

STIBINE**0776**

August 1997

CAS No: 7803-52-3
 RTECS No: WJ0700000
 UN No: 2676
 EC No: 051-003-00-9

Antimony hydride
 Antimony trihydride
 Hydrogen antimonide
 (cylinder)
 SbH₃
 Molecular mass: 124.8

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/SYMPTOMS	PREVENTION	FIRST AID/FIRE FIGHTING
FIRE	Extremely flammable. Cylinder may explode in heat of fire. Gives off irritating or toxic fumes (or gases) in a fire.	NO open flames, NO sparks, and NO smoking.	Shut off supply; if not possible and no risk to surroundings, let the fire burn itself out; in other cases extinguish with water spray.
EXPLOSION	Gas/air mixtures are explosive. Risk of fire and explosion on contact with ozone or concentrated nitric acid.	Closed system, ventilation, explosion-proof electrical equipment and lighting.	In case of fire: keep cylinder cool by spraying with water. Combat fire from a sheltered position.

EXPOSURE		AVOID ALL CONTACT!	IN ALL CASES CONSULT A DOCTOR!
Inhalation	Cough. Headache. Laboured breathing. Nausea. Sore throat. Weakness. Wheezing. Weak and irregular pulse. Haemoglobinuria.	Ventilation, local exhaust, or breathing protection.	Fresh air, rest. Refer for medical attention.
Skin	ON CONTACT WITH LIQUID: FROSTBITE.	Cold-insulating gloves.	ON FROSTBITE: rinse with plenty of water, do NOT remove clothes.
Eyes	Redness.	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			

SPILLAGE DISPOSAL	PACKAGING & LABELLING
Evacuate danger area! Consult an expert! Ventilation. (Extra personal protection: self-contained breathing apparatus).	EU classification Xn Symbol N Symbol R: 20/22-51/53 S: (2)-61 Note: A UN classification UN Hazard Class: 2.3 UN Subsidiary Risks: 2.1

EMERGENCY RESPONSE	SAFE STORAGE
Transport Emergency Card: TEC (R)-20G43 NFPA Code: H4; F4; R2	Fireproof. Cool.

IMPORTANT DATA

Physical State; Appearance

COLOURLESS COMPRESSED GAS, WITH CHARACTERISTIC ODOUR.

Physical dangers

The gas is heavier than air and may travel along the ground; distant ignition possible.

Chemical dangers

The substance decomposes slowly at room temperature but quickly at 200/C producing metallic antimony and hydrogen. Reacts violently with chlorine, concentrated nitric acid and ozone causing fire and explosion hazard.

Occupational exposure limits

TLV: 0.1 ppm; 0.51 mg/m³ (as TWA) (ACGIH 1997).

MAK: IIb (not established but data is available) (DFG 2006).

Routes of exposure

The substance can be absorbed into the body by inhalation.

Inhalation risk

A harmful concentration of this gas in the air will be reached very quickly on loss of containment.

Effects of short-term exposure

The substance irritates the respiratory tract. The substance may cause effects on the blood (haemolysis), the kidneys, liver, and the central nervous system. Exposure above the OEL may result in death. The effects may be delayed. Medical observation is indicated.

PHYSICAL PROPERTIES

Boiling point: -18/C

Melting point: -88/C

Relative density (water = 1): 2.26 at -25/C

Solubility in water: poor

Relative vapour density (air = 1): 4.4

Flash point: Flammable Gas

ENVIRONMENTAL DATA

NOTES

Explosive limits are unknown in literature, although the substance is combustible and has a flash point < 61/C.

Depending on the degree of exposure, periodic medical examination is indicated.

The relation between odour and the occupational exposure limit cannot be indicated.

Card has been partially updated in August 2007: see EU Classification, Occupational Exposure Limits.

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