

PERCHLORIC ACID (72% SOLUTION)**1006**

October 2000

CAS No: 7601-90-3
 RTECS No: SC7500000
 UN No: 1873
 EC No: 017-006-00-4

Hydronium perchlorate
 ClHO_4
 Molecular mass: 100.46

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/SYMPOMS	PREVENTION	FIRST AID/FIRE FIGHTING
FIRE	Not combustible but enhances combustion of other substances. Many reactions may cause fire or explosion. Gives off irritating or toxic fumes (or gases) in a fire.	NO contact with combustibles and reducing agents.	In case of fire in the surroundings: water spray.
EXPLOSION	Risk of fire and explosion on contact with metals, reducing agents, organic material.	Do NOT expose to friction or shock.	In case of fire: keep drums, etc., cool by spraying with water. Combat fire from a sheltered position.

EXPOSURE		PREVENT GENERATION OF MISTS! AVOID ALL CONTACT!	IN ALL CASES CONSULT A DOCTOR!
Inhalation	Corrosive. Sore throat. Burning sensation. Cough. Laboured breathing. Symptoms may be delayed (see Notes).	Ventilation, local exhaust, or breathing protection. Ventilation system must be specifically designed and maintained for perchloric acid.	Fresh air, rest. Half-upright position. Artificial respiration if indicated. Refer for medical attention. See Notes.
Skin	Corrosive. Redness. Pain. Serious skin burns.	Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention.
Eyes	Corrosive. Redness. Pain. Permanent loss of vision. Severe deep burns.	Face shield, or eye protection in combination with breathing protection.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
Ingestion	Corrosive. Sore throat. Abdominal pain. Burning sensation. Diarrhoea. Shock or collapse. Vomiting.	Do not eat, drink, or smoke during work.	Rinse mouth. Do NOT induce vomiting. Refer for medical attention.

SPILLAGE DISPOSAL	PACKAGING & LABELLING
Evacuate danger area! Consult an expert! Do NOT absorb in saw-dust or other combustible absorbents. Absorb the spillage in inert material then remove to safe place. Cautiously neutralize remainder. Do NOT wash away into sewer. (Extra personal protection: complete protective clothing including self-contained breathing apparatus).	<p>O Symbol C Symbol R: 5-8-35 S: (1/2-)23-26-36-45 UN Hazard Class: 5.1 UN Subsidiary Risks: 8 UN Pack Group: I</p> <p>Special material. Unbreakable packaging; put breakable packaging into closed unbreakable container.</p>

EMERGENCY RESPONSE	STORAGE
Transport Emergency Card: TEC (R)-51G07 NFPA Code: H3; F0; R3; OX	Fireproof. Separated from - see Chemical Dangers. Well closed.

IMPORTANT DATA

Physical State; Appearance

COLOURLESS LIQUID, WITH PUNGENT ODOUR.

Chemical dangers

May explode on heating. The substance decomposes on heating producing toxic and corrosive fumes. The substance is a strong oxidant and reacts violently with combustible and reducing materials, organic materials and strong bases, causing fire and explosion hazard. Attacks many metals forming flammable/explosive gas (hydrogen - see ICSC 0001). The acid is unstable if the concentration is over 72%; may explode by shock or concussion when dry or drying. Mixtures with combustible material (such as paper) may ignite spontaneously at room temperature.

Occupational exposure limits

TLV not established. MAK not established.

Routes of exposure

The substance can be absorbed into the body by inhalation and by ingestion.

Inhalation risk

No indication can be given about the rate in which a harmful concentration in the air is reached on evaporation of this substance at 20°C.

Effects of short-term exposure

Corrosive. The vapour is very corrosive to the eyes, the skin and the respiratory tract. Inhalation of vapour or mist may cause lung oedema (see Notes). The effects may be delayed. Medical observation is indicated.

PHYSICAL PROPERTIES

Boiling point (decomposes): 19°C

Melting point: -112°C

Relative density (water = 1): 1.76 at 22°C

Solubility in water: miscible

Relative vapour density (air = 1): 3.5

ENVIRONMENTAL DATA

The substance is harmful to aquatic organisms.

NOTES

DO NOT use perchloric acid in a hood designed for other purposes.

The symptoms of lung oedema often do not become manifest until a few hours have passed and they are aggravated by physical effort. Rest and medical observation is therefore essential.

Immediate administration of an appropriate spray, by a doctor or a person authorized by him/her, should be considered.

Rinse contaminated clothes (fire hazard) with plenty of water.

NEVER pour water into this substance; when dissolving or diluting always add it slowly to the water.

ADDITIONAL INFORMATION

LEGAL NOTICE

Neither the EC nor the IPCS nor any person acting on behalf of the EC or the IPCS is responsible for the use which might be made of this information