

CAS No: 563-12-2
 RTECS No: TE4550000
 UN No: 3018
 EC No: 015-047-00-2

Diethion
 O,O,O',O'-Tetraethyl S,S'-methylene-bis-phosphorodithioate
 $C_9H_{22}O_4P_2S_4$
 Molecular mass: 384.5

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/SYMPTOMS	PREVENTION	FIRST AID/FIRE FIGHTING
FIRE	Combustible. Liquid formulations containing organic solvents may be flammable. Gives off irritating or toxic fumes (or gases) in a fire.	NO open flames.	Water spray, alcohol-resistant foam, powder, carbon dioxide.
EXPLOSION	Risk of fire and explosion if formulations contain flammable/explosive solvents.		

EXPOSURE		PREVENT GENERATION OF MISTS! STRICT HYGIENE! AVOID EXPOSURE OF ADOLESCENTS AND CHILDREN!	IN ALL CASES CONSULT A DOCTOR!
Inhalation	Pupillary constriction, muscle cramp, excessive salivation. Sweating. Nausea. Dizziness. Laboured breathing. Convulsions. Unconsciousness.	Ventilation, local exhaust, or breathing protection.	Fresh air, rest. Artificial respiration may be needed. Refer for medical attention.
Skin	MAY BE ABSORBED! (See Inhalation).	Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse and then wash skin with water and soap. Refer for medical attention.
Eyes		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	Vomiting. Abdominal cramps. Diarrhoea. (Further see Inhalation).	Do not eat, drink, or smoke during work. Wash hands before eating.	Induce vomiting (ONLY IN CONSCIOUS PERSONS!). Refer for medical attention.

SPILLAGE DISPOSAL	PACKAGING & LABELLING
Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent and remove to safe place. Do NOT wash away into sewer. Do NOT let this chemical enter the environment. Personal protection: complete protective clothing including self-contained breathing apparatus.	T Symbol N Symbol R: 21-25-50/53 S: (1/2-)25-36/37-45-60-61 UN Hazard Class: 6.1 UN Pack Group: II Do not transport with food and feedstuffs. Severe marine pollutant.

EMERGENCY RESPONSE	SAFE STORAGE
Transport Emergency Card: TEC (R)-61GT6-II	Separated from food and feedstuffs. Well closed.

IMPORTANT DATA

Physical State; Appearance

COLOURLESS LIQUID.

Chemical dangers

The substance decomposes on heating or on burning producing toxic and corrosive fumes including phosphorus oxides and sulfur oxides.

Occupational exposure limits

TLV: 0.05 mg/m³ as TWA; (skin); A4; (ACGIH 2004).
MAK not established.

Routes of exposure

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

Inhalation risk

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

Effects of short-term exposure

The substance may cause effects on the nervous system, resulting in convulsions, respiratory failure. Cholinesterase inhibitor. Exposure may result in unconsciousness and death. The effects may be delayed. Medical observation is indicated.

Effects of long-term or repeated exposure

Cholinesterase inhibitor; cumulative effect is possible: see acute hazards/symptoms.

PHYSICAL PROPERTIES

Melting point: -12/-13°C
Relative density (water = 1): 1.2
Solubility in water, g/100 ml at 20°C: 0.0001

Vapour pressure, Pa at 25°C: 0.0002
Octanol/water partition coefficient as log Pow: 5.073

ENVIRONMENTAL DATA

The substance is very toxic to aquatic organisms. Avoid release to the environment in circumstances different to normal use.

NOTES

Depending on the degree of exposure, periodic medical examination is suggested.
Specific treatment is necessary in case of poisoning with this substance; the appropriate means with instructions must be available.
If the substance is formulated with solvent(s) also consult the card(s) (ICSC) of the solvent(s).
Carrier solvents used in commercial formulations may change physical and toxicological properties.
Do NOT take working clothes home.
Nialate, Niagara 1240, Rhodocide and Vegfru fosmite are trade names.
Card has been partly updated in October 2004. See sections Occupational Exposure Limits, EU classification, Emergency Response.

ADDITIONAL INFORMATION

LEGAL NOTICE

Neither the EC nor the IPCS nor any person acting on behalf of the EC or the IPCS is responsible