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Anh Nguyen
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To: NCIC HPV@EPA
CC:
Subject: Environmental Defense comments on Isooctadecanoic Acid Reaction Products with TEPA (CAS# 68784-17-8)

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Richard_Denison@environmentaldefense.org on 12/01/2003 01:30:59 PM

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Subject: Environmental Defense comments on Isooctadecanoic Acid Reaction Products with TEPA (CAS# 68784-17-8)

(Submitted via Internet 12/1/03 to oppt.ncic@epa.gov, hpv.chemrtk@epa.gov, boswell.karen@epa.gov, chem.rtk@epa.gov, MTC@mchsi.com, and Sarah_McLallen@americanchemistry.com)

Environmental Defense appreciates this opportunity to submit comments on the robust summaries/test plan for Isooctadecanoic Acid Reaction Products with TEPA (CAS# 68784-17-8).

The Health, Environmental, and Regulatory Task Group (HERTG) of the American Chemistry Council's Petroleum Additives Panel, in response to the HPV Challenge, has submitted robust summaries and a test plan for isooctadecanoic acid reaction products with TEPA (CAS# 68784-17-8). This CAS# is actually a mixture of chemicals consisting of from one to three molecules of isooctadecanoic acid linked to one molecule of tetraethylenepentaamine (TEPA). It is synthesized in highly refined lubricant base oil and is not isolated in pure form. The resulting product is used primarily as an ashless dispersant to control deposits in water-cooled two-cycle engines. It is not mentioned, however, that such engines are used almost exclusively on outboard motorboats, thus providing greater potential for consumer exposure and environmental contamination than implied by the test plan. Other uses, if any, are not mentioned.

The test plan provides a good summary of the limited data available for this substance; most SIDS elements are not currently addressed by available data. The available studies are described in some detail in the robust summaries and appear to have been carefully designed and conducted under GLP guidelines. Review of the studies listed under Ecotoxicity indicates the test concentrations used were those that went into solution following 24 hours of mixing, and referred to as the "water accommodated fraction". Thus, in the matrix of SIDS elements versus available data and testing proposed in the test plan, it should be pointed out that WAF stands for "water accommodated fraction" and as such accounts only for that portion of the dose that went into solution under the mixing conditions used. WAF does not indicate the actual concentration of the material in the water to which the test species were exposed, only that portion of the dose that went into solution. The actual concentration of the test substance in the water was apparently not determined.

In any case, it appears this substance, at the dissolved concentrations

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achievable, has low toxicity to fish and moderate toxicity to aquatic invertebrates. This chemical is, however, quite toxic to aquatic plants, at least to the algae tested. This last point is significant in light of the facts that this chemical is not readily biodegradable and its primary use is in outboard motor oils. Thus, there is significant potential for exposure to aquatic plants. Also, since it appears that only one species of aquatic plants has been tested, it would seem highly desirable to conduct studies of additional species of aquatic plants, although we recognize that further studies are not required under the HPV Challenge.

Robust Summaries of the limited data addressing mammalian toxicity and genotoxicity suggest this product has little acute toxicity and is not mutagenic in the Ames system. Other SIDS elements are apparently not addressed by available data; for this reason, the test plan proposes appropriate studies or computer modeling to address each of those elements not currently addressed by available data.

Thank you for this opportunity to comment.

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