

# Material Safety Data Sheet

# Cleaner 401

## 1. IDENTIFICATION OF PREPARATION AND COMPANY

**Product identifier:** Transparent liquid  
**Trade name:** Avesta Classic Cleaner 401  
**Application and use:** Cleaning of stainless steel and aluminium  
**Issue date/No:** 2010-02-03, 1  
**Manufacturer:** **Böhler Welding Group Nordic AB**  
 Avesta Finishing Chemicals  
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**Emergency number:** +46-8-331 231

## 2. HAZARDS IDENTIFICATION

### Health hazard in case of accidental exposure (R-phrases):

Product is classified corrosive due to its measured pH-value 0.6. Risk for injuries on skin and mucous membranes. See also section 11.

### Environmental effects:

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

### Physical and chemical risks:

Can emit phosphorous gases and hydrogen gas when heated. See also section 5 and 10.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### Preparation

### Chemical nature:

Colourless Acid solution with corrosive properties.

| Hazardous components, chemical name, formula     | CAS No.    | EEC No.   | Contents weight-% | Hazard Symbol/ R-phrase* |
|--|------------|-----------|-------------------|--------------------------|
| Phosphoric acid , H <sub>3</sub> PO <sub>4</sub> | 7664-38-2  | 231-633-2 | 10-20             | C, R34                   |
| Alcohols, C11-14-iso-, C13-rich, ethoxylated     | 78330-21-9 | -         | 3-5               | Xn, R22, 41              |

\*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

**Measures to be taken immediately after the following ways of contact with cleaning agent.**



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### 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 inconvenience occur.

### Ingestion:

Drink at once, preferably milk or water. Do not induce vomiting. Seek medical care.

### Skin contact:

Rinse with water. Remove contaminated clothing. Seek medical care.

### Eye contact:

Rinse immediately with plenty of water for 15-30 minutes. Seek medical care. Keep rinsing during transport.

## 5. FIRE FIGHTING MEASURES

### Danger of fire/explosion:

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

### Extinguishing media:

Choose media depending on what is burning in the surroundings.

### Chemical exposure risks caused by the product itself:

The cleaner might be irritating at skin-contact. Released product should be neutralised with caustic soda.

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

The cleaner will emit toxic fumes of phosphoric oxides in the presence of heat/fire.

### Protective clothing for firemen:

Suitable protective clothing and breathing apparatus.

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

Thoroughly wash with water.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions:

Avoid direct contact. Wear eye- protection, skin-protection and rubber gloves. Keep working area well ventilated. See also section 7 and 8.

### Environmental precautions (water, air, soil):

Prevent spillage from entering sewage or public waters.

### 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 and decontamination:

Spillage should be picked up and disposed of in full compliance with federal, state and local regulations as acid waste. See also section 13.



## 7. HANDLING AND STORAGE

### Handling

**Technical measures:**

Working place and methods should be worked out in order to avoid direct contact. Keep working area well ventilated.

**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 working place.

### Storage

**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:**

Packaging material must be of acid resistant plastic material.

**Specific use:**

Contact manufacturer/supplier for more information.

## 8. EXPOSURE CONTROL/PERSONAL PROTECTION

**Exposure limits:**

Phosphoric acid LLV 1 mg/m<sup>3</sup> , STV 3 mg/m<sup>3</sup>

### Personal protective equipment

**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 cover 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.



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### Environmental exposure controls:

See section 6 and 7.

### 9. 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 %

#### Solubility in organic solvents:

Not applicable.

### 10. STABILITY AND REACTIVITY

#### Stability:

Stable under normal conditions, polymerization will not occur.

#### Conditions to avoid:

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

#### Material to avoid:

Alkaline compounds and water, will give an exothermal reaction, with heat development.

#### Hazardous decomposition products:

Will emit phosphoric gases and hydrogen gas.

### 11. TOXICOLOGICAL INFORMATION

#### Acute toxicity:

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

#### Local effects

##### 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.



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### After ingestion:

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

### Upon inhalation:

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

### CMR-effects:

Not known

## 12. ECOLOGICAL INFORMATION

### Environmental effects

#### Mobility:

The product in its concentrated form will lower the pH of ground water and may not be discharged into the clearwater system without pre-treatment. Product is soluble in water.

#### Persistence/degradability:

No data

#### Bioaccumulative potential:

The product is not regarded as bioaccumulative.

#### Results of PBT assessment:

See section 16.

#### Other adverse effects:

Not known

## 13. DISPOSAL CONSIDERATIONS

### Methods of disposal

#### Product:

Discarded product and related waste is hazardous waste. Allotting 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 to correct its pH-value to pH 6-11, and heavy metals resulting from the cleaning of stainless steel should be removed. Neutralise with Avesta Neutralising Agent or slaked lime.

#### Contaminated packing material:

Rinse with plenty of water.

#### Additional information:

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



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### International regulations (UN)

**UN-Classification No:**

3264

**Classification Code:**

C1

**Proper shipping name:**

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

**Packaging group:**

III

**IMDG (Sea):**

Class 8 EmS F-A, S-B

**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

### Regulations

**Hazard and safety information:**

According to handling of dangerous goods.

**Chemical Safety Assessment:**

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

**Contents:**

Phosphoric acid

**Hazard symbols:**



Corrosive

**Risk phrases:**

R 34 Causes burns

**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.

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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)

### Regulations:

KIFS 2005:7, (EG) 1272/2008, AFS 2005:17

## 16. OTHER INFORMATION

### Training advice:

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

### Recommended applications and restrictions:

Only for the cleaning of stainless steel (aluminium), not to be used on other metals. Basic information sources used to draw up the information cards: Standard Practice for cleaning stainless steel (ASTM-A-380), International Standard ISO 11014-11,

### The full texts of the R-phrases in section 3 are:

R22: Harmful if swallowed

R 34: Causes burns.

R 41: Risk of serious damage to eyes

### Changes made since last version:

New layout and doc number

s. 3 – Phosphoric acid concentration interval changed

s. 14 - Tunnel restriction code, reference to regulations removed

s. 15 – Regulations updated

