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Testimony to the Committee on Children, General Assembly, State of Connecticut Raised Bills No. 5035 and 5354

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My name is Thomas Osimitz. I have a doctorate degree in toxicology and am certified in toxicology by the American Board of Toxicology and am European Registered Toxicologist. I have spent over 30 years in the safety assessment of a wide range of chemicals. I am here to speak on behalf of the American Chemistry Council (ACC), specifically to comment on the toxicology of the organophosphate flame retardants cited in Raised Bill No.5035, with particular attention to TCPP. To start with, the naming of these molecules, while it conforms to a convention that chemists understand (TCCP, TCEP, TDCPP or TDCP, TDBPP), it can be confusing. It is tempting to group them all together, referring to them as simply "flame retardants" or "tris" and treat them as identical with respect to their health and environmental properties. That is too simple of a solution and may lead to the unnecessary restriction of a chemical that lacks the undesirable properties that have led to the elimination of other chemicals.

Of most interest to me is TCPP, (2-Propanol, 1-Chloro-, Phosphate (3:1)), an important industrial fire retardant. It's been in commerce for many years and has a much science that supports its efficacy and safety. TCPP is used primarily in polyurethane foam insulation. Its use there enables builders to meet building codes that are in place to the risk of fire. I am not aware of applications where TCPP is used as the primary flame retardant in children's products. It is my understanding TCPP is largely used for rigid foam insulation applications in the United States. That being said, large volumes of TCPP are made in China. Since many retailers and manufacturers source products and components from China, its possible TCPP ends up in some children's products originating from this region. Nonetheless, as I will discuss, from a safety standpoint, TCPP is different from TCEP, TDCPP, TDBPP) and even its presence in children's products does not pose the same potential risk that the other compounds might.

Unfortunately, it has been inaccurately lumped with similar sounding chemicals into the current chemical legislative debate due to comparisons to other flame retardants, some of which are no longer made or sold in the US.

TCPP has been through all required health and safety testing procedures and is approved for use worldwide. I have reviewed much of the data that supports the safety of TCPP. Most \consider to be the most comprehensive and carefully done assessment of TCPP.

In contrast other molecules to which it is related and with which it is often discussed, TCPP is not considered neurotoxic (toxic to the nervous system) nor is it toxic to the reproductive system. Speaking in regulatory terms, it is not "classified" as a CMR (carcinogen, mutagen, or reproductive toxicant) or a PBT (persistent, bioaccumulative, toxic chemical). This is important,

because it those properties: CMR, PBT that have led to the elimination from commerce of several of the other flame retardants.

As I mentioned, the EU carried out a full multi-year risk assessment for TCPP and for consumer exposure they concluded that at present there is no need for further information and/or testing and no need for risk reduction measures beyond those that are already being applied. This finding was reaffirmed in a 2011 independent study done for the EU Consumer and Health Authorities (DG-SANCO).

Conclusion...

Therefore, please be sure to make the distinction between molecules that have a demonstrated undesirable profile and TCPP, a molecule with flame retardant efficacy and a favorable safety profile.

Thank you very much.