

Safety Data Sheet

Avesta Passivator 601

This Safety Data Sheet contains information to help users understand the potential hazards relating to this product and provides advice for risk management.

This information must be shown to or made available to those who may come into contact with the material or are responsible for the material. This Safety Data Sheet is prepared in accordance with GHS, as adopted by the UN Economic and Social Council (ECOSOC) in July 2003 and being implemented into the US under OSHA Hazard Communication Standard 29CFR1910.1200 and being implemented into Canada to meet the legal obligations under WHMIS (Workplace Hazardous Materials Information System).

Reference is also made to the current OSHA requirements, with classification to NFPA standards and also to the Canadian WHMIS Classification as part of transitional arrangements.

1. IDENTIFICATION OF PREPARATION AND COMPANY

Product identifier: Passivating agent for stainless steels

Trade name: Avesta Classic Passivating Agent 601
Avesta Passivator 601

Application and use: Passivating agent for stainless steels

Issue date: 2010-07-01, **1**

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In case of emergency call CHEMTREC: **1 (800) 424-9300**
In case of non-emergency assistance (800) 441-7343 or 716-827-4400

2. HAZARDS IDENTIFICATION

NFPA RATING: Health = 3 Flammability = 0 Reactivity = 0
HMIS RATING: Health = 3 Flammability = 0 Reactivity = 0
Classification WHMIS: Class E, Corrosive
Classification GHS: DANGER
Skin Corrosion, Category 1A
Causes severe skin burns and eye damage

Health hazard in case of accidental exposure : Causes severe burns with damage to skin and eyes.

Environmental effects: Passivation Fluid will reduce pH in water, but after dilution, will not be a major hazard to the environment. This is an inorganic material and will not be persistent in the environment. Local spills must be neutralised. See also section 12.
Physical and chemical risks: When heated nitrous gases can be developed. Only for treatment of stainless steel, not to be used on other metals.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Preparation

Chemical nature: Liquid with corrosive properties.

Hazardous components, chemical name, formula	CAS No.	Contents weight-%	WHMIS	Class (GHS)
Nitric acid, HNO ₃	7697-37-2	20-40	Class C, Oxidising material Category 1 Corrosive Class E, Corrosive	Category 3 Oxidising Category 1 Corrosive

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

Additional information:

Classification and phrases are for concentrated substances.

4. FIRST AID MEASURES

Measures to be taken immediately after the following exposure to this type of product.

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 minor exposure occurs.

Ingestion: If victim is conscious and alert, immediately give two glasses (250 ml) of cream, milk or water to drink. Thereafter 10-15 lime tablets dissolved in water. Do not induce vomiting. Get medical aid immediately.

Skin contact: Remove all contaminated clothing immediately. Wash off with plenty of soap and water. Always seek medical advice. Launder clothes before reuse.

Eye contact: Rinse immediately with plenty of water for at least 15 minutes. Keep eyelids apart. Seek immediate medical care (eye specialist). Keep rinsing during transport.

Information for medical care: Inform that the injury has been caused by contact with nitric acid solution.

5. FIRE FIGHTING MEASURES

Danger of fire/explosion: Fluid is non-flammable. In contact with metals hydrogen gas is formed in small quantities, which together with air can cause explosion. Containers close to fire should be removed or cooled with water.

Extinguishing media: Water, foam or dry powder. Use extinguishing media most appropriate for the surrounding fire.

Chemical exposure risks caused by the product itself: The Passivation Fluid will cause corrosive damage on skin-contact.

Chemical exposure risks caused by hazardous combustion products: The Passivation Fluid will emit toxic fumes and nitrous gases in the presence of heat/fire. Approach fire from upwind to avoid hazardous vapors and toxic decomposition products.

Protective clothing for firemen: Appropriate protective clothing and breathing apparatus should be used.

Breathing protection: Gas mask with filter of chlorine type B (grey) and dust filter P2, according to CEN (Central European Norms).

How to clean or destroy soiled fire equipment: Thoroughly wash with water.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Avoid direct contact with the product. Wear eye-protection, skin-protection, rubber gloves and breathing apparatuses as indicated in section 8. Keep good ventilation. See also handling section 7.

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. Contain area of spill with inert material such as sand and dispose of as chemical waste. Arrange for pick up. Rinse area 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 section 13.

7. HANDLING AND STORAGE

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: Containers close to fire should be removed or cooled with water. Avoid contact with clothing or other combustible materials. Keep containers closed.

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.

Storage

Technical measures: Storage room should be kept separate, cool, dry and closed to unauthorised persons.

Incompatible products: Metals (other than stainless steel), Alkaline compounds, organic materials.

Storage conditions: Keep containers securely closed when not in use and in 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 the manufacturer for more information.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls: Local exhaust ventilation is recommended.

Exposure limits:

Nitric Acid, Cas No 7697-37-2

OSHA Permissible Exposure Limit (PEL): 2 ppm (TWA), 4 ppm (STEL)

ACGIH Threshold Limit Value (TLV): 2 ppm (TWA); 4 ppm (STEL)

DNEL has not been determined, but no long term health effects are known.

Personal protective equipment

Respiratory protection: Gas mask with a filter of the chlorine type B (grey) and dust filter P2

Hand protection: Acid resistant rubber-gloves.

Long and repeated exposure: Trelchem HPS,VPS,TLU, Super

Exposure 1-4 hrs: Viton, Butyl 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. Remove contaminated

clothes immediately. Wash hands and face thoroughly after working with passivation fluid.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state (form, colour, smell) at 20°C:

Colourless liquid with a pungent smell.

Boiling point: 120°C

Flash point / Explosion properties: Not applicable

Specific temperatures:

Fluid-gas 50-60°C (nitric fumes)

Vapour pressure at 20°C: 3mm Hg

pH: 0 at 20°C

Density: 1.1-1,3 g/cm³ 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, polymerisation will not occur.

Conditions to avoid: Avoid high temperatures, must not be exposed to direct sunshine. When heated nitrous gases will be developed.

Materials to avoid: Metals (other than stainless steel), Alkaline compounds and water will give an exothermal reaction with heat development.

Hazardous decomposition products: Will emit nitrous gases.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:

LD50 (orally): 1460 mg/kg

LC50 (dermal): 170 ppm/1h

Reference: Index method according to WHO, health criteria 6.

Local effects

Effects on the skin: Gives corrosive damages with yellowish discoloration of the skin, blisters and slow-healing wounds.

Effects on the eyes: Causes intensive pain and corrosive damages. Risk of irreparable damage to the eyes.

After ingestion: Gives corrosive damages with burning pain, possibly severe general effect and damage to kidneys and liver.

Upon inhalation: Inhalation of fumes or mist might cause aches, cough and difficulty in breathing. Risk for oedema on the lungs.

CMR-effects: Not listed as carcinogen (IARC).

Additional information: Symptoms will not appear immediately.

12. ECOLOGICAL INFORMATION

Environmental effects

Ecotoxicity:

LC50 (96h) *Gambusia affinis* 72 mg/l

LC50 (48h) *Ictalurus sp.* 100-330 mg/l

Mobility: The product in its concentrated form will have a poisonous influence on the ground and water. During usage the product will be diluted with water but will still lower the pH of ground-water and may not be discharged into the Clearwater system without pre-treatment.

Persistence/degradability: Will be protolized in water to H⁺, NO³⁻.

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. 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 to correct its pH-value to pH 6-11. Neutralise with Avesta Neutralising Agent or slaked lime.

Contaminated packing: 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

International regulations (UN)

UN-Classification No: 2031

Classification Code: C01

Proper shipping name: Nitric acid

Packaging group: II

ADR/RID (road, rail): Class 8

IMDG (Sea): Class 8, EmS: F-A, S-B, MP: No

IATA/DGR (air): Class 8

Additional information: The product is to be transported according to dangerous goods regulations.

Current regulations:

ADR/ADR-S SRVFS 2006:7

RID/RID-S SRVFS 2006:8

IMDG CODE Amdt 33-06

DGR 49th Edition

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: Nitric acid

Danger symbol:

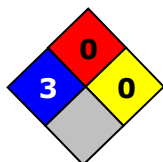
Classification GHS



DANGER

Skin Corrosion, Category 1A

Causes severe skin burns and eye damage



NFPA RATING: Health = 3 Flammability = 0 Reactivity = 0

HMIS RATING: Health = 3 Flammability = 0 Reactivity = 0

WHMIS



Class E, Corrosive

The chemicals in this product are listed on the US TSCA Chemical Substances Inventory, the Canadian Domestic Substances List and European EINECS.

Classification EU

C Corrosive, R35

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 passivation of stainless steel, 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 11014-1,

Changes since last revision in: 15 and document number is changed

Issued by: André Fasth
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