

THE FACTS HYDRAZINE



In the EU, about 2.1 million workers are estimated to be potentially exposed to hydrazine. The primary routes of potential human exposure to hydrazine are ingestion, inhalation, and dermal contact. It is carcinogenic to humans (classified as Group 2B by IARC i.e. possible human carcinogens). It may increase the risk of lung and colorectal cancer with potential genotoxicity.

Where risks occur

Hydrazine exposure has been documented in the paper, tire-manufacturing, military, and aerospace industries where hydrazine is produced or used.

More about the substance

Hydrazine is a colorless oily liquid at room temperature with a penetrating ammonia-like odor. It is miscible with methyl, ethyl, propyl, and butyl alcohols, slightly miscible with hydrocarbons and halogenated hydrocarbons, and insoluble in chloroform and ether. It is used primarily as a chemical intermediate to produce agricultural chemicals and chemical blowing agents, as a corrosion inhibitor, water-treatment chemical, and rocket propellant.

How symptoms can affect you

The symptoms of acute (short-term) exposure to high levels of hydrazine may include irritation of the eyes, nose, and throat, dizziness, headache, nausea, pulmonary edema, seizures, and coma in humans. Acute exposure can also damage the liver, kidneys, and central nervous system in humans. The liquid is corrosive and may produce dermatitis from skin contact. Prolonged exposure may cause lung or colorectal cancer.

What you can do

Perform proper exposure measurements continuously so it is known when actions should be taken. Investigate if workers report early symptoms. Workers need to be aware of the effects of exposure. The control measures include use of enclosed processes, local exhaust and general ventilation. Other recommended work practices include providing employees with hazard information and training, monitoring airborne chemical concentrations, providing eye wash fountains and emergency showers, washing the body parts at the end of the workshift and prohibit eating, smoking or drinking in chemical handling areas. Personal protective equipment should consist of mask, glasses, impermeable gloves and clothing. Personal protective equipment should only be used as a last resort, after introducing the possible engineering solutions.

References: IARC, EC, EPA, CDC, NIOSH