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RESULTS OF RANGE FINDING TOXICOLOGICAL TESTS ON EPON 1164-1

Chemical Name (300 per name)	25	CAS No. (10)	24
GLYCIDOL & ITS DERIVATIVES		999 800-13-4	
PROPANE, 2,2'-BIS(P(2,3-EPOXYPROPOXY) PHENYL),		1675-54-3	
		—	

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D-364

Biochemical Research Laboratory
THE DOW CHEMICAL COMPANY

Subject: RESULTS OF RANGE FINDING TOXICOLOGICAL TESTS ON EPON1164-1

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Work By V. K. Rowe

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UNIT ABSTRACT

EPON1164-1 does not appear to present any serious toxicological hazards.

UNIT INDEX

EPON1164-1; Toxicity of

Shell EPON1164-1; Toxicity of

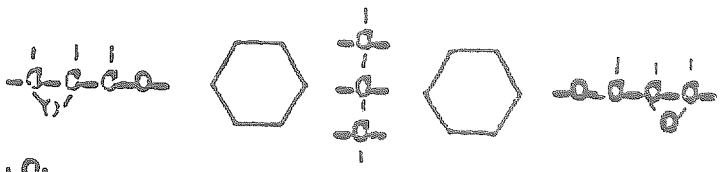
Propane, 2,2'-bis(p(2,3-epoxypropoxy)phenyl); Toxicity of

MATERIAL

The subject material is thought to be bis(p(2,3-epoxypropoxy)phenyl)propane part of which is polymerized.

Formula:

Structural



Empirical $C_{21}H_{24}O_4$

The material was obtained from the Shell Chemical Corporation as a 50% solution in methylisobutylketone. No other data is available upon it.

PROBLEM

The material is being considered for use in Saran film for food packaging etc. In final form, none of the methylisobutylketone will be present. What toxicological effects does the material have?

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EXPERIMENTAL

In order to test this material, the solvent, methylisobutylketone was removed from the resin by C. L. Moyle by heating to 160°C. at 2 mm. Hg. The remaining residue was a yellow, viscous resin. This resin was dissolved in olive oil and fed to rats in single oral doses as large as 3.0 g./kg. without causing any deaths.

The material as a 10% solution in butylcarbitolacetate was repeatedly applied to the ear and shaven belly of a rabbit. It caused a very slight irritation when first applied and, after several repeated exposures, a response of slight intensity developed. It seems doubtful, however, that this would be of much practical significance in most applications of this material.

COMMUNICATIONS

Correspondence from the Shell Chemical Corporation of San Francisco to with regard to this material indicates that its handling hazards are negligible. It is, however, pointed out that the material has not been studied sufficiently to be satisfactory for use in applications involving foods.

CONCLUSIONS

We do not believe that EPON1164-1 presents any significant handling hazard. More toxicological work will have to be done before it can be approved for use in food applications.

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