

MATERIAL SAFETY DATA SHEET

ABX Pentra Chloride-E - A91A00661-

2004/03/23

1. Product and company identification

1.1 Identification of the product:

Product name: ABX Pentra Chloride-E
Product code: Ref. ABX ==> A11A01739

1.2 Company identification: ABX Diagnostics - rue du Caducée - Parc Euromédecine –
34184 MONTPELLIER CEDEX 4 – FRANCE
TEL (33) 4 67 14 15 16 FAX (33) 4 67 14 15 17

1.3 Emergency phone number: Contact the nearest first-aid station

2. Composition/information on ingredients

Description of the kit: Electrode : mixture, solid.
Chemical nature:

Methyl Methacrylate (polymer)	60 – 70 %
Silver, lump	10 – 15 %
Butyl rubber mixture	5 – 10 %
Ethylene Glycol	1 – 5 %

Hazardous ingredients:
(name, concentration)

Dangerous preparation according to 67/548/EEC - 99/45/EEC (Yes/No) : No.

3. Hazards identification

Most important hazards: Partially combustible solid, including liquid in case of being heated at high temperature.

Specific risks: None.

4. First-aid measures

Inhalation: In the case of inhaling a large quantity of vaporised silver, remove the victim from contamination immediately to fresh air, make him gargle with some water and keep him warm and comfortable. Get medical aid immediately.

Skin contact: In the case of contacting with the upper terminal, take off the contaminated clothing, and wash and clean the affected part of body. Get medical aid immediately.

Eye contact: Immediately rinse the affected eyes with clean running water for 10 – 15 minutes. Get medical aid immediately.

Ingestion: Induce vomiting immediately and remove the victim from contamination to the fresh air. In the case of respiratory pause, conduct an artificial respiration. Get medical aid.

5. Fire-fighting measures

Extinguishing media: Powder fire extinguisher, foam fire extinguisher, carbon dioxide.

Specific risks: At a fire, a gas including carbon monoxide or monomer of methyl methacrylate may be produced by incomplete combustion or thermal decomposition. If possible, transfer immediately the products to safer places. If not, spray water around the products to cool them. Cut off the source of combustion and extinguish the fire by using a fire extinguisher. The procedures should be taken from the windward. Wear a respiratory protective equipment.

Special protective equipment: N/A.

Additional recommendations:

6. Accidental release measures

Personal precautions: Wear an appropriate protective clothing while working.

Environmental precautions: None

Methods for cleaning / absorption: In the case of spill of the materials inside the electrode, vacuum or sweep up material and place in an empty disposal container. Ventilate the place.

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7. Handling and storage

7.1 Handling:

Technical measures:

Precautions:

Avoid unnecessary leak, and environment of high temperature and high humidity. Avoid contact with combustibles or oxidising agent.

Handling recommendations:

Do not touch the upper terminal of electrode. Do not treat the electrode roughly, such as turning up side down, dropping, giving a shock or dragging. Open the packing case just before the use. After starting the use, install the electrode in the main body of instrument and avoid long-time or repeated exposure. In a work shop avoid using a fire without reason and make efforts to tidy up. Wash hands after use.

7.2 Storage:

Technical measures:

N/A.

Storage conditions:

Store in a dark place at 15 – 35°C.

Incompatible materials:

N/A.

Packaging materials:

N/A.

8. Exposure controls/personal protection

Specific control parameters:

Controlled concentration: not established.

Allowable concentration: TWA 0.01 mg/m³ (as Ag)

TLV-TWA 10 mg/m³ (as mist of ethylene glycol)

Technical measures:

Place a local exhauster if necessary.

Respiratory protection:

N/A.

Hand protection:

Wear appropriate protective gloves.

Eye protection:

Wear protective eye glasses or chemical safety goggles if necessary.

Skin protection:

N/A.

Hygiene measures:

N/A.

9. Physical and chemical properties

Physical state: Solid.

Colour: N/D.

Odour: N/D.

pH : N/A

Boiling point: N/D.

Melting point: Higher than 120°C (methyl methacrylate (polymer)).

Flashing point: N/D.

Flammability (solid, gas) : Combustible and burns if there is a source of fire. At burning, it produces carbon monoxide and carbon dioxide. Moreover, monomer produced by thermal decomposition has irritating odour which may cause headache and vomiting. Acrolein causing a strong irritating action to eyes or to respiratory organs can be produced.

Auto-flammability: Higher than 400°C (methyl methacrylate (polymer)).

Explosive properties: Higher than 400°C (methyl methacrylate (polymer)).

Oxidizing properties: N/D.

Vapour pressure: N/D.

Relative density: N/D.

Solubility: Miscible in water.

Miscible in organic solvent.

Partition coefficient: N/D.

Other data: Specific gravity : 1.2 ~1.4.

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10. Stability and reactivity

Conditions to avoid:

Materials to avoid:

Hazardous decomposition products:

Other data:

Stable at the normal temperature in a tightly closed container. A compound sensitive to impact may be produced by Acetylene (Ag).

11. Toxicological information

Acute toxicity:

LD_{Oral} mouse > 10 g/kg (Ag)

LC50_{Oral} mouse > 4.090 mg/kg (Ethylene Glycol)

LC50_{Oral} rat > 12.600 mg/kg (Ethylene Glycol)

Chronic toxicity:

(sensitization, carcinogenicity, mutagenicity, teratogenicity, etc)

Carcinogenic and reproductive effects : Not detected.

Mutagenic effects : chromosomal aberration; rat (in vivo, oral); positive (Ethylene Glycol)

Deforming factor: not detected.

Inhalation:

Hazardous in the case of inhalation or oral ingestion. May cause fever, headache, bronchitis or even pulmonary in the case of inhaling a large quantity of the vaporised silver.

Skin contact:

Silver may penetrate from the contacted part into the skin and may cause pain and a change of colour to yellow..

Eye contact:

May irritate the mucous and cause disorders in cornea, etc. Long-term exposure may cause colour change to ash-blue in eyes, nose, pharynx or skin (silver toxicosis).

Ingestion:

Hazardous in the case of oral ingestion. May cause fever, headache, bronchitis or even pulmonary in the case of inhaling a large quantity of the vaporised silver.

Other data:

Irritant properties : feeling of wrongness

Sensitisation: not detected.

12. Ecological information

Mobility:

N/A.

Degradability:

Not detected.

Bioaccumulative potential:

Not detected.

Ecotoxicity:

Not detected.

Other hazardous effects:

13. Disposal considerations

Surplus or waste (residues):

Waste evacuation procedure : observe all federal, state and local environmental regulations.

Contaminated packaging:

14. Transport information (International regulations)

By land:

N/A.

By river:

N/A.

By air:

N/A.

By sea:

N/A.

General information:

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15. Regulatory information

Labelling according to EEC directives

Symbols: None.

R phrases: None.

S phrases: None.

Substances: None.

Other regulatory requirements: The Fire laws : methyl methacrylate (polymer) (designated combustibles-synthetic resins), ethylene glycol (water-soluble solution, 3rd petroleum, 4th class, Article 2 Dangerous object (4.000L)).
Industrial Safety And Health Law : silver (Clause 2, Article 57 (Clause 2, Article 18 of Act) No.138 of toxic substance whose name should be notified)
PRTR Law : silver (chemical substance designated as Class 1)
In no way does this information exempt the user from knowing about or applying all the national or international regulations relating to his/her activity.

16. Other information

This sheet is a complement to instructions for use but does not replace them. Information contained herewith is based on our current knowledge of the product, at the date shown, and is correct to the best of our knowledge.

Furthermore, the user's attention is drawn to the dangers of using this product for anything other than its intended use.

The user must accept the sole responsibility and take precautions accordingly for the use of this product.