BCC Richard Davis - GO

September 1, 1960

Mr. Stephen B. Logan
Louisville Branch Engineer
American Mutual Liability Insurance Co.
120 Iroquois Manor Office Building
5330-A South Third Street
Louisville 14, Kentucky

Dear Mr. Logan:

Your letter requesting information on Pydraul A-200 has been forwarded to me for reply.

Animal toxicity studies with this fluid indicate that the lethal oral dose in rats is approximately 10,000 milligrams per kilogram of body weight. When applied to the skin of rabbits, the lethal dose was approximately 1,000 milligrams per kilogram. Our interpretation of this data is that accidental ingestion of the fluid is not a hazard in view of the high oral lethal dose. The lethal dose following skin penetration is such, however, that in the case of workmen, prolonged and repeated skin contact should be avoided. Such exposure must also be avoided to prevent skin irritation.

We also recommend that vapor inhalation be prevented when the fluid is at elevated temperatures. The prevention of such an exposure again relates to prolonged or repeated incidents rather than single massive or acute exposures. In the case of the latter, workmen would not voluntarily subject themselves to concentrations that are hazardous for short periods.

If there is a leak in an hydraulic system containing Pydraul A-200 such that the fluid may be sprayed on hot or molten metal surfaces, the fluid will obviously volatilize or decompose, depending on the temperatures of the metal. Animal toxicity studies with the decomposition products of the components of Pydraul A-200 again indicate that the acute hazard of inhalation of the decomposition products is not serious. The fluid decomposes to acidic and phenolic materials which form white clouds and are irritating to the respiratory tract and eyes to the extent that workmen will not tolerate seriously toxic concentrations.

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I am not at liberty to divulge the composition of the fluid. As our label indicates, Pydraul A-200 does contain chlorinated hydrocarbons. There is no evidence, however, that in the decomposition of these chlorinated hydrocarbons, referred to above in the comments about system leaks, any significant concentrations of phosgene are evolved. I mention this point because of the history of phosgene production when some of the aliphatic chlorinated hydrocarbons have been used as fire extinguishers.

I believe your other questions relative to physical and chemical characteristics and properties are answered in the enclosed literature.

If you have any additional questions, please let me know.

Very truly yours,

Elmer P. Wheeler
Assistant Director
Medical Department

EPW:dh
Enclosures 3

1) "Monsanto introduces ... Pydraul A-200"

2) "Monsanto Fluids for Specialized Engineering"

3) "Know Your Hydraulic Fire Hazards"

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