

DR-0001-5849

METHYLENE CHLORIDE

REPT H

ACUTE INHALATION EFFECTS

- In confined or poorly ventilated areas, vapors can readily accumulate and can cause unconsciousness and death.
- Excessive exposure may cause irritation to upper respiratory tract.
- Excessive exposure may cause carboxyhemoglobinemia, thereby impairing the blood's ability to transport oxygen.
- Minimal anesthetic or narcotic effects may be seen in the range of 500-1000 ppm methylene chloride. Progressively higher levels over 1000 ppm can cause dizziness, drunkenness, and as low as 10,000 ppm, unconsciousness and death.
- These high levels may also cause cardiac arrhythmias (irregular heartbeats).

SUBCHRONIC EFFECTS

- Signs and symptoms of excessive exposure may be central nervous system effects.
- Excessive exposure may cause carboxyhemoglobinemia, thereby impairing the blood's ability to transport oxygen.
- Observations in animals include liver and kidney effects.

CHRONIC EFFECTS / CARCINOGENICITY

- For hazard communication purposes under OSHA Standard 29 CFR Part 1910.1200, this chemical is listed as a potential carcinogen by IARC and NTP.
- Methylene chloride has been shown to increase the rate of spontaneously occurring malignant tumors in the B6C3F1 mouse and benign tumors in laboratory rats.
- Other animal studies, as well as several human epidemiology studies, failed to show a tumorigenic response. Methylene chloride is not believed to pose a measurable carcinogenic risk to man when handled as recommended.

TERATOGENIC EFFECTS

- Birth defects are unlikely. Exposures having no effect on the mother should have no effect on the fetus. Did not cause birth defects in animals; other effects were seen in the fetus only at doses which caused toxic effects to the mother.

REPRODUCTIVE EFFECTS

- In animal studies, has been shown not to interfere with reproduction.

MUTAGENICITY

- Negative or equivocal results have been obtained in mutagenicity tests with methylene chloride using mammalian cells or animals. This is consistent with the lack of interaction with DNA in rats and hamsters.
- Although results of Ames bacterial tests have generally been positive, overall the data suggest that genotoxic potential does not appear to be a significant factor in the toxicity of methylene chloride.

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