September 25, 1961

Mr. George Otto
Maytag Company
Newton, Iowa

Dear Mr. Otto:

Our Mr. Dale Smith has asked us to write you concerning the toxicity and safe handling of our product Pydraul A-200.

We have prepared a brief summary of the toxicity work carried out on this material, which indicates that it is not a serious handling hazard. A copy of the summary is enclosed.

If you have any additional questions after reviewing the attachment, please let me know.

Very truly yours,

Elmer P. Wheeler
Assistant Director
Medical Department

EPW:dh
Enclosure

cc Mr. Dale F. Smith
Monsanto Chemical Company
800 North Lindbergh Boulevard
St. Louis 66, Missouri

DSW 018790

STLCOPCB4005334

TOXICITY AND SAFE HANDLING OF PYDRAUL A-200

Animal toxicity studies with this product have indicated that the oral lethal dose (LD_{50}) to rats is 10,500 milligrams per kilogram. The lethal dose when the material was applied undiluted to the unbroken skin of rabbits is approximately 1250 milligrams per kilogram.

We conclude from the above that accidental ingestion on the part of humans is not a particular hazard in view of the high oral lethal dose in rats. Similarly, single massive skin exposures should not be immediately hazardous. The lethal dose obtained in skin penetration studies is such, however, that prolonged and repeated skin contact should be avoided because of possible systemic effects. In addition, prolonged and repeated skin contact may lead to skin irritation.

We also feel that vapor inhalation should be avoided when the fluid is heated to elevated temperatures. Such exposure again relates to prolonged or repeated exposures rather than short-term massive or acute exposures. In the case of the latter, workmen would not voluntarily expose themselves to concentrations that are hazardous because of irritation of the respiratory tract.

The use of Pydraul A-200 in industrial hydraulic fluid applications should not present toxicity hazards during the transfer of the fluid from original containers to the hydraulic system. Obviously, when the fluid is within the hydraulic system, there should be no exposure and consequently, no hazard. In the event of rupture of hydraulic lines and subsequent splashing or spraying of the fluid on the heated surfaces, vapors of the fluid and possible decomposition products (depending on the temperature of the heated surface) may be irritating if inhaled to the degree that workmen will not voluntarily expose themselves to toxic concentrations. No hazardous exposure should result during the interval required to shut down the system and obtain suitable respiratory protective devices during repairs to the system.

The material in this report is to be used in development of the product and may be given to responsible sales contacts, but it is not to be used by them in advertising copy. The source of this material is not to be divulged until it appears in formal publications. No exceptions to the established rule may be made without the approval of the Medical Department in St. Louis. Customers' inquiries regarding matters of toxicity are to be referred as before to the Medical Department in St. Louis for reply.

— Monsanto Chemical Company

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