

**1. IDENTIFICATION OF PREPARATION AND COMPANY****PRODUCT IDENTIFIER**

**Trade name:** Avesta Cleaner 401  
Avesta Classic Cleaner 401

**RELEVANT IDENTIFIED USES AND USES ADVISED AGAINST**

**Application and use:** Cleaning of stainless steel  
**Not to be used on** Other metals than stainless steel

**DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET**

**Manufacturer:** **Böhler Welding Group Nordic AB**  
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Telephone: +46 (0)40 288 300  
E-mail: [safety@avestafinishing.com](mailto:safety@avestafinishing.com)

**EMERGENCY TELEPHONE NUMBER**

+44 1 132 450 530 (Leeds)

**MISCELLANEOUS**

**Issue date:** **2013-08-16**  
**Version No:** 7  
**Valid from:** 2013-08-31

**2. HAZARDS IDENTIFICATION****CLASSIFICATION****Health hazard in case of accidental exposure (R-phrases):**

The product is classified as corrosive. Risk for injuries on skin and mucous membranes.

**Environmental effects:**

Will reduce pH in water. Must be neutralised. See also section 12.

**Physical and chemical risks:**

When heated phosphorus gases and hydrogen can be emitted.

**LABEL ELEMENTS****Hazard symbols:**

Corrosive

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**Risk phrases:**

R 34

**Safety phrases:**

S 1/2

S 26

S 28

S 36/37/39

S 45

**OTHER HAZARDS**

Not known

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**PREPARATION**

**Chemical identity:** Colourless acid solution with corrosive properties.

**INFORMATION ON IGREDIENTS**

CLASIFICACION ACCORDING TO REGULATION 67/548/EEG OR 1999/45/EG					
Hazardous components, chemical name, formula	CAS No.	EC No.	Contents weight-%	Hazard symbol/ Risk phrase*	
Phosphoric acid , H <sub>3</sub> PO <sub>4</sub>	7664-38-2	231-633-2	16	C, R34	
Alcohols, C11-14-iso-, C13-rich, ethoxylated	78330-21-9	-	3-5	Xn, R22, 41	
CLASIFICACION ACCORDING TO REGULATION (EG) no 1272/2008					
Hazardous components, chemical name, formula	CAS No.	EC No.	Contents weight-%	Hazard category	Hazard statements cod
Phosphoric acid , H <sub>3</sub> PO <sub>4</sub>	7664-38-2	231-633-2	16	1 1B	H290 H314
Alcohols, C11-14-iso-, C13-rich, ethoxylated	78330-21-9	-	3-5	1 4	H318 H302

\*The full texts of the phrases are shown in section 16.

Additional information Classification according to directive 67/548/EEC.

Symbols and risk phrases are for concentrated substances.

**4. FIRST AID MEASURES**

**DESCRIPTION OF FIRST AID MEASURES AND INDICATION OF IMMEDIATE AND SPECIAL TREATMENT NEEDED**

**Inhalation:**

Remove to fresh air. Keep victim lying down, quiet and warm. Rinse nose and mouth with water. Might require assistance with breathing. Seek medical care even if only slight discomfort occurs.

**Ingestion:**

Drink at once milk or water. Seek medical care.

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**Skin contact:**

Rinse immediately with plenty of water, seek medical care.

**Eye contact:**

Protect intact eye. Rinse immediately with plenty of water for at least 15 minutes and seek immediate medical care (eye specialist). Keep rinsing during transport.

**SYMPTOMS ACUTE AND DELAYED**

Not known

**5. FIRE FIGHTING MEASURES**

**EXTINGUISHING MEDIA**

The most appropriate media to extinguish surrounding fire is depending on what is burning.

**SPECIAL HAZARDS ARISING FROM THE MIXTURE**

**Chemical exposure risks caused by released gases/vapours:**

The Pickling Fluid will emit toxic fumes and phosphoric oxides when exposed to heat/fire.

**ADVICE FOR FIREFIGHTERS**

**Danger of fire/explosion:**

Fluid is non-flammable. Bottles close to fire should be removed or cooled with water.

**Protective clothing for firemen:**

Appropriate protective acid-resistant clothing should be used.

**Breathing protection:**

Gas mask with filter according to CEN (Central European Norms).

**How to clean or destroy soiled fire equipment:**

Thoroughly wash with water.

**6. ACCIDENTAL RELEASE MEASURES**

**PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES**

**Personal precautions:**

Avoid direct contact. If there is still a risk of direct contact or stench protect with some form of acid-resistant material. Wear eye protection, skin protection, rubber gloves and breathing apparatus. Keep working area well ventilated.

**ENVIRONMENTAL PRECAUTIONS**

**Spillage (water, air, soil):**

Prevent spillage from entering sewage or public waters or nature.

**METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP**

**Methods for cleaning up:**

Neutralise with Avesta Neutralising Agent or a strong alkaline compound i.e. slaked lime. Embank with sand. Arrange for pick up. Rinse with plenty of water.

Spillage should be picked up and disposed of in full compliance with federal, state and local regulations as acid waste.

**REFERENCE TO OTHER SECTIONS**

Handling and storage section 7, exposure control/personal protection section 8 and disposal considerations section 13.

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## 7. HANDLING AND STORAGE

### PRECAUTIONS FOR SAFE HANDLING

**Technical measures:**

Working place and methods should be worked out in order to avoid direct contact. Work and storage area should be well ventilated. A closed rinse water system with filtration and reuse of clear water is recommended.

**To prevent fire and explosion:**

Bottles close to fire should be removed or cooled with water.

**Precautions:**

Avoid fume generation and accumulation by using in a well-ventilated area. Use in areas having local exhaust and general ventilation.

Emergency eyewash and safety shower must be available at the working place.

### CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

**Technical measures:**

Storage room should be kept separate, cool, dry, well ventilated and closed to unauthorised persons.

**Incompatible products:**

Not applicable.

**Storage conditions:**

Keep containers securely closed when not in use and in an upright position. Store in areas where temperature remains between 0-30 °C at all times.

**Packaging materials:**

Package must be of acid resistant plastic material.

### SPECIFIC END USES

See section 1. Contact the manufacturer for more information.

## 8. EXPOSURE CONTROL/PERSONAL PROTECTION

### CONTROL PARAMETERS

**Phosphoric acid:**

EU: IOEL 1,0 mg/m<sup>3</sup> (8 hr), 2,0 mg/m<sup>3</sup> (15 min)

### EXPOSURE CONTROLS

**Respiratory protection:**

Gas mask with a filter according to CEN (Central European Norms)

**Hand protection:**

Acid resistant rubber gloves, i.e. Butyl and Nitrile rubber.

**Eye protection:**

Face shield.

**Skin and body protection:**

Rubber boots and acid resistant clothes, which covers all body parts exposed to splashes.

**Specific hygienic measures:**

Do not inhale fumes, avoid contact with eyes, skin and clothes. It is not allowed to eat, drink and smoke at workplace.

**Environmental exposure controls:** See section 6 and 7.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

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**INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES****Physical state (form, colour, smell) at 20°C:**

Transparent liquid with a slight smell.

**Boiling point:**

80-100°C

**Flash point / Explosion properties:**

Not applicable

**Specific temperatures:**

Solid-fluid 0°C, Fluid-gas 80-100°C

**Vapour pressure at 20°C:**

< 0.01 kPa

**pH:**

0,6 at 20°C

**Density:**

1.1 g/cm<sup>3</sup> at 20°C

**Solubility in water at 20°C:**

100 weight %

**10. STABILITY AND REACTIVITY****REACTIVITY**

Reacts vigorously with alkaline substances

**CHEMICAL STABILITY**

Stable under normal conditions.

**POSSIBILITY OF HAZARDOUS REACTIONS**

Polymerization will not occur

**CONDITIONS TO AVOID**

Avoid high temperatures, must not be exposed to direct sunshine. When heated, phosphoric gases will be emitted.

**INCOMPATIBLE MATERIALS**

Contact with alkaline compounds causes a heavy exothermic reaction with heat development.

**HAZARDOUS DECOMPOSITION PRODUCTS**

Will emit phosphoric gases and hydrogen gas.

**11. TOXICOLOGICAL INFORMATION****INFORMATION ON TOXICOLOGICAL EFFECTS****Acute toxicity**

LD<sub>50</sub> rat oral 1530 mg/kg (Phosphoric acid)

**Effects on the skin:**

Will irritate, burn and may cause wounds.

**Effects on the eyes:**

Fumes may cause irritation. Splashes can cause serious damage to the eye.

**After ingestion:**

May cause damage to mucous membranes, pain, vomiting and diarrhoea.

**Upon inhalation:**

Inhalation of fumes or mist might cause aches, cough and difficulty in breathing. Risk for pulmonary oedema.

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**OTHER RELEVANT INFORMATION**

**CMR-effects:**

Not known

**12. ECOLOGICAL INFORMATION**

**PERSISTENCE AND DEGRADABILITY**

No data

**BIOACCUMULATIVE POTENTIAL**

The product is not regarded as bioaccumulative.

**MOBILITY IN SOIL**

The product can hike down to the groundwater.

**RESULTS OF PBT AND vPvB ASSESSMENT**

Non-current

**OTHER ADVERSE EFFECTS**

The product is soluble in water and in its concentrated form will lower the pH of ground water.

**13. DISPOSAL CONSIDERATIONS**

**WASTE TREATMENT METHODS**

**Methods of disposal the product:**

Discarded product and related waste is hazardous waste. Alloting of EWC-code should be made on the basis of the source causing the waste.

Suggested EWC-code is 11 01 05\* Pickling acids.

**Waste from residues:**

Contaminated residues i.e. wastewater must be neutralised and heavy metals from the process should be removed and these constitute hazardous waste.

**Contaminated packing:**

Rinse with plenty of water.

**Additional information:**

Effluent must be separated and disposed of as acidic waste. A filtration system for rinse water is recommended.

Consult with your local authorized and licensed waste disposal agency and ministry of environment for instructions and procedures for approved waste disposal.

**14. TRANSPORT INFORMATION**

**UN-Classification No:**

3264

**UN PROPPER SHIPPING NAME**

CORROSIVE LIQUID, ACIDIC, INORGANIC N.O.S. (phosphoric acid)

**TRANSPORT HAZARD CLASS(ES)**

**Classification Code:**

C1

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**PACKING GROUP**

III

**ENVIRONMENTAL HAZARDS**

**IMDG (Sea):**

Class 8 EmS F-A, S-B

Marine Pollutant: No

**ADR/RID (road, rail):**

Class 8

Tunnel restriction code:

(E)

**IATA/DGR (air):**

Class 8

**ADDITIONAL INFORMATION**

The product is to be transported according to dangerous goods regulations.

**15. REGULATORY INFORMATION**

**SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS**

**Regulations:**

1907/2006/EC, 1272/2008/EC Table 3.1, 67/648/EEC, EWC 2000/532/EC

**Other regulations:**

IMDG

ADR/RID

IATA/DGR

**Chemical Safety Assessment:**

Has not been carried out for this product (or substances in the preparation).

**16. OTHER INFORMATION**

**CHANGES MADE SINCE LAST VERSION**

Information on dual classification of elements in section 3, explanation of the hazard classes referred to in section 16.

**TRAINING ADVICE**

The Avesta Welding "Handbook for the pickling and cleaning of stainless steel" and "Guidelines for Planning and Designing a Pickling Workshop".

**KEY LITERATURE REFERENCES AND SOURCES FOR DATA**

Standard Practice for cleaning stainless steel (ASTM-A-380),

International Standard ISO 11014-1

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**LIST OF RELEVANT R- AND S-PHRASES, HAZARD CATEGORIES AND STATEMENTS CODES AS WELL AS PRECAUTIONARY STATEMENTS IN SECTION 2 AND 3.****Risk phrases:****R 22:** Harmful if swallowed.**R 34:** Causes burns**R 41:** Risk of serious damages to eyes.**Hazard classes to the hazard categories and hazard statements codes****1/H290:** May be corrosive to metals**1B/H314:** Causes severe skin burns and eye damage**1/H318:** Causes serious eye damage**4/H302:** Harmful if swallowed**Safety phrases:****S 1/2:** Keep locked up and out of the reach of children.**S 26:** In case of contact with eyes rinse immediately with plenty of water and seek medical advice.**S 28:** After contact with skin, wash immediately with plenty of water or Avesta First Aid Spray.**S 36/37/39:** Wear suitable protective clothing, gloves and eye/face protection.**S 45:** In case of accident or if you feel unwell, seek medical advice immediately. Show the label where possible.

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