

Thiuram Category – Comments of Environmental Defense

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Environmental Defense appreciates this opportunity to submit comments on the robust summary/test plan for the Thiuram Category (tetraethyl thiuram disulfide CAS# 97-77-8 and tetramethyl thiuram disulfide CAS# 137-26-8).

The two chemicals proposed for the Thiuram Category, tetraethyl thiuram disulfide (TETD) and tetramethyl thiuram disulfide (TMTD), are closely related in structure and function and have similar biological properties, and are thus appropriately classified as a category. The robust summary submitted by the American Chemistry Council/Es Rubber and Plastic Panel (RAPA) provides an extensive compilation of data for TMTD. Our review of data for TMTD indicates it is generally complete and has been generated through well designed experiments. Data for TETD are less complete. We offer the following comments regarding the Test Plan and Robust Summaries:

1. The list of SIDS elements in Table 2 of the test plan does not include Fugacity for either compound. The observed or calculated rates of hydrolysis, biodegradation, lack of water solubility and other factors suggest that transport between environmental compartments (i.e., fugacity) is likely to be minimal. However, this element should still be listed even if calculated for both compounds.
2. According to Table 2 of the Test Plan, adequate data are available to determine Acute Invertebrate Toxicity and Alga Toxicity of TETD. The relevant sections, 4.2 and 4.3, of the Robust Summary for TETD provide no data on these subjects. Either the data should be provided or Table 2 should be revised and a proposal to provide the data offered. (The data may be available as the Test Plan states that "The thiurams are toxic to algae, water fleas and fish." If the data for TETD are not available, that statement should be revised.)
3. It is proposed that SIDS elements not addressed by data presented for TETD be extrapolated from relevant studies of TMTD. We would agree to such a proposal for three of the four missing elements for TETD (though we note that these three elements - hydrolysis, biodegradability and photodegradation - could be very easily generated).

Other comments:

1. The Executive Summary and other portions of the Test Plan almost exclusively focus on the use of these chemicals in the rubber industry. Whereas use as vulcanizing accelerators in the rubber industry may account for the greatest volume of these chemicals used, it does not account for the primary sources of human and environmental exposure. Both chemicals are also used extensively in agriculture as fungicides, pesticides, bacteriostats, and/or seed disinfectants. Each has found additional consumer uses as well. Further, TETD is consumed by some humans as a drug (specifically a deterrent to alcohol use). While some of these uses do not "count" in terms of determining whether TETD has high-production-volume status, from a public health perspective it would be desirable for the document to describe human and environmental exposures resulting from these varied uses as well as the use of these chemicals in the rubber industry.
2. A great many of the reports summarized in the robust summary for TMTD are not in English. It would be desirable to provide appropriate translations.

Thank you for this opportunity to comment.

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