

VINYL CHLORIDE

"Because vinyl chloride is a gas, the only significant route of toxic exposure is inhalation. If it is confined on the skin in a liquid, some might be expected to be absorbed, but the relative amount is small. The likelihood of acute effects is not nearly as significant as are liver injury, angiosarcoma [liver cancer] and probably acroosteolysis [softening of the tips of the bones] which may occur following excessive repeated exposures".¹

The acute effects possible from exposure to high concentrations of vinyl chloride include depression of the central nervous system. Light-headedness, some nausea and dulling of visual and auditory responses may develop in acute exposures.¹

Teratology studies in several animal species indicated that vinyl chloride does not cause any significant effect on the fetus.²

Vinyl chloride is regarded as a human carcinogen, and a causal agent of angiosarcoma of the liver in humans. The OSHA permissible exposure limit for vinyl chloride is 1.0 ppm. (8-hr TWA). The odor of vinyl chloride is only noticeable at levels in great excess of the TLV.

REFERENCES

¹Patty's Industrial Hygiene and Toxicology, p. 3538, 3rd Revised Edition, Vol. 2B, John Wiley & Sons, 1981.

²John, J. A., et al., Tox. & Appl. Pharmacol., 39 (3), 497-513 (1977).