

CALCIUM ARSENATE

0765

October 1999

CAS No: 7778-44-1
 RTECS No: CG0830000
 UN No: 1573
 EC No: 033-005-00-1

Tricalcium arsenate
 Calcium ortho-arsenate
 Arsenic acid, calcium salt
 $\text{Ca}_3(\text{AsO}_4)_2$
 Molecular mass: 398.1

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/SYMPTOMS	PREVENTION	FIRST AID/FIRE FIGHTING
FIRE	Not combustible. Gives off irritating or toxic fumes (or gases) in a fire.		In case of fire in the surroundings: use appropriate extinguishing media.
EXPLOSION			

EXPOSURE		PREVENT DISPERSION OF DUST! AVOID ALL CONTACT! AVOID EXPOSURE OF (PREGNANT) WOMEN!	IN ALL CASES CONSULT A DOCTOR!
Inhalation	Cough. Sore throat. Headache. Laboured breathing. Weakness. (See Ingestion).	Closed system and ventilation.	Fresh air, rest. Refer for medical attention.
Skin	Redness.	Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse and then wash skin with water and soap. Refer for medical attention.
Eyes	Redness. Pain.	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	Abdominal pain. Diarrhoea. Vomiting. Burning sensation in the throat and chest. Headache. Shock or collapse.	Do not eat, drink, or smoke during work. Wash hands before eating.	Rinse mouth. Give a slurry of activated charcoal in water to drink. Induce vomiting (ONLY IN CONSCIOUS PERSONS!). Refer for medical attention.

SPILLAGE DISPOSAL	PACKAGING & LABELLING
Vacuum spilled material. Carefully collect remainder, then remove to safe place. Chemical protection suit including self-contained breathing apparatus. Do NOT let this chemical enter the environment.	<p>EU classification T Symbol N Symbol R: 45-23/25-50/53 S: 53-45-60-61 Note: A; E</p> <p>UN classification UN Hazard Class: 6.1 UN Pack Group: II</p> <p>Unbreakable packaging; put breakable packaging into closed unbreakable container. Do not transport with food and feedstuffs. Marine pollutant.</p>

EMERGENCY RESPONSE	SAFE STORAGE
Transport Emergency Card: TEC (R)-61GT5-II	Separated from acids, food and feedstuffs. Well closed.

IMPORTANT DATA

Physical State; Appearance

COLOURLESS TO WHITE, AMORPHOUS POWDER

Chemical dangers

Upon heating, toxic fumes are formed. Reacts with acids to produce toxic arsine gas (see ICSC 0222).

Occupational exposure limits

TLV: (as As) 0.01 mg/m³; A1 (confirmed human carcinogen); BEI issued; (ACGIH 2004).
MAK: Carcinogen category: 1; Germ cell mutagen group: 3A; (DFG 2004).

Routes of exposure

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

Inhalation risk

Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly when dispersed.

Effects of short-term exposure

The substance irritates the eyes, the skin and the respiratory tract. The substance may cause effects on the gastrointestinal tract, cardiovascular system, central nervous system, kidneys, resulting in severe gastroenteritis, loss of fluid and electrolytes, cardiac disorders, shock and kidney impairment. Exposure above OEL may result in death. The effects may be delayed.

Effects of long-term or repeated exposure

Repeated or prolonged contact with skin may cause dermatitis. The substance may have effects on the skin, mucous membranes, peripheral nervous system, bone marrow and liver, resulting in pigmentation disorders, perforation of nasal septum, neuropathy, lesions of blood cells and liver impairment. This substance is carcinogenic to humans. Animal tests show that this substance possibly causes malformations in human babies.

PHYSICAL PROPERTIES

Melting point: 1455°C
Density: 3.62 g/cm³

Solubility in water: none

ENVIRONMENTAL DATA

This substance may be hazardous to the environment; special attention should be given to water organisms. Avoid release to the environment in circumstances different to normal use.

NOTES

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

Do NOT take working clothes home.

Card has been partly updated in October 2005. See sections Occupational Exposure Limits, Emergency Response, Effects of long-term or repeated exposure.

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