Product Chemicals Management
Web Resource for Retailers:
A GC3 working group project

Yve Torrie
May 3, 2011
GC3 project group began 2 years ago to engage retailers and share best practices

Released report: *Best Practices in Product Chemicals Management in the Retail Industry*

- Apple, Boots, Green Depot, Patagonia, REI, Staples, and Walmart
- 11 best practices identified
- “A retailer should determine which product chemicals management approach is the best fit for its retail operation”
Many retailers lack resources to educate themselves about the tools and systems available to evaluate and manage chemical ingredients in products.

Web resource designed to help retailers begin the education process.

Help retailers begin to:
- establish systems to track the chemical ingredients of the products being sold
- identify chemicals of concern in products
- green their supply chains
Tools / systems

- enable retailers to evaluate chemicals or chemical-containing products for their potential human health and environmental impacts
- identify chemicals or materials that are regulated or are of concern and not yet regulated
- go beyond ensuring compliance with existing environmental regulations (provide additional information to “green” product lines)
- free or commercially available to retailers
- we welcome additions, modifications and comments so resource can be kept up to date
Product sectors
Retail operation classified by 20 product sectors (type of products sold):
- Apparel & Footwear; Automotive
- Building Materials & Products
- Cleaning & Janitorial Products (Residential & Commercial/Industrial)
- Electronics
- Food & Beverage
- Furniture
- Hard Goods & Appliances
- Health & Beauty, Cosmetics, & Pharmacy
- Jewelry & Crafts
- Lawn & Garden
- Outdoor/Sporting Goods
- Packaging
- Paints & Coatings
- Pet
- Photo & Printing
- Pool & Spa
- Textiles
- Tools
- Hardware & Plumbing
- Toys
Web resource

Tool Categories

Tools classified into 4 categories:

- Restricted Substances Lists (RSLs)
- Standards, Certifications and Labels
- Third-Party Evaluation Tools and Systems
- Consumer Guides
Standard Format Used to Characterize Each Tool

Data summarized for each tool includes:

- **Focus of Evaluation**
  - Substances (chemicals, ingredients), products (articles), companies/product lines
- **Product Stage of Life Evaluated**
  - Manufacturing, transportation, consumer use, end of life
- **Impacts Evaluated**
  - Air emissions, ecological health, energy use, GHGs, material impacts, ozone depletion, human health, water use, water emissions, worker health and safety
- **Process description**
- **Data needs**
- **Cost**
- **Evaluation frequency**
- **Some retailers who use it**
- **Similar tools**
## Product Chemicals Management Web Resource for Retailers
(BY PRODUCT SECTOR)

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<th>Key:</th>
<th>Restricted Substances Lists</th>
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<th>Third-party Evaluation Tools</th>
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<tr>
<td>Tools relevant to this product sector</td>
<td>Restricted Substances Lists (RSLs) e.g. AARFA RSL, &amp; ETAD</td>
<td>bluesign&lt;sup&gt;®&lt;/sup&gt;</td>
<td>EcoLogo</td>
<td>Global Organic Textile Standard</td>
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<td>Tools relevant to all product sectors</td>
<td>Cradle to Cradle&lt;sup&gt;®&lt;/sup&gt;</td>
<td>3E Green Product Analyzer&lt;sup&gt;™&lt;/sup&gt;</td>
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<td>Tools relevant to this product sector</td>
<td>Restricted Substances Lists (RSLs) e.g. GADSL</td>
<td>EPA Design For Environment Safer Product Labeling Program</td>
<td>EcoLogo</td>
<td>Green Seal</td>
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<th>Electronic Product Environmental Assessment Tool (EPEAT)</th>
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<th>Good Guide</th>
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<th>bluesign®</th>
<th>EcoLogo</th>
<th>Global Organic Textile Standard</th>
<th>Greenguard</th>
<th>OekoTex Standard 100</th>
<th>SmArT&lt;sup&gt;®&lt;/sup&gt; 4.0 Sustainable Product Standard</th>
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| Tools relevant to all product sectors | Cradle to Cradle™ | 3E Green Product Analyzer™ | Actio Material Disclosure | Chemical Compliance Systems, Inc. (CCS) Tools | GreenWERCs | IHS Inventory Greening Solutions | SciVera Lens™ |  |  |

| Jewelry & Crafts |  |  |  |  |  |  |  |  |  |
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| Lawn & Garden |  |  |  |  |  |  |  |  |  |
|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Tools relevant to this product sector | Restricted Substances Lists (RSLs) | Organic Materials Review Institute | USDA National Organic Program |  |  |  |  |  |  |
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**Evaluation Tool**
bluesign®

**Tool Category**
Standards, Certifications & Labels

**At a Glance**
Bluesign is an independent textile industry standard that optimizes the sustainability of the manufacturing process along the production chain. It is used by raw material and component suppliers that manufacture yarns, dyes, and additives, as well as textile manufacturers. The bluesign® certified fabric, textiles and accessories are then used by retailers and brands in their products.

**Tool Website(s)**

**Focus of Evaluation**
Substances (chemicals, ingredients), products and companies.

**Product Stage of Life Evaluated**
Raw material, manufacturing, consumer use, end of life

**Impact(s) Evaluated**
Air emissions, environmental health, human health, material impacts, water emissions, & worker health and safety. See bluesign standard: www.bluesign.com/index.php?id=151

**Process Description**
The goal of the standard is to improve environmental, health and safety conditions as well as improve resource efficiency along the whole textile supply chain. The standard guarantees compliance with new national and international legislative standards and aims to do this without compromising functionality, quality, or design.
The standard analyses input streams from raw materials to chemical components to resources used. Components are then rated according to their impacts and divided into three categories: a blue rating means components, production processes, and technologies have met all criteria for the bluesign® standard and may be used for all applications; a grey rating means components, production processes, and technologies may be used under one or more pre-conditions following the Best Available Technology as defined in the EU Directive 96/61/EC; a black rating is equal to a ban and the component must be eliminated from the manufacturing process.

In addition to the bluesign® standard criteria, documents are provided that describe the criteria for selected industries such as the chemical industry, textile manufacturing mills, producers of accessories, and garment manufacturers. See www.bluesign.com/index.php?id=151. The publicly available bluesign standard substances list (BSSL) specifies the restrictions (limits and bans) for consumer safety that are enforced by the bluesign® standard. Retailers using bluesign® approved fabric, textiles, and accessories can have the final product bluesign® safety certified.

Product Categories
Apparel & Footwear, Furniture, Textiles

Data Needs
Suppliers of chemical components must provide detailed chemical and toxicological data in order for bluesign to determine if the components meet the bluesign® standard. An on-site audit to verify handling of chemicals and EHS management is also conducted. For manufacturers, EHS and general production data covering one year is collected, followed by a detailed on-site evaluation of the EHS impacts. This results in a detailed report with recommendations of changes to be made in the components and processes used.

Cost of Tool
bluesign® members pay an annual membership fee and actively support the development of the standard. An alternative approach is to subscribe to the bluefinder™ — an online database designed for textile manufacturers which contains bluesign®-approved components (auxiliaries, dyestuffs, finishing agents, coatings, etc.).

Evaluation Frequency
The standard is updated periodically when new chemical components and processes are introduced.

Strengths
The bluesign® standard guarantees compliance with international legislative standards, without compromising functionality, quality, or design. It links suppliers, manufacturers, retailers, and brands to jointly reduce the environmental footprint of a product and foster a responsible textile industry.

Weaknesses
Allows “grey” chemical use without transparency — that is, without specifying what those grey chemicals are.

Examples of Retailers Who Use It
Patagonia, REI, North Face, Mountain Equipment Coop (MEC)

Similar Tools
Oeko-tex, Global Organic Textile Standard

For More Information
bluesign technologies ag, Tel: 41 (0)71 272 29 90, Email: info@bluesign.com
GreenWERCS™

Evaluation Tool
GreenWERCS™

Tool Category
Third-party evaluation tools

At a Glance
The GreenWERCS™ is a third party chemical screening tool that allows chemical manufacturers, formulators, and retailers to evaluate the potential impact of chemical ingredients in products on human health and the environment while protecting proprietary information.

Tool Owner/Sponsor
The WERCs Ltd. and Wercs Professional Services LLC

Type of Entity
For profit

Tool Website(s)
www.greenwercs.com; www.thewercs.com

Focus of Evaluation
Chemical ingredients in products.

Product Stage of Life Evaluated
Manufacturing, consumer use, end of life

Impact(s) Evaluated
Ecological health, human health, material impacts

Process Description
GreenWERC™ was developed to help retailers gain a better understanding of the human and environmental impact of the products they sell. The system requires suppliers to enter ingredient information into a proprietary database. GreenWERC™ uses this data to examine potential impacts on human health and the environment based on regulatory lists of hazardous substances. An aggregated score based on a company's weighting and scoring methodology is then developed.

A retailer can compare products within a category and make decisions about which to purchase based on its sustainability goals. GreenWERC™ protects a manufacturer's proprietary data so the ingredient data is not shared directly with the retailer.

Chemical product manufacturers can also use GreenWERC™ to better understand the potential human health and environmental impact of their product formulations at the development stage. In addition, the tool can compare products and provide "what if" scenarios that allow users to see the impact of changing chemical formulations.

**Product Categories**
All products

**Data Needs**
Suppliers provide key product ingredient data (chemical composition and formulation) for chemical products.

**Cost of Tool**
There are three ways for suppliers to purchase GreenWERC™: a software as a service model with a monthly fee and tiered pricing; a transactional fee structure with companies paying $20 to enter each product for scoring; and a perpetual seat license where the purchaser has the software installed at their workplace.

**Evaluation Frequency**
Ongoing — an on-demand tool. National and international regulatory lists of hazardous substances are updated quarterly.

**Strengths**
Retailers can use product scores generated by GreenWERC to compare competing products and encourage suppliers to substitute safer ingredients for harmful ones.

**Weaknesses**
Chemicals that do not appear on any lists receive a lower score, which indicates a preferable ingredient. This may be misleading, as chemicals not on lists may not have been adequately tested for human health and environmental hazards. Each retailer determines its own weighting methodology so that products may not be comparable across retailers.

**Some Retailers Who Use It**
Walmart / Sam's Club, West Marine, Halliburton, and Allergan Pharmaceutical.

**Similar Tools**
SciVera Lens™, 3E Green Product Analyzer™, IHS Greening Solutions

**For More Information**
Tom Carter — Vice President, The Wercs, Ltd., 23 British American Blvd., Latham, NY 12110, Tel: (518)-640-9249
Key to Data Category Definitions

**Type of Entity**
Non-profit, for profit, academic, government, industry, trade association, etc.

**Focus of Evaluation**
1. Substances (chemicals, ingredients)
2. Products (articles)
3. Companies/product lines

**Product Stage of Life Evaluated**
1. Raw Material
2. Manufacturing
3. Transportation
4. Consumer Use
5. End of Life

**Impact(s) Evaluated**
Detail about which attributes are evaluated (Air emissions, ecological health, energy use, GHGs, material impacts, ozone depletion, human health, social responsibility, water use, water emissions, worker health and safety).

**Process Description**
Summary of tool goal and use: How it works, process flow. Does it support compliance?

**Product Category**
Which product types or industries does the tool evaluate?

**Data Needs**
Type of input needed (MSDS, ingredient lists, etc.) and from whom (retailer/supplier/vendor).

**Cost of Tool**
Fee Structure.
How retailers can use tools

Restricted Substances Lists

This is where retailers often begin:

- RSLs for internal use
- Publicly available RSLs
- Sector wide RSLs
How retailers can use tools

Standards, labels and certifications

Largest group represented in Web resource:

- Confusing arena of over 300 eco-labels but commonly used and recognized ones can give retailers a degree of confidence in those products
- Can recognize standards, labels & certifications outright
- Can require additional information
- Understanding impacts evaluated usually key to determining recognition or requiring additional information
How retailers can use tools

Third-party evaluation tools and systems

Many tools are emerging in this category including some collaborative tools:

- Can ensure compliance with current regulations
- Can be used to compare alternative chemicals / products to determine safer choices
- Can help smaller retailers with limited internal resources
- Can help larger retailers offering a customizable system, and automation to manage many products and changing inventories
- Users make decisions about impacts to be evaluated, endpoints, weighting and scoring methodology
How retailers can use tools

Consumers guides

- Are transparent and allow consumers (and retailers) to understand more about product content
- Some have multiple criteria and some have one criteria e.g. Good Guide provides information about health, environmental and social impacts of products; Skin Deep provides information about chemicals of concern in personal care products
Retailers can choose to adopt a single tool or system or a combination of tools.

Some sectors have tools and systems developed to help retailers e.g. cleaning and janitorial products, furniture, apparel & footwear; and other sectors do not.

Time and energy needed to research tools and systems...this web resource can help educate retailers about what’s available to manage chemical ingredient in products.
Yve Torrie

Yve_torrie@uml.edu

978.934.3121