

Overview of GC3 Project Group Activities

Business / University Partnerships for Safer Chemicals



Monica Becker

Monica Becker & Associates Sustainability Consultants
&

Shari Franjevic

Transform to Green LLC
Consulting to Clean Production Action

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:

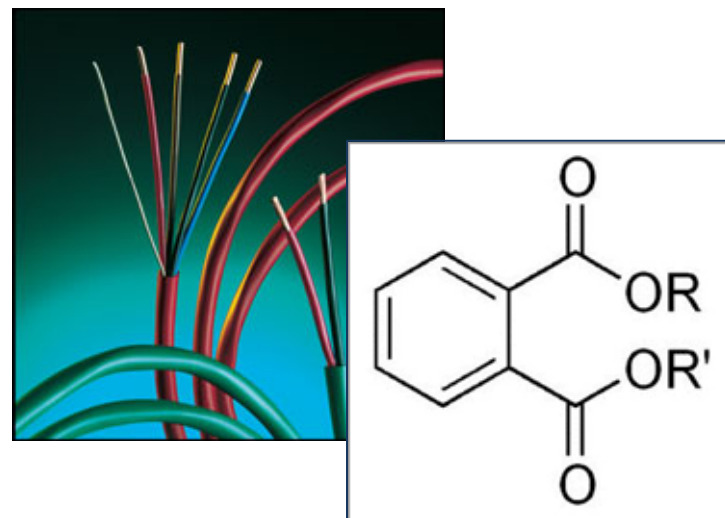
1. To develop repeatable model for a collaborative process, with university and business partners, to evaluate safer alternatives to chemicals.
 - Process should support decision-making for GC3 companies and their supply chain partners.
 - Should include a comparison of alternatives, including:
 - Relative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



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Project Group Members:

Suppliers

BASF
Dow Chemical
Hallstar
Teknor Apex

OEMs/Retail

Dell
EMC
HP
Staples

Consulting Toxicologists

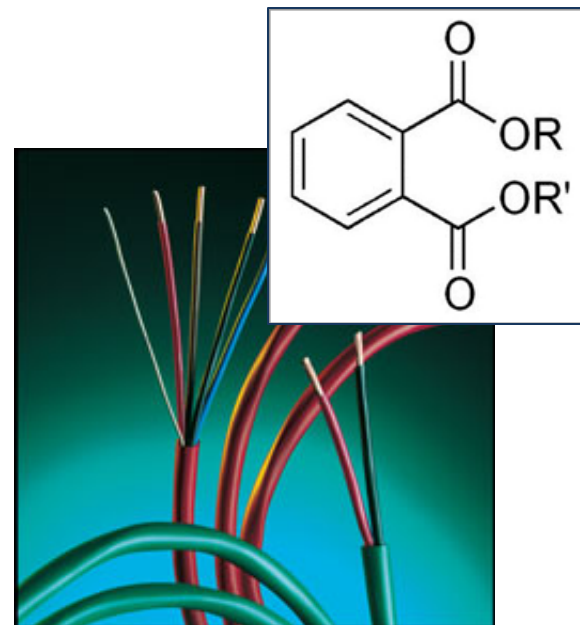
ToxServices

University Partners

- Lowell Center for Sustainable Production
- Faculty of Univ. of Mass Lowell

Government & NGOs

- Washington State
- Clean Production Action
- Pacific Northwest Pollution Prevention Resource Center



Final List of Plasticizers

Hexamoll® DINCH™ - BASF

DEHT

DINP

DOZ

Dow Ecolibrium™ (biobased polymer)

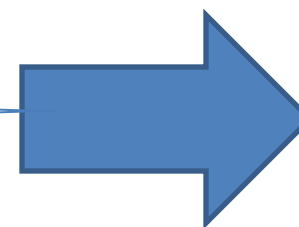
DPHP

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
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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.
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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
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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.

