BCC C. B. Ammons - GO
D. F. Smith - GO

July 25, 1960

AIR MAIL

Mr. Gordon Capel
Plant Maintenance Engineer
Massey-Ferguson Limited
915 King Street West
Toronto, CANADA

Dear Mr. Capel:

I have been asked to send you toxicity and safe handling information on our hydraulic fluid Pydraul A-200. Attached is a discussion dealing with this subject.

Mr. Forbes of our Toronto Office informed me that you were particularly interested in the possible skin hazards resulting from exposure to our fire resistant synthetic fluids. We have pointed out in the attached that prolonged, repeated skin contact should be avoided. From a practical standpoint, this is meant to imply that workmen should not let their skin become smeared with the fluids and allow the fluid to remain during a workshift. The synthetic fluids are excellent solvents and they can dissolve the normal skin oils and fats resulting in dry, cracked skin. Experience has indicated that if reasonable personal hygiene practices are followed and care is exercised to avoid the type of exposure I mentioned, no skin difficulties should develop. There is no evidence that these fluids cause sensitization.

If you have any further questions, please write directly to me or to Dr. R. Emmet Kelly, our Medical Director, at this address.

Very truly yours,

Elmer P. Wheeler
Assistant Director
Medical Department

EPW:dh
Attachment

cc Mr. John S. N. Forbes
Monsanto Canada Limited
183 Front Street East
Toronto 2, Canada

TOXICITY AND SAFE HANDLING OF PYDRAUL A-200

Animal toxicity studies with this product have indicated that the oral lethal dose (LD50) 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.