Rhodia

HS&E CORPORATE SERVICES
Toxicology Department

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Subject: Rhodia Inc. Comments on NTP Nomination of THPO for Toxicity Testing

Dear Dr. Masten:

Rhodia Inc.(Rhodia) wishes to comment on the nomination by the Consumer Products Safety Commission (CPSC) of Tris(hydroxymethyl)phosphine oxide (THPO; CAS # 1067-12-5) for testing by the National Toxicology Program (NTP). CPSC recommended THPO for toxicological subchronic and chronic oral toxicity testing and dermal absorption testing. The basis for this recommendation was that phosphorus containing residuals were found in CPSC migration tests involving "woven furniture fabrics" processed with Tetrakis(hydroxymethyl) phosphonium chloride (THPC) pre-condensates. The CPSC analysis demonstrated that the migrating phosphorus was not THPC. A proportion of the migrating residual was identified as simple inorganic phosphate. The remainder was not identified in the work but was only considered potentially to be THPO, based on the process – it was not specifically identified.

Rhodia markets a THPC pre-condensate flame retardant process under the trade name Proban®.

We wish to provide the following comments to the panel in considering the testing proposal.

- THPO is not considered to be a flame retardant. THPO has different chemistry, different reactivity, different stability and different toxicity compared to the precursor chemicals in the process.

- The Flame Retardant that appears in the textile in the Proban® process is a very high molecular weight, very insoluble polymer. Though it is possible that a small amount of THPO might be produced in the process, residual levels should be minimal with routine efficient washing of the fabric during the application process.

- Proban® treated fabrics pass a performance test consisting of being run through 50 wash-cycles and then being tested for flame retardancy. If a significant percentage of phosphorus containing FR were easily extracted from the treated textile using water based saliva stimulant, it would be unlikely that Proban® could function as an effective durable FR for textiles.

- Rhodia believes actual THPO levels in treated fabrics to be extremely low, giving rise to minimal potential for exposure.

- Rhodia owns some acute toxicity data which shows that THPO has a completely different toxicity profile to the more reactive precursor chemical, THPC.

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- In the event that CPSC continues to recommend testing and NTP agrees to proceed, Rhodia would welcome the opportunity to provide advice on the design and conduct of the studies, which might include fabric choice, information regarding sample, purity and impurities etc.

- Although the original basis for CPSC testing fabric produced from the THPC pre-condensates process was because Rhodia had expressed interest in having its technology evaluated for use on upholstered furniture, Rhodia never entered and does not intend to enter the US furniture market with Proban® flame retardants.

Rhodia intends to embark on a program of work in connection with a regulatory submission in another country. This would involve extraction of Proban® treated fabrics with simulated saliva followed by identification and quantification of potential migrating substances (including THPO). This work, which we hope to conduct during 2006, might contribute to a better understanding of the need for the testing proposed by the CPSC. It would show whether significant levels of THPO are extracted and would therefore be complementary to the previous work conducted by CPSC.

If you require any further information relating to the information above we would be happy to help.

Thank you for this opportunity to comment.

Sincerely yours,

Glenn S. Simon

Glenn S. Simon, PH.D., DABT
Director of Toxicology