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September 14, 1984

Mr. Louis Borghi
Senior Scientist
Industrial Chemical Information Section
Dynamac Corporation
The Dynamac Building
11140 Rockville Pike
Rockville, MD 20852

Dear Mr. Borghi:

Eastman Kodak Corporation (Eastman) is herewith providing information as you requested in your letter to Dr. D. W. Kreh of August 1, 1984.

You have already been informed that the following substance, previously produced and sold in laboratory scale quantities by Eastman, is no longer produced:

Tetraethylene glycol monomethyl ether [CAS No. 23783-42-8]

Eastman does not manufacture triethylene glycol monomethyl ether [CAS No. 112-35-6].

Although Eastman does not manufacture the following glycol ethers as discrete chemical substances, byproduct mixtures containing these ethers are produced by Eastman which contain the following:

a. Triethylene glycol monoethyl ether [CAS No. 112-50-5]
b. Tetraethylene glycol monoethyl ether [CAS No. 5650-20-4]
c. Triethylene glycol monobutyl ether [CAS No. 143-22-6]

The following respond to your specific questions. These answers pertain to the three glycol ethers (ethers a, b, and c) above.

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KINGSPORT, TENNESSEE 37662 • 615 229-2000

1. Current annual production and trends

Eastman produces these three glycol ethers only in byproduct mixtures. These mixtures typically contain predominately the mono ether of triethylene glycol plus smaller quantities of the mono ethers of diethylene and tetraethylene glycols. This is the case for both the ethyl ether and the butyl ether series.

a. Triethylene glycol monoethyl ether [CAS No. 112-50-5]
Annual production - less than 500,000 kg

b. Tetraethylene glycol monoethyl ether [CAS No. 5650-20-4]
Annual production - approximately one-fifth that of triethylene glycol monoethyl ether

Note that a marked decline in production and sales is projected for the next five years for ethers (a and b) above.

c. Triethylene glycol monobutyl ether [CAS No. 143-22-6]
Annual production - less than 2,000,000 kg

A flat to decreasing trend in sales is forecast for ether (c) above.

2. Technical product literature and material safety data sheets

See enclosed.

3. Use data

The byproduct glycol ether mixtures are sold to formulators of brake fluid.

4. Occupational exposure

No more than 50 workers are assigned annually to the manufacture of byproduct mixtures containing the three glycol ethers. These byproducts are produced, transferred, and stored in enclosed equipment. The only exposure point is during occasional quality control sampling and bulk loading. Actual exposure is insignificant, since workers work in a well ventilated area, and because the liquids have very low vapor pressure.

5. Consumer exposure data

The glycol ethers are components in brake fluids sold to garages and retailed to consumers. Typically the consumer is expected to store small quantities (1 pint) and open the container a few times per year to top off the master brake cylinder in his car.

6. Unpublished toxicological data

None.

7. Environmental data

Air emissions are minimal because of low volatility and enclosed equipment. There are no waste streams. The glycol ethers are expected to biodegrade readily.

We hope that you will find this information helpful for your report to the Interagency Testing Committee.

Yours very truly,

R. D. Gerwe

R. D. Gerwe
Senior Chemist
Product Safety Staff

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