cc. A. R. Hempe R. Schumacher - Chicago

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January 7, 1964

Mr. Roy Myer
The Budd Company
700 Chase Blvd.
Gary, Indiana

Dear Mr. Myer:

I have been asked to forward a statement on the toxicity and safe handling for our fluid Pydraul F-9. The requested information is attached.

It is my further understanding that your particular concern related to eye irritation if the fluid is accidentally splashed or wiped into the eyes. Appropriate animal studies to determine eye irritation potential have indicated Pydraul F-9 is not a serious irritant. On the other hand, we do know that in the case of humans accidental contact with eye tissues results in severe pain out of proportion to the degree of irritation. To avoid such discomfort care should be taken to prevent accidental exposure. As with any hydraulic fluid or other industrial liquid chemical workmen should not wipe their eyes or face with their hands or gloves or clothing, if there has been contamination of these surfaces with any of these foreign materials.

Although we have heard of a number of cases of accidental eye contact (and with the resulting pain referred to above), there have not been any reports of any damage to eye sight or permanent damage to eye tissues.

First aid treatment for the eyes if there has been accidental contact is immediate flushing with copious quantities of water and referral of the patient to a physician. To relieve the pain and irritation physicians have used Pontocaine solution as well as ophthalmic cortisone acetate eye drops.

If I can be of any further service, please let me know.

Very truly yours,

R. Emmet Kelly, M. D.
Medical Director

REK:mjb
Attachment

DSW 018835

STLCOPCB4005379

MONSANTO CHEMICAL COMPANY

800 NORTH LINDBERGH BOULEVARD
ST. LOUIS 66, MISSOURI

PYDRAUL F-9

TOXICITY AND SAFE HANDLING INFORMATION

Extensive animal experimental work has been done on Pydraul F-9. In the case of oral feedings, it was found that the minimum lethal dose for rats was 10.6 to 15.8 grams per kilogram of body weight. In rabbits, the oral MLD was 0.57 to 0.85 grams; in both cases the undiluted material was introduced into the animal stomach by means of a rubber tube catheter.

Pydraul F-9 was patch tested full strength according to the method of Schwartz and Peck, which is the standard test for industrial chemicals. Two hundred and five volunteers were tested and there was no evidence of primary skin irritation sensitization.

The material was tested for its vapor phase toxicity by exposing animals to saturated atmosphere concentrations in suitable chambers. This part of the investigation involved not only the vapors of Pydraul F-9 itself but also experiments where the fluid was dropped on Inconel surfaces heated to 1050°F and 1250°F. In all cases the toxicity was roughly comparable to that of petroleum-based hydraulic fluids as far as short-term massive exposures are concerned.

When splashed or sprayed into the eyes, Pydraul F-9 causes burning and smarting; however, there have been no reports of lasting damage. In treating eye irritation following introduction of Pydraul, copious and prolonged washing is recommended. To relieve the irritation, physicians have used 1% Pontocaine solution as well as ophthalmic cortisone acetate solution.

Regarding the effect of Pydraul F-9 on workers, we have not experienced any injuries during its manufacture. We advise in safe handling that following prolonged or repeated skin contact, the material be washed off and that the material be kept out of the eyes. If prolonged contact with the decomposition products at elevated temperatures should occur, respiratory protection is necessary. For short periods such as would occur in turning off a machine following a breakdown, no such protection is necessary .

R. Emmett Kelly, M. D.
Medical Director

1/7/64

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