

FILE	✓	
Destroy		
JTG		
WHH	✓	✓
MNJ	✓	✓
REK	✓	✓
R-M	✓	✓
EPN	✓	✓

December 29, 1964

Doctor Claeys
Centre De Recherches Medicales Minières
Centre Faivre D Acier
Sin Le Noble
Nord France

Dear Doctor Claeys:

Pydraul A-200 is a compound that is a mixture of silicones and chlorinated hydrocarbons. It has an oral toxicity to rats of over 10 g/kg which, of course, represents low oral toxicity.

We exposed rats to saturated vapors at room temperature, with no ill effect. This was an exposure of six hours. We, then, carried out mist exposures to fog caused by decomposition at 10000F. There was considerable discomfort but the animals survived each one-hour exposure for a period of six hours. We, then, increased the concentration so that it was so dense that the animals were obscured in the back of the exposure chamber. They were subjected to 15-minute exposures. Oral and nasal discharge occurred, which ceased within one hour but the nasal mucosa was evidently irritated for a period of 24 to 36 hours.

Toxicity Report on Pydraul 625

Oral Toxicity in Rats

The Oral LD₅₀ of this fluid was placed at 34.3 grams per kilogram with lower and upper limits of 32.6 to 36.5 grams per kilogram. This indicates that the compound is relatively harmless from a standpoint of oral ingestion.

Oral Toxicity in Rabbits

The Minimum Lethal Dose in rabbits for this fluid was 4.25 to 5.00 grams per kilogram. The animals in this experiment did not appear to develop any paralytic symptoms. These data indicate considerable difference between the rat and rabbit work also. These data indicate that this fluid is only slightly toxic from a standpoint of oral ingestion to rabbits.

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Skin and Eye Irritation in Rabbits

This fluid was also tested for skin and eye irritation. These tests indicate that this fluid is a rather mild skin irritant with a score of 0.3 out of a possible 8.0 and a mild eye irritant with a score of 10.0 out of a possible 110.0.

Vapor Inhalation in Rats

Animals were exposed to saturated atmospheres of the vapors at room temperature. There was no evidence of toxicity, but probably very little vapor was carried over into the chamber. The animals were then exposed to a vapor inhalation of the fumes volatilized by dropping liquid onto a surface heated to 200°F. Rats were exposed for eight hours to a moderate concentration; this caused salivation and nasal discharge. There were no evidence of toxicity with the exception of local irritation. This was a rather large vapor concentration inasmuch as the condensate caused the fur of the animals to become damp. We, then, exposed the rats to such a heavy concentration that they were obscured in the chamber. This caused nasal discharge and redness of the eyes and nose. No systemic damage occurred.

The interpretation of the above data is that Pydraul 625, from the acute point of view, does not possess a great amount of toxicity. However, from the structure of the material and other data, I would warn against repeated or continuous skin contact as well as inhalation of the fumes at above room temperature. In fact, my recommendation would be the same for both Pydraul A-200 and Pydraul 625.

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

Sincerely,

R. Emmet Kelly, M. D.
Medical Director

REK:akd

cc: D. Perry - Brussels
bcc: D. F. Smith - St. Louis

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