Overview of GC3 Project Group Activities
Business / University Partnerships for Safer Chemicals

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GC3 Business / University Partnership Project

Primary Motivations for the Project

GC3 companies want to collaborate to conduct evaluations of safer alternative chemicals/materials to:

- pool knowledge and share the cost of evaluations
- allow conversations within supply chains that can lead to better outcomes

Universities have the technical expertise needed for evaluations
Project Objectives:

1. To develop repeatable model for a collaborative process, with university and business partners, to evaluate safer alternatives to chemicals.
   - Process should support decision-making for GC3 companies and their supply chain partners.
   - Should include a comparison of alternatives, including:
     - Relative hazard/safety
     - Technical performance
     - Cost

2. Pilot test the model

3. Share results with the public to promote adoption of safer chemicals and materials in supply chains
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The Pilot

Focus chosen by GC3 Members: Alternatives to known toxic phthalate plasticizers in PVC & non-PVC wire & cable applications
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Project Plan:

1. Identify & prioritize potential alternatives;
2. Conduct chemical hazard assessments on selected alternatives - performed by ToxServices, using the GreenScreen™;
3. Conduct collaborative technical performance and economic evaluations on top performers from Step 3; and
4. If none of the candidates in Steps 3 & 4 are acceptable, develop new chemicals/materials.

Complete
GC3 Business / University Partnership Project

Project Group Members:

**Suppliers**
- BASF
- Dow Chemical
- Hallstar
- Teknor Apex

**University Partners**
- Lowell Center for Sustainable Production
- Faculty of Univ. of Mass Lowell

**OEMs/Retail**
- Dell
- EMC
- HP
- Staples

**Government & NGOs**
- Washington State
- Clean Production Action
- Pacific Northwest Pollution Prevention Resource Center

**Consulting Toxicologists**
- ToxServices
Final List of Plasticizers

- Hexamoll® DINCH™ - BASF
- DEHT
- DINP
- DOZ
- Dow Ecolibrium™ (biobased polymer)
- DPHP
- TEHTM
- HallStar (polyester adipates)
  - Dioplex
  - Paraplex

Chemical Hazard Screening using the GreenScreen™ - (conducted by licensed GreenScreen Profiler)
What have we achieved so far?

✓ Succeeded in demonstrating that collaborative alternative assessments can be done

✓ Succeeded in demonstrating the benefits of a collaborative approach
  • Dialogue within supply chain yields more robust/usable results
  • Process yields more data
  • Cost-effective: pooling resources instead of each potential user conducting assessments themselves

✓ Succeeded in conducting chemical hazard assessments of 9 alternative plasticizers
Key Lessons from the Pilot Include:

1. There are differences in handling assessments with fully transparent data vs. formulations with CBI -- best to agree upon a process up front.
   - For formulations with CBI, GreenScreen done under NDA, reports redacted, and workgroup members unable to review and provide substantive comments

2. Funding model needs to be streamlined.
Next Steps

1. Write up project results to date, including:
   - Description of work accomplished & lessons learned
   - Description of proposed model for collaborative effort, based on the pilot

2. Write-up results of the chemical hazard assessments of alternative plasticizers and develop dissemination strategy
Ideas for Continuing the Work in 2012-2013
Ideas:

- Build out the model for collaborative alternatives assessments by executing the technical & cost analysis of high-scoring plasticizers?

- Choose another chemical class/application to repeat work already done?

- Other ideas?

Join the discussion at the project group mtg.