



White File
Free Vinyl Chloride

TO C. Self AT Lake Charles DATE June 22, 1981
FROM D. C. Krathen AT New Haven COPY TO S. J. Barbee
SUBJECT Toxicological Data
Vinyl Chloride, Vinylidene Chloride,
n-Nitrosodimethylamine

Summaries of the toxicology data for vinyl chloride, vinylidene chloride and n-Nitrosodimethylamine are presented below.

Vinyl chloride is extremely irritating via inhalation, skin, eye and mucous membrane contact. Contact with liquified gas can produce freezing frostbite to the skin and eyes. Vinyl chloride is an established human and animal carcinogen. In humans, exposures of 500 ppm produced a rare form of liver cancer, angiosarcoma. In rats, liver tumors were produced at concentrations of 250 ppm for an intermittent four hour exposure. All exposures to vinyl chloride should be considered extremely hazardous.

Vinylidene chloride has been demonstrated to be a carcinogen in rats. It has produced liver and kidney damage in humans at concentrations of 25 ppm. The oral and inhalation toxicity data indicates it is toxic by these routes of exposure. Vinylidene chloride is extremely irritating to the skin and eyes. The similarity to vinyl chloride structurally and toxicologically would warrant the same classification as extremely hazardous by all routes of exposure.

N-nitrosodimethylamine has been demonstrated to be carcinogenic in every species of animal tested. It has produced liver tumors, kidney tumors and lung tumors in various animal species. In humans, there is evidence of liver damage. N-nitrosodimethylamine is toxic via oral and inhalation routes of exposure, and is irritating to the skin, eyes, mucous membranes and respiratory tract. It should be regarded as a suspected human carcinogen.

Exposures to any of these compounds by any route should be as low as possible.

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