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Subject: Environmental Defense comments on Polyphosphoric Acid Esters of Triethanolamine, Sodium Salts (CAS# 68131-72-6)

(Submitted via Internet 6/1/04 to oppt.ncic@epa.gov, hpv.chemrtk@epa.gov, boswell.karen@epa.gov, chem.rtk@epa.gov, MTC@mchsi.com, and Sjbarbee@archchemicals.com)

Environmental Defense appreciates this opportunity to submit comments on the robust summary/test plan for Polyphosphoric Acid Esters of Triethanolamine, Sodium Salts (CAS# 68131-72-6).

Arch Chemicals, Inc., in response to EPA's High Production Volume (HPV) Chemical Challenge, has submitted robust summaries and a test plan describing data for triethanolamine, which it proposes to use to address the SIDS elements required under the HPV Challenge for polyphosphoric acid esters of triethanolamine, sodium salts. No data are provided for the sponsored substance itself, polyphosphoric acid esters of triethanolamine, sodium salts. We appreciate the fact that the subject chemical is a mixture of sodium salts of phosphoric esters of triethanolamine and as such presents some technical problems to the design and conduct of the appropriate tests. However, we are not convinced that the properties of polyphosphoric acid esters of triethanolamine are sufficiently similar to those of triethanolamine such that data generated for the latter chemical can be completely substituted for those required for the former chemical.

Our objection to the use of data for triethanolamine to bridge all properties of polyphosphoric acid esters of triethanolamine, sodium salts is based on the following observations.

1. The properties of the two chemicals apparently differ sufficiently that polyphosphoric acid esters of triethanolamine, sodium salts are used as a surfactant to inhibit corrosion and scale in water recirculating systems, whereas there is no mention that triethanolamine is used in a similar manner. Thus, unless this submission simply failed to mention this use of triethanolamine, the two chemicals must have different properties. If they have different properties than triethanolamine, the esters should be directly tested.
2. Hydrolysis of polyphosphoric acid esters of triethanolamine, sodium salts to quantitatively yield triethanolamine is strongly inferred in this submission, but no evidence is presented to support this inference.
3. An assumption of metabolism of polyphosphoric acid esters of triethanolamine, sodium salts to triethanolamine is made, but again this assumption is not confirmed with data.
4. An assumption that the addition of a phosphate group would decrease the toxicity of triethanolamine is made, but again not supported by data.

Under the justification for use of data for triethanolamine as a surrogate for those of polyphosphoric acid esters of triethanolamine, sodium salts, the discussion of the molecular weight is irrelevant. The statement that molecular structures of the two chemicals are similar is like saying fatty acids and soaps have similar structures. It is true only to a limited

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extent, and it does not in any way confirm that they do not have different properties. The statement that the phosphate group is "normal to physiological function" is true, but it does not assure us that the combination of the phosphate group with other moieties is not toxic. (An extreme example where this is known not to be true is the organo-phosphate insecticides.)

Finally, we would point out that this submission describing the toxicological properties of triethanolamine fails to cite the recent extensive studies of this chemical by the National Toxicology Program.

In summary, we do not consider the submission of data generated for triethanolamine to serve as an acceptable surrogate for those required for polyphosphoric acid esters of triethanolamine, sodium salts has been justified. Thus, we do not think this is an acceptable submission under EPA's HPV Challenge.

Thank you for this opportunity to comment.

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