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

1.1 Product identifier
- Trade name: Avesta RedOne Pickling Paste 140

1.2 Relevant identified uses of the substance or mixture and uses advised against
- 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
  Lodgatan 14
  211 24 Malmö, Sweden
  Tel: +46 (0)40 - 28 83 00
  www.voestalpine.com/welding

- Further information obtainable from: André Fasth
  +46 (0) 40 28 83 00; Andre.Fasth@voestalpine.com

1.4 Emergency telephone number:
- NCEC
  +44 1235 239670

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
- Classification according to Regulation (EC) No 1272/2008
  Acute Tox. 2 H300 Fatal if swallowed.
  Acute Tox. 2 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.

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-determining components of labelling:
  - nitric acid
  - hydrogen fluoride
- Hazard statements
  - H300+H310 Fatal if swallowed or in contact with skin.
  - H331 Toxic if inhaled.
  - H314 Causes severe skin burns and eye damage.
Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 07.09.2018
Version number 3
Revision: 09.10.2017

Trade name: Avesta RedOne Pickling Paste 140

Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P321 Specific treatment (see on this label).
P303+P361+P353 IF ON SKIN (or hair): 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.
P361+P364 Take off immediately all contaminated clothing and wash it before reuse.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards
Results of PBT and vPvB assessment

PBT: Not applicable.
vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures
Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:

<table>
<thead>
<tr>
<th>CAS</th>
<th>EINECS</th>
<th>Index number</th>
<th>Reg. nr.</th>
<th>Hazard phrases</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>7697-37-2</td>
<td>231-714-2</td>
<td>007-004-00-1</td>
<td>01-2119487297-23</td>
<td>Acute Tox. 2, H330; Met. Corr. 1, H290; Skin Corr. 1A, H314</td>
<td>12.5-25%</td>
</tr>
<tr>
<td>7664-39-3</td>
<td>231-634-8</td>
<td>009-003-00-1</td>
<td>01-2119458860-33</td>
<td>Acute Tox. 2, H300; Acute Tox. 1, H310; Acute Tox. 2, H330; Skin Corr. 1A, H314</td>
<td>5-12.5%</td>
</tr>
</tbody>
</table>

Nonhazardous components:

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

SECTION 4: First aid measures

Description of first aid measures
General information:
Immediately remove any clothing soiled by the product.
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 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.

4.2 Most important symptoms and effects, both acute and delayed
No further relevant information available.

(Contd. on page 3)
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
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.

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 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
      - WEL Short-term value: 2.6 mg/m³, 1 ppm
    - 7664-39-3 hydrogen fluoride
      - WEL Short-term value: 2.5 mg/m³, 3 ppm
      - Long-term value: 1.5 mg/m³, 1.8 ppm
  - **Additional information:** The lists valid during the making were used as basis.

- **8.2 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.
      - 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.
      - Use suitable respiratory protective device in case of insufficient ventilation.
      - Filter BE P3
  - **Protection of hands:**
    - Protective gloves
    - Neoprene gloves
    - **Penetration time of glove material**
      - \( \geq 8 \text{ h} \)
    - The exact breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed.
  - **Eye protection:**
    - Safety glasses
    - Face protection
  - **Body protection:**
    - Protective work clothing
    - Acid resistant protective clothing

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**SECTION 9: Physical and chemical properties**

- **9.1 Information on basic physical and chemical properties**
  - **General Information**
  - **Appearance:**
    - **Form:** Pasty
    - **Colour:** Red

(Contd. on page 5)
## 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
React with various metals.
Develops corrosive gases/fumes.

### 10.4 Conditions to avoid
No further relevant information available.

### 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 toxicological effects

#### Acute toxicity

<table>
<thead>
<tr>
<th>Substance</th>
<th>Oral Beräkningsmetod</th>
<th>Dermal Beräkningsmetod</th>
</tr>
</thead>
<tbody>
<tr>
<td>7664-39-3 hydrogen fluoride</td>
<td>6.67 mg/l (Human Being)</td>
<td>6.67 mg/kg (Human Being)</td>
</tr>
</tbody>
</table>
Fatal if swallowed or in contact with skin.
Toxic if inhaled.

- **LD/LC50 values relevant for classification:**
  - 7697-37-2 nitric acid
    - Inhalative LC50/4 h 1.56 mg/l (rat) (OECD 403)
  - 7664-39-3 hydrogen fluoride
    - Inhalative LC50/1h 2,240 ppm (rat) (Water free preparation)

- **Primary irritant effect:**
  - **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.

### 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.
  - **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.

- **12.5 Results of PBT and vPvB assessment**
  - **PBT:** Not applicable.
  - **vPvB:** Not applicable.
  - **12.6 Other adverse effects** No further relevant information available.

### 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.
European waste catalogue
11 01 05* pickling acids

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.

SECTION 14: Transport information

ADR, IMDG, IATA UN2922

14.2 UN proper shipping name
ADR 2922 CORROSIVE LIQUID, TOXIC, N.O.S. (HYDROFLUORIC ACID, NITRIC ACID)
IMDG, IATA CORROSIVE LIQUID, TOXIC, N.O.S. (HYDROFLUORIC ACID, NITRIC ACID)

14.3 Transport hazard class(es)
ADR

\[\text{Class} \quad 8\]
\[\text{Label} \quad 8+6.1\]

IMDG

\[\text{Class} \quad 8\]
\[\text{Label} \quad 8/6.1\]

IATA

\[\text{Class} \quad 8\]
\[\text{Label} \quad 8 \ (6.1)\]

14.4 Packing group
ADR, IMDG, IATA II

14.5 Environmental hazards:
Not applicable.

14.6 Special precautions for user
Warning: Corrosive substances.
Danger code (Kemler): 86
Trade name: Avesta RedOne Pickling Paste 140

<table>
<thead>
<tr>
<th>EMS Number:</th>
<th>F-A,S-B</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Transport/Additional information:</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADR</td>
</tr>
<tr>
<td>Limited quantities (LQ)</td>
</tr>
<tr>
<td>Excepted quantities (EQ)</td>
</tr>
<tr>
<td>Maximum net quantity per inner packaging: 30 ml</td>
</tr>
<tr>
<td>Maximum net quantity per outer packaging: 500 ml</td>
</tr>
<tr>
<td>Transport category</td>
</tr>
<tr>
<td>Tunnel restriction code</td>
</tr>
<tr>
<td>IMDG</td>
</tr>
<tr>
<td>Limited quantities (LQ)</td>
</tr>
<tr>
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<td>Maximum net quantity per inner packaging: 30 ml</td>
</tr>
<tr>
<td>Maximum net quantity per outer packaging: 500 ml</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>UN &quot;Model Regulation&quot;:</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN 2922 CORROSIVE LIQUID, TOXIC, N.O.S. (HYDROFLUORIC ACID, NITRIC ACID), 8 (6.1), II</td>
</tr>
</tbody>
</table>

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 |
| 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.

<table>
<thead>
<tr>
<th>Relevant phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>H290 May be corrosive to metals.</td>
</tr>
<tr>
<td>H300 Fatal if swallowed.</td>
</tr>
<tr>
<td>H310 Fatal in contact with skin.</td>
</tr>
<tr>
<td>H314 Causes severe skin burns and eye damage.</td>
</tr>
<tr>
<td>H330 Fatal if inhaled.</td>
</tr>
<tr>
<td>Training hints -</td>
</tr>
<tr>
<td>Contact: André Fasth</td>
</tr>
<tr>
<td>Abbreviations and acronyms:</td>
</tr>
<tr>
<td>NCEC - National Chemical Emergency Centre (=Carechem24)</td>
</tr>
<tr>
<td>ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)</td>
</tr>
<tr>
<td>IMDG: International Maritime Code for Dangerous Goods</td>
</tr>
</tbody>
</table>

(Contd. on page 9)
Trade name: Avesta RedOne Pickling Paste 140

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
Met. Corr. 1: Corrosive to metals – Category 1
Acute Tox. 1: Acute toxicity – Category 1
Acute Tox. 2: Acute toxicity – Category 2
Acute Tox. 3: Acute toxicity – Category 3
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.