ppm

**7664-39-3 hydrogen fluoride**

NES Peak limitation: 2.6 mg/m<sup>3</sup>, 3 ppm

- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.

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Store protective clothing separately.  
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 B

Filter P2

- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Penetration time of glove material**

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

- **Eye protection:**



Tightly sealed goggles

- **Body protection:**

Protective work clothing

Use protective suit.

## 9 Physical and chemical properties

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

- **General Information**

- **Appearance:**

**Form:** Liquid  
**Colour:** Colourless

- **Odour:** Pungent

- **Odour threshold:** Not determined.

- **pH-value at 20 °C:** 0

- **Flash point:** Not applicable.

- **Flammability (solid, gaseous):** Not applicable.

- **Decomposition temperature:** Not determined.

- **Self-igniting:** Product is not selfigniting.

- **Danger of explosion:** Product does not present an explosion hazard.

- **Explosion limits:**

**Lower:** Not determined.

**Upper:** Not determined.

**Relative density** Not determined.

**Vapour density** Not determined.

**Evaporation rate** Not determined.

**water:** Fully miscible.

- **Partition coefficient (n-octanol/water):** Not determined.

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- **Dynamic at 20 °C:** 10000 mPas
- **Kinematic:** Not determined.
- **Organic solvents:** 0.0 %
- **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.
- **Hazardous decomposition products:**  
Nitrogen oxides  
Hydrogen fluoride  
Nitrogen oxides (NOx)

### 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**

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

7664-39-3 hydrogen fluoride

Oral LD50 1276 mg/kg (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Strong caustic effect on skin and mucous membranes.
- **Serious eye damage/irritation** Strong caustic effect.
- **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:  
Corrosive  
Very toxic  
Danger through skin adsorption.  
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)** Nothing known

### 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **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.

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- **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.
- **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 be specially treated adhering to official regulations.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### 14 Transport information

- |                                     |   |
|-------------------------------------|---|
| · <b>UN-Number</b>                  |   |
| · <b>ADG, IMDG, IATA</b>            | UN2922  |
| · <b>UN proper shipping name</b>    |   |
| · <b>ADG</b>                        | 2922 CORROSIVE LIQUID, TOXIC, N.O.S. (HYDROFLUORIC ACID, NITRIC ACID)   |
| · <b>IMDG</b>                       | CORROSIVE LIQUID, TOXIC, N.O.S. (HYDROFLUORIC ACID, NITRIC ACID)  |
| · <b>IATA</b>                       | Corrosive liquids, toxic, n.o.s. (Hydrofluoric acid, Nitric acid)   |
| · <b>Transport hazard class(es)</b> |   |
| · <b>ADG</b>                        |   |
|                                     |   |
| · <b>Class</b>                      | 8 Corrosive substances.   |
| · <b>Label</b>                      | 8+6.1   |
| · <b>IMDG</b>                       |   |
|                                     |   |
| · <b>Class</b>                      | 8 Corrosive substances.   |
| · <b>Label</b>                      | 8/6.1   |
| · <b>Class</b>                      | 8 Corrosive substances.   |
| · <b>Label</b>                      | -   |
| · <b>Label</b>                      | 8 (6.1)   |

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· <b>Packing group</b> · <b>ADG, IMDG, IATA</b>	II
· <b>Environmental hazards:</b> · <b>Marine pollutant:</b>	No
· <b>Special precautions for user</b> · <b>Danger code (Kemler):</b> · <b>EMS Number:</b>	Warning: Corrosive substances. 86 F-A,S-B
· <b>Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	Not dangerous according to the above specifications.
· <b>ADG</b> · <b>Limited quantities (LQ)</b> · <b>Excepted quantities (EQ)</b>	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>Transport category</b> · <b>Tunnel restriction code</b>	2 E
· <b>IMDG</b> · <b>Limited quantities (LQ)</b> · <b>Excepted quantities (EQ)</b>	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>UN "Model Regulation":</b>	- 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 Chemical Substances**

7697-37-2 nitric acid

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

7697-37-2 nitric acid

S5, S6

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



GHS05 GHS06

- **Signal word** Danger
- **Hazard-determining components of labelling:**  
nitric acid  
hydrogen fluoride
- **Hazard statements**  
Fatal in contact with skin.  
Toxic if inhaled.  
Causes severe skin burns and eye damage.

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- **Precautionary statements**

Do not breathe mist/vapours/spray.

IF ON SKIN (or hair): 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.

Immediately call a POISON CENTER/doctor.

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 H1** ACUTE TOXIC

- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5 t

- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 20 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.

- **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.

- **Training hints -**

- **Department issuing MSDS:** QHES

- **Contact:** Mirna Castro

- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport 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)

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. 3: Oxidising Liquids, Hazard Category 3

Met. Corr. 1: Corrosive to metals, Hazard Category 1

Acute Tox. 2: Acute toxicity, Hazard Category 2

Acute Tox. 1: Acute toxicity, Hazard Category 1

Acute Tox. 3: Acute toxicity, Hazard Category 3

Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

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