BizNGO Guide to Safer Chemicals

November 30, 2011

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Our mission

To promote the creation and adoption of safer chemicals and sustainable materials in a way that supports market transitions to a healthy economy, healthy environment, and healthy people.

Our objectives include ...

– Model new type and degree of collaboration
– Develop tools and continuous improvement criteria
– Advance policy initiatives
BizNGO Projects

**Chemicals**
- Principles for Safer Chemicals
- Guide to Safer Chemicals

**Materials**
- Principles for Sustainable Plastics
- Plastics Scorecard - tool for integrating green chemistry into material assessments

**Policy**
- Gov’t Initiatives – TSCA, CA Green Chemistry
- Industry Standards – GRI, Sustainability Consortium, ULE
BizNGO Principles for Safer Chemicals
(formerly the “Guiding Principles for Chemicals Policy”)

Endorsers include …

- Brooks Sports
- Catholic Healthcare West
- Construction Specialties, Inc.
- Health Care Without Harm
- Hewlett-Packard Company
- Hospira, Inc.
- Kaiser Permanente
- Method
- Novation
- Perkins+Will
- Practice Greenhealth
- Premier, Inc.
- Seventh Generation
- Staples, Inc.
- Whole Foods Market, Inc.

1. Know and disclose product chemistry
2. Assess and avoid hazards
3. Commit to continuous improvement
4. Support public policies and industry standards
BizNGO Guide to Safer Chemicals – Benchmarks

Principle #1a - Knowing Ingredients

Compliance
Know only regulated substances

Trailhead
Ask suppliers if they know chemicals in products, but do not require disclosure

Base Camp
Require disclosure of limited number of chemicals of high concern

High Camp
Require disclosure of all chemicals of high concern

Summit
Know all ingredients in products
Know upstream process chemistry
Know breakdown products

Full Lifecycle Insights
Highlights of Seagate’s Product Stewardship System

Alignment to standards
- Seagate uses IPC 1752 as our materials reporting format
  - IPC 1752 is an open, industry data standard, not a Seagate-specific format

Full disclosure
- “FMD” (Full Materials Disclosure) is used to manage compliance to changing regulations and customer specifications
- Software automation is used to gather and manage data, grade compliance

Stability
- Supplier reporting requirements and formats seldom change

Security
- Seagate does use third party content collection services, but all data are maintained only in Seagate systems – and supplier data are kept confidential

Supplier responsibility
- Suppliers must provide full-disclosure data
- Suppliers are responsible for engaging third party (WSP) services
Resources required to react to new substance restrictions typically follow a 'sawtooth' line, and increase over time.

- Emerging new restrictions result in spikes of NRE and business process change.
- Resource levels rise over time to sustain compliance.

**Challenge:** Meet increasing requirements with limited resources.

*Slide courtesy of Brian Martin, Seagate*
By investing early in full disclosure data, Seagate has been able to flatten the ‘sawtooth' in resource requirements

Seagate invested in CAS* system and developed full disclosure (Bill of Substances) strategy to deal with changing requirements.

“sawtooth” is less pronounced, overall resources required reduced as compared to other compliance strategies. Resource trend is almost flat. Why? Because Seagate collects full content data up front, and software is used to grade against new specifications.

Seagate is able to respond quickly to changing substance restrictions.

Seagate effectively manages substance restrictions at low, predictable cost and resource levels.

*CAS – Compliance Assurance System, Seagate’s materials content compliance system

Slide courtesy of Brian Martin, Seagate
**BizNGO Guide to Safer Chemicals – Benchmarks**

**Principle #1b - Benchmarks for Disclosure**

- **Trailhead**
  - Disclose presence or absence of chemicals of high concern

- **Base Camp**
  - Disclose most ingredients to customer

- **High Camp**
  - Publicly disclose most ingredients
  - Disclose all ingredients to 3rd party or customer

- **Summit**
  - Publicly disclose
  - All chemical and material ingredients in products
  - Process chemistries
  - Key life cycle concerns

**Full Product Disclosure**

**Compliance**
- MSDS
- RoHS
GIVE NEW MEANING TO CLEANING

Our new standards for household cleaning products let you make the best choice for you.

- Full transparency, disclosure of ingredients on packaging by April 2012
- Independent 3rd party verified compliance to standards
- No ingredients with significant environmental or safety concerns
- No formaldehyde-donors, preservatives which have the potential to release formaldehyde
- No phosphates, chlorine, or synthetic colors
- 100% natural fragrances
- No ingredients with moderate environmental or safety concerns
- No DEA, MEA or TEA—surfactants that have the potential to contain nitrosamines and other impurities
- No synthetic, petroleum-derived thickeners made from nonrenewable sources

- Only 100% natural ingredients
- No petroleum-derived ingredients
## Health Product Declaration Form

<table>
<thead>
<tr>
<th>Name &amp; IDs</th>
<th>Tuff Stuff X42, product SKU SB4353</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer</td>
<td>Ajax Manufacturing</td>
</tr>
<tr>
<td>Description</td>
<td>High performance coating designed for painting bath stall walls and other wet surfaces.</td>
</tr>
</tbody>
</table>

### 2) Product Contents Disclosure

<table>
<thead>
<tr>
<th>Disclosure level</th>
<th>94</th>
<th>percent of intentionally added content is fully disclosed (100 percent is ideal).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>CAS RN</td>
<td>%</td>
</tr>
<tr>
<td>1 Phenyl Glycidyl Ether</td>
<td>122-60-1</td>
<td>55%</td>
</tr>
<tr>
<td>2 Alkyl (C12, C14) Glycidyl Ether</td>
<td>68609-97-2</td>
<td>21%</td>
</tr>
<tr>
<td>3 Bis(2-(dimethylamino)ethyl) ether</td>
<td>3033-62-3</td>
<td>8%</td>
</tr>
<tr>
<td>4 Polyethylene</td>
<td>9002-88-4</td>
<td>7%</td>
</tr>
<tr>
<td>5 Trade secret</td>
<td>Not disclosed</td>
<td>3%</td>
</tr>
<tr>
<td>6 Acme Zap-It Antimicrobial</td>
<td>Content not disclosed</td>
<td>3%</td>
</tr>
<tr>
<td>7 Silver</td>
<td>7440-22-4</td>
<td>2%</td>
</tr>
<tr>
<td>8 Distillate Fuel Oils, Light</td>
<td>13463-41-7</td>
<td>1%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>All known residuals disclosed to</th>
<th>Lowest requirements (ideal)</th>
<th>X</th>
<th>100 ppm</th>
<th>1000 ppm</th>
<th>As required on MSDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 Formaldehyde</td>
<td>50-00-0</td>
<td>&lt;1000 ppm</td>
<td>Group 1: Agent is carcinogenic to humans (IARC) and other cancer warnings Generally accepted asthmagen (AOEC) R23: Toxic by inhalation and R24: Toxic in contact with skin and R25: Toxic if R34: Causes burns and R43: May cause sensitization by skin contact (EC Risk)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The manufacturer affirms that all known material contents were screened for chemicals of concern and health warning listings using: Pharos Chemical and Material Library from the Healthy Building Network.
BizNGO Guide to Safer Chemicals – Benchmarks

Principle #2 - Assess & Avoid Hazards

Compliance
Avoid legally restricted substances

Trailhead
Prioritize known chemicals of high concern (e.g., SIN List)

Base Camp
Assess hazards of chemicals in products and process chemistry

High Camp
Benchmark chemicals using Green Screen

Summit
Select safer substitutes for both products and process chemistry

Safer Substitutes
The SIN List
a tool for identifying high concern chemicals

www.sinlist.org

REACH S.I.N*
*SUBSTITUTE IT NOW
Greening Consumer Electronics
- moving away from bromine and chlorine

SONY ERICSSON

Bromine- and Chlorine-Free Mobile Phones

APPLE

Restriction of Elemental Bromine and Chlorine to Achieve Elimination of BFRs and PVC in Consumer Electronics Products

DSM ENGINEERING PLASTICS

Bromine- and Chlorine-Free Plastic Components
• Comparative Chemical Hazard Assessment Method
• Publicly accessible and transparent
• Data driven, systematic and scientifically robust
• Builds from:
  – Life cycle thinking
  – 12 Principles of Green Chemistry
  – US EPA DfE Chemical Alternatives Assessment method
Benchmark 1
Avoid – Chemical of High Concern

Benchmark 2
Use but Search for Safer Substitutes

Benchmark 3
Use but Still Opportunity for Improvement

Benchmark 4
Prefer – Safer Chemical
GREEN SCREEN

HP is the world’s leading practitioner of the Green Screen tool.

“HP has committed to replace restricted substances only with materials that are better for the environment and human health, and when there is sufficient assurance of required volumes and we have enough time to design and qualify the new material into the product. To assess alternative replacement materials we now use the Green Screen, a hazard-based assessment framework developed by the nongovernmental organization Clean Production Action.”

HP’s Global Citizens Report
**BizNGO Guide to Safer Chemicals – Benchmarks**

**Principle #3 – Commit to Continuous Improvement**

1. **Baseline**
   - Do not report on progress
   - Establish internal chemical policy guidelines & set goals

2. **Trailhead**
   - Publicly disclose internal guidelines towards goals

3. **Base Camp**
   - Publicly report on progress towards goals

4. **High Camp**

5. **Summit**
   - Integrate into 3rd party verifiable system and job descriptions & performance reviews

**Leadership & Innovation**
Using Safer Chemicals in Products Supports Preventive Health Care

Healthy Chemicals, Healthy Patients—Why Health Care Needs Federal Chemicals Reform

Green Buildings Need Safer Chemicals Policy Reform

Taking a Precautionary Approach to Chemicals in Products

Safer Chemicals Policy Reform—Bringing Transparency to Chemicals Management
Comprehensive Chemicals Policy – Policy Statement

CHW Supply Chain Management will:

1. Request product chemistry data from suppliers
2. Prioritize chemicals of high concern for elimination
3. Create contractual obligations w/suppliers to:
   a. Avoid chemicals of concern
   b. Substitute safer alternatives
4. Develop goals and metrics to measure progress and evaluate results
**BizNGO Guide to Safer Chemicals – Benchmarks**

**Principle #4 – Support Policies & Standards that Advance Principles #1 and #2**

- **Baseline**: Do not engage
- **Trailhead**: Public sharing of internal initiatives
- **Base Camp**: Submit written comments
- **High Camp**: Collaborate with advocacy organizations
- **Summit**: Publish OpEds, testify before Congress & speak to the media

Advancing a Green Economy
Support Public Policies & Industry Standards

CONSTRUCTION SPECIALTIES PROMOTES TSCA REFORM AT HOUSE HEARING

BUSINESS LEADERS DISCUSS SAFER CHEMICALS POLICIES
November 30, 2010
In this 7 min. video three business leaders discuss how their companies are implementing the BizNGO Principles

BizNGO
FOR SAFER CHEMICALS AND SUSTAINABLE MATERIALS
Engaging and Informing Policy

- Business and NGO collaboration
- Academia collaboration
- Public forums
- Media
- Inform and engage government agencies
- Engage and inform public policymakers
- Inform and engage at the organizational level
- Supply chain collaboration

*Slide courtesy of Roger McFadden, Staples*
Trends in Chemicals Management

• ↑ Transparency – disclose chemicals in products
• ↑ Responsibility -- Supply Chain and Life Cycle, including feedstocks
• ↑ Demand for comprehensive hazard data on chemicals
• ↑ Demand for safer alternatives based on hazard assessment
• Leadership across many sectors, including: Health Care, Electronics, Buildings, Retail, Cleaning Products, Personal Care Products, Apparel & Footwear, Outdoor Industry
Acknowledgements

- Alan Rae
- Albert Tsang
- Barbara Kyle
- Brian Martin
- Chris Youssef
- Colin Price
- Dennis McGavis
- Elizabeth Sommer
- Eric Harrington
- Helen Holder
- Howard Williams
- John Robbins

- Marilyn Johnson
- Mark Buczek
- Mary Ellen Leciejewkski
- Monica Becker
- Peter Syrett
- Rachael Baker
- Rachelle Wenger
- Rich Liroff
- Roger McFadden
- Sue Chiang
- Ted Smith
- Tom Lent
- Tracey Easthope
Thank You!

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