

July 1, 1964

Miss Claire Barton
Poison Information Center
4014 Sunset Boulevard
Los Angeles, California 90027

Dear Miss Barton:

Confirming the information which I gave you today on the telephone, the following data relates to the toxicity of our synthetic fluid Pydraul AC.

In animal toxicity studies the minimum oral lethal dose in rats was found to be approximately 40 g/kg of body weight (an oral LD₅₀ in rats was reported to be approximately 52 g/kg. As I told you on the phone, I question the reliability of an LD₅₀ of this magnitude. Consequently, we normally make reference to the minimum lethal dose rather than the LD₅₀ for this product).

In rabbits the oral minimum lethal dose was found to be between 3.5 and 4.5 g/kg. The greater sensitivity of rabbits is typical with this type of fluid.

When applied to the skin of rabbits the minimum percutaneous lethal dose was between 4.0 and 5.0 g/kg. Although this indicates that the fluid may be absorbed through the unbroken skin, we feel that the lethal dose is such that accidental massive skin exposure to man is not a serious hazard.

In appropriate skin and eye irritation studies with rabbits the fluid was classified as a "mild irritant." We know from experience with humans, however, that if the fluid is accidentally splashed in the eyes, the resulting pain is out of proportion to the degree of irritation to tissues. Industrial physicians have used pontocaine eye drops to relieve the pain. In relation to the effect of the fluid on the skin of humans, we know that the product has a solvent action for the naturally occurring skin oils and thus, like many paint removers

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and common solvents, can lead to drying and chapping of the skin if there is prolonged and repeated skin exposure.

In acute vapor inhalation studies with rats, the animals survived a six-hour exposure in an atmosphere saturated with vapors at room temperature. The animals did not appear to be seriously affected by the vapors. Breathing remained regular and irritation was sufficient to produce only a slight degree of lacrimation and salivation. We concluded that at normal temperatures humans would not be exposed to significantly toxic vapor concentrations. The low vapor pressure of the fluid does not lead to significant atmospheric concentrations.

If the fluid is used in such a fashion that it may be heated to several hundred degrees Fahrenheit and there is an accidental release to the atmosphere, the vapors will be irritating to the degree that humans would not voluntarily submit to prolonged exposure. If, for some reason, workmen could not escape such an exposure, the effects of inhalation of high concentrations of vapors would undoubtedly lead to irritation of the eyes and throat, nausea, vomiting and possible reversible liver injury if the exposure were prolonged sufficiently.

I would be happy to try to answer any further questions that might be raised by the person who directed the inquiry to you. Perhaps I could be more specific in terms of proper use and safe handling instructions if I knew the problem which led to the query.

If I can be of any further assistance, please do not hesitate to let me know.

Very truly yours,

Elmer P. Wheeler, Manager
Environmental Health
Medical Department

EPW:mjb

cc: Frank T. Nemits - Monsanto, Los Angeles

Note to Frank Nemits -- Miss Barton said that Union Oil Company had asked her for toxicity information on Pydraul AC. I believe she said a Mr. Rich was the person who called her.

EPW