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KELLER AND HECKMAN LLP
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1001 G Street, N.W.
Suite 500 West
Washington, D.C. 20001
tel. 202.434.4100
fax 202.434.4646

330721

Writer's Direct Access
Thomas C. Berger
(202) 434-4285
berger@khlaw.com

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(Attn: TSCA Section 8(e) Coordinator)
U.S. Environmental Protection Agency
1201 Constitution Avenue, NW
Washington, DC 20004-3302
Phone: 202-564-8940

88110000030

Re: Fatty acids, tall-oil, esters with pentaerythritol (CASRN 68188-27-2)

Dear Sir or Madam:

On behalf of Arizona Chemical Company LLC (Arizona or Arizona Chemical), we are hereby delivering a report summarizing an acute toxicity study on bacteria on the above referenced test substance pursuant to current guidance issued by EPA indicating EPA's interpretation of Section 8(e) of the Toxic Substances Control Act.[1]

Attachment 1 reports results which EPA generally consider to be of "moderate" concern. Agency guidance states that test results showing moderate concern should be reported if actual or potential exposure to the test substance is sufficient to cause the effects observed in the study. Arizona Chemical does not have any information to support a conclusion that actual or potential exposure to the substance will cause the adverse effects observed in the study. Nonetheless, Arizona is submitting this information pursuant to Section 8(e) out of an abundance of caution and as a matter of good product stewardship.

[1] This information is being submitted in conjunction with a voluntary audit and disclosure of potential TSCA violations dated October 13, 2010.

CONTAINS NO CBI

Should you have any questions, or require further information, please contact Ms. Jenifer Whittington. Her contact information is as follows:

Ms. Jenifer Whittington
Arizona Chemical Company, LLC
US Product Regulatory Manager
1201 West Lathrop Avenue
Savannah, Georgia 31415
(912) 238-6776
jenifer.whittington@azchem.com

Sincerely,

Thomas C. Berger/P.O'B.

Thomas C. Berger

Attachment 1

cc: Philip Milton, EPA (w/o attachment)

ATTACHMENT 1

Fatty acids, tall-oil, esters with pentaerythritol (CASRN 68188-27-2)
Acute Toxicity Test with Bacteria (*Pseudomonas putida*)
Study No. 1078/002
Safepharm Laboratories (Oct. 30, 1997)

Summary:

The study considered the effect of the test substance on the growth of bacteria over a 16 hour period. Once bacterial populations were removed from exposure, absorbance values were determined. These absorbance values, in comparison to control values, were used to quantify inhibition of growth using the following equation:

$(B_R - B_N) / (B_R - B_O) \times 100$,

where B_R is the mean absorbance of the control at the test's end; B_N is the mean absorbance of the test culture at the test's end, and B_O is the mean absorbance of the control culture at the start of the test period.

Due to the poor solubility of the test materials, *Pseudomonas putida* was exposed to an aqueous dispersion of the test material (a water accommodated fraction (WAF)) at multiple concentrations (*e.g.*, 5, 10, 20, 40, 80, 160, 320, 640, 1,280, 2,560, 5,120, and 10,240 mg/L loading rate WAF). Exposure is expressed in terms of the original concentration of the test material in water at the start of the mixing period, *i.e.*, the loading rate, irrespective of the actual concentration in the WAF. Thus, results are reported as effective loading rates (ELR). Three replicate samples were prepared for each test concentration.

Results:

TABLE 2

MEAN ABSORBANCE VALUES FROM THE DEFINITIVE STUDY

Nominal Concentration (mg/l loading rate WAF)	Absorbance Value	
	0 hours	16 hours
Control	0.009	1.689
5.0	-	1.672
10	-	1.531
20	-	1.476
40	-	1.518
80	-	1.392
160	-	1.305
320	-	1.244
640	-	1.074
1280		1.010
2560	-	0.724
5120	-	0.089
10240	-	0.011

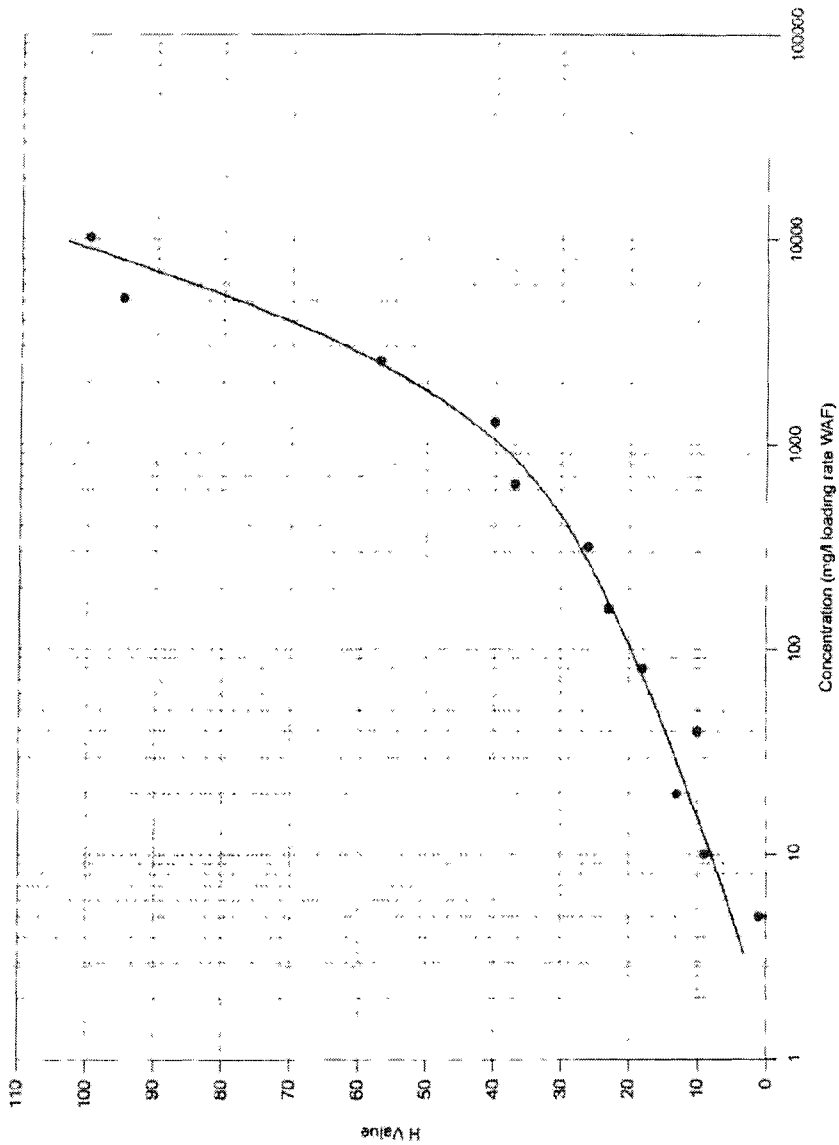
TABLE 3

INHIBITION OF GROWTH

Nominal Concentration (mg/l loading rate WAF)	H Values (%)
5.0	1
10	9
20	13
40	10
80	18
160	23
320	26
640	37
1280	40
2560	57
5120	95
10240	100

H values, *i.e.*, inhibition of growth values, were plotted against test concentration (Figure 1, below). The ELR_{10} and ELR_{50} values were read from the graph.

FIGURE 1
INHIBITION OF GROWTH



Assessment:

Bacterial growth was clearly affected by the test substance over a period of 16 hours. The following values were observed under the conditions of the study:

- The ELR_0 was 10 mg/L loading rate WAF;
- The ELR_{10} was 14 mg/L loading rate WAF; and
- The ELR_{50} was 1,800 mg/L loading rate WAF.