

Copy to Dr. Reeve
Copy to Dr. Edgar

October 14, 1936

Mr. Robert P. Harland
907 Empire Building
Milwaukee, Wisconsin

Dear Sir:

Your letter of September 25th concerning the effects of gasoline on the skin, addressed to the Ethyl Gasoline Corporation, has been referred to me by Dr. Edgar in accordance with his recent

The effects of gasoline on the skin are in general like those produced by a number of fat solvents. There is a tendency for this solvent to remove the oil from the skin and to leave it in a dry and cracked state. For most people who are engaged in handling gasoline, this is about the only effect seen. However, if gasoline is applied to a clothed surface of the skin or if it is applied on or beneath a cloth or cotton sponge, or any other article which serves to hold it in contact with the skin and to prevent ventilation, blistering is very likely to result. Gasoline burns, therefore, are not too uncommon among people who handle gasoline or who have it spilled on them or on their clothing. Some people are apparently quite sensitive to gasoline and show a great deal more reaction to it than do others. However in my experience in connection with considerable numbers of regular refinery workers and filling station attendants, serious injury to the skin is not very frequent.

After some years of observations I am unable to detect any difference in the effects on the skin of gasolines which contain lead as compared to those which do not. The lead compound is present in very low concentration and it is in itself not as irritating to the skin as is an equivalent quantity of gasoline. I do not believe, therefore, that the lead compound exerts any influence on the irritating properties of gasoline. On the other hand, gasoline bases to which lead is added are extremely variable in their chemical composition. Therefore some gasolines seem to be more irritating than others and it is my opinion, though it would be a little difficult to prove, that some of the materials which result from modern processes of gasoline manufacture are more irritating than are the natural products of simple petroleum

Mr. Robert P. Harland (cont)

distillation.

You refer in your letter to regulations for the handling of Ethyl Gasoline. I do not believe there is at the present time any need for regulations for the handling of gasoline which refer specifically to gasolines containing lead. There is no present reason for believing that the small lead content of the gasoline represents any potential danger to persons who handle this gasoline. On the other hand there are a variety of reasons why all fuels destined for use in motors should be handled with caution. Spillage should be avoided as much as possible because gasoline of all types is toxic when inhaled, and also because the danger of fire is always present. Moreover all skin contact with gasoline should be avoided so far as possible because, as I have pointed out, gasoline is inevitably somewhat injurious to the skin. Any regulations which are in force in any part of the country with regard to the handling of gasoline are applied, and as a matter of fact, should apply to all types of gasoline. So far as I know, no instructions have been issued which have been directed specifically at the avoidance of contact with gasoline merely because it contains lead.

I trust this will serve to answer your questions, and if I can be of any further assistance to you, I shall be glad to do so.

Very truly yours,

RAK:ls

Robert A. Kehoe, M.D.

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