



**AGENDA
TECHNICAL PROGRAM
Vinoy® Renaissance Hotel
St. Petersburg, Florida
May 26, 2016
2:30 PM – 5:00 PM**

**Responsible Management of Waste Foams Mixed with Flame Retardants - Green Science Policy Institute
Presenter: Sara Petty**

Until recently, the foam in furniture contained flame retardants in order to meet a California flammability standard called Technical Bulletin 117 (TB117). This regulation was updated to a smolder standard called TB117-2013, which has made furniture without flame retardants increasingly available. But as consumers purchase new furniture, discarded furniture is typically either landfilled or given to a second-hand market, where the flame retardants continue to pose a risk to human health and the environment. Responsibly managing waste foams that contain flame retardants presents a complex challenge which could benefit from input from a broad base of experts. On April 12-13th, more than 40 experts from industry, academia, government, and nonprofits met in Berkeley, CA to investigate how to improve management of these wastes. Topics included the scope of the problem; lifecycle considerations; exposure to flame retardants based on waste management practices; and how to fund possible advancements. This presentation will highlight the topics covered in the workshop as well as outcomes and opportunities for potential partnerships between various stakeholders.

**Update: Modification of the ASTM E-1428 Pink Stain Test Method – Lonza
Presenter: Tom Robitaille**

Lonza previously presented a review of the rationale and manner for modifying the current ASTM E 1428 Pink Stain Test method. The current ASTM E 1428 test method may not be reliable and can be very frustrating for those that are required to pass the test routinely. The Committee Working Group is progressing to the final stages of its review. This presentation will provide the current status of this work with an update on the team's effort to make the pink stain test more reliable and meaningful for both foam producers and end-users.

**Development of Flexible Polyurethane Foam with Improved Environmental Profile to Meet Stringent Flammability Tests - Fogg, Reimann, Shen
Presenter: Kurt Reimann**

In recent years society has seen many changes regarding the acceptance of various fire retardants for flexible polyurethane foam (FPF). Fire retardant grades of FPF must comply with today's environmental demands. While some application requirements have changed to the extent that fire retardant additives are no longer necessary, other applications with more stringent standards still require the use of fire retardant chemistries. The present work examines some of these requirements and has adapted specific chemistries to provide technically feasible solutions to meet future demands. Bench scale laboratory methods were combined with industry standard large scale tests to evaluate performance for furniture, mattress, and packaging foams. The resulting FPF have been shown to meet or exceed all test requirements. The laboratory methodology and results of appropriate large scale flammability test are presented.

Performance Comparisons of Renewable Resource Polyols for FPF - Emery Oleochemicals LLC
Presenter: Greg Hunt

Market demand and development for renewable resource polyols is increasing, but sustainability with performance can be challenging for flexible polyurethane foam systems. While the idea of making polyurethane foam from renewable resources is appealing, foam performance, quality and economics should not be negatively impacted. Natural (castor) oil or modified (soybean, cashew, canola, etc.) natural oil polyols (NOPs) can be more difficult to engineer for a specific application than their petrochemical equivalent. This paper explores conventional Toluene Diisocyanate (TDI) polyether flexible slabstock foam performance properties with partial substitution levels of renewable resourced polyols: EMEROX® 14050, Castor Oil, and two Soy-Based Polyols. Foam performance properties via ladder studies are compared.

The papers have not been subjected to peer review. PFA does not endorse or recommend the proprietary products or processes of any manufacturer. PFA assumes no responsibility for the accuracy or use of the information presented and hereby disclaims all liability in connection therewith.