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LETTER TO THE EDITOR

Lubrication Engineering welcomes the comments and suggestions of readers with regard to articles published in its pages or concerning topics of interest to those engaged in any phase of lubrication engineering. Letters received cannot be acknowledged, but those felt to be of interest to other readers will be published. The Society will not be responsible for the statements or opinions expressed.

ASLE FAR EASTERN CORRESPONDENT ANSWERS QUERY ON JAPANESE LAW

Mr. Robert F. Connelly
CPO Box 642
Tokyo 100-91, Japan

Dear Mr. Connelly:

I read with interest your recent article in the March 1975 *Lubrication Engineering* on the new Japanese law on the regulation of chemical substances. I wish to take advantage of your offer and ask for further information. Specifically I would appreciate your comments on the following:

1. You mentioned that an item containing three or more ingredients can be classed as a "product." What information must be revealed on an item classed as a "product?"
2. If the item contains a mixture of solvents plus the active ingredients, can each of the solvents be counted as an ingredient?
3. Since the regulations do not require listing percentages of components, is there any minimum below which it is unnecessary to list an ingredient?
4. Is a mixture with 1 percent of a toxic material placed in the same category as a mixture that contains 50 percent of the same toxic material?
5. Are several formulations considered differently than the same formulation supplied in bulk?

My company manufactures and sells a variety of release coatings and dry film lubricants based on fluorocarbons and polysiloxanes (silicone). Our sales to Japan are very minor at this time but a number of our U. S. customers have affiliates in Japan who will, we hope, want to try our formulations. How aggressively we cultivate this business can be influenced by governmental restrictions in Japan. We prefer to reveal as little proprietary information as possible.

You can be most helpful by providing answers to my questions as well as any additional information you might think of value.

(Name withheld)

Mr. Connelly's Reply:

Dear Sir:

As with any totally new legislation, the new Japanese law "Concerning Screening of Chemical Substances and Regulations of their Manufacture, Importation, and Use" has been subject to considerable discussion, resulting in some ad-

ministrative modification of the original provisions. Since the questions posed by Mr. Fum are typical of those heard from many quarters, we are including them in our reply.

1. Q. You mentioned that an item containing three or more ingredients can be classed as a "Product." What information must be revealed on an item classed as a "Product?"

A. As mentioned in the March, 1975, issue of *Lubrication Engineering*, one of the administrative decisions was to define amorphous or liquid compounds containing three or more ingredients as "Products." We have been allowed to clear shipments of lubricants through customs without revealing the formulation with this one exception. On the reverse of the invoice we must state, "This product does not contain any P.C.B." After this statement we must place the company banko (seal).

2. Q. If the item contains a mixture of solvents plus the active ingredients, can each of the solvents be counted as an ingredient?

A. Each solvent would be regarded as a separate chemical substance under the law. However, some of the listings are rather general, e.g., "light oil produced by reforming of petroleum fractions," "kerosene produced by reforming in cracking of petroleum fractions," "aromatic hydrocarbons (C₆-8) produced by pyrolysis of petroleum fractions." Other rather generalized listings include "petroleum sulfonic acid salt (Ca, Mg, Na)," "barium petroleum sulfonate," "naphthene acid" and "lead naphthalene."

3. Q. Since the regulations do not require listing percentages of components, is there any minimum below which it is unnecessary to list an ingredient?

A. According to our contact at MITI, any chemical substance deliberately added to the mixture should be specified. Since there are very low substances which would have beneficial effects at concentrations below the limits at which they could be detected, it would be appropriate to disclose all such ingredients, regardless of concentration.

4. Q. Is a mixture with 1 percent of a toxic material placed in the same category as a mixture that contains 50 percent of the same toxic material?

A. First, let us emphasize that a "toxic material" is not necessarily a "Specified Chemical Substance" under the Code. The Code is intended to put rigid controls on the use of substances which are "non-biodegradable and which will accumulate in biological organisms and which, if ingested, could be injurious to human health." Therefore, a mixture containing one percent of a "Specified Chemical Substance" would fall into the same category as a mixture containing 50 percent of the same substance.

As a general rule, marketers of lubricants would be well advised to find substitutes for any "Specified Chemical Substance" in their formulations. The objectionable "Specified Chemical Substance" which has been most widely used in the past in lubricant formulations is polychlorinated biphenyl (better known as "PCB"). While none has been manufactured or imported for some time, PCB was back in the headlines only two months ago resulting from the fact that a large firm in Kentucky was still selling old stocks of lubricants containing PCB.

It should also be noted that a chemical compound will not be classified as a "Specified Chemical Substance" if it already falls under existing legislation covering "specified poisons," "food stuffs including additives, containers and wrappings, playthings and detergents," "agriculture chemicals," and "medical supplies (including pharmaceuticals, phosphamides, cosmetics and medical implements)." Therefore, it would be possible to have a different set of restrictions upon a "toxic material" even though it is not classified as a "Specified Chemical Substance."

5. Q. Are aerosol formulations considered differently than the same formulation supplied in bulk?

A. Aerosol formulations fall under a totally different set of regulations. Since an aerosol can has "shape or form," it is, by definition, a "Product" rather than a "Chemical Substance." The regulations covering the importation of aerosols are quite complex, and numerous steps must be followed in order to clear a shipment.

When importing any aerosol, all of the following steps must be followed in the proper order:

1. The importer must obtain the necessary information from the manufacturer so that he can submit an "Aerosol Information Form," in Japanese, to the Aerosol Association Laboratory. This form must include the following items: Purpose of importing the aerosol, use, name, weight or volume, pressure, name of propellant, list of ingredients, name and address of manufacturer, materials used in the container, thickness of container, inside diameter of container, capacity of container, name of manufacturer of container, address of manufacturer of container.

2. The above form is submitted to the Aerosol Association Laboratory. After approximately two weeks, they advise whether they are willing to test the import.

3. The customs house broker removes two cans from the bonded warehouse, and these are hand carried to the Aerosol Laboratory, along with the authorization to submit the sample.

4. After analysis, the Aerosol Laboratory submits a report covering the items above.

5. The closures of the containers (they have been cut up with tin strips) must be picked up from the Aerosol Association Laboratory and returned to the customs house agent to be replaced in the original box. This is necessary so that the number of containers presented to customs is the same as the number shown on the invoice.

6. At this point, the shipment is ready to submit to customs to be subjected to the procedures required for nonaerosol imports.

The entire procedure must be repeated each and every time the same product is imported.

A number of people are referring to this law as the "Anti-PCB law," for the manufacture of lubricants; this abbreviation is accurate. However, in the future, other substances may be found with beneficial effects for lubrication while, at the same time, being objectionable from the standpoint of nonbiodegradability and accumulation in biological organisms. Compounders should keep this in mind as they screen new candidate substances.

Warmest personal regards,

BARCLAY & COMPANY, INC.

by Robert F. Connelly
Manager, Industrial Products Div.



ASLE/ASME
Joint Lubrication Conference
October 21-23
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