Requests for Transparency and Disclosure: What Makes Sense?

TRANSPARENCY IN THE MARKETPLACE: AN INTRODUCTION TO HPD AND EPD

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MATERIALS TRANSPARENCY: WHY IS IT IMPORTANT?

- Promote healthier products
- Enable better decision making
- Spur greater knowledge
- Drive the market
SWIMMING IN A WORLD OF ECOLABELS
PURPOSE OF EPD AND HPD

- Product transparency
- Document all of the ingredients in a product
- Perform rigorous assessment of environmental and human health impacts
- Publish the data in a recognized format to allow consumers to make better-informed product choices

(Think ramped up nutrition labels, produce country of origin labels, calorie information on menus, etc.)
ENVIRONMENTAL PRODUCT DECLARATION (EPD) – WHAT IS IT?

- Transparency tool: Provide product comparisons of environmental impacts
- History:
  - Developed in Europe starting in 1993
  - Published as ISO Standard 14025 in 2006
- Requirements outlined in Product Category Rules (PCRs)
- Evaluations based on a Life Cycle Assessment (LCA)
  - Raw material acquisition, manufacturing, transportation, use, end of life
  - EPD Summarizes Product LCA
  - Addresses topics such as: global warming potential, resource depletion, eutrophication, acidification, energy, water consumption
EPD – HOW IS ONE CREATED?

- Identify a Program Operator
- Utilize an established PCR
- Conduct LCA based on PCR
- Complete EPD Report (LCA summary, product performance data, corporate sustainability info)
- Verify EPD through 3rd party
- Publish EPD and register with Program Operator
HPD
Health Product Declaration

EPD
Environmental Product Declaration

- Ecotoxicity
- Human Toxicity
- Abiotic Depletion
- Acidification potential
- Eutrophication potential
- Global Warming potential
- Ozone Layer Depletion potential
- Photochemical Ozone Creation potential
- Hazardous and Non-hazardous waste
HEALTH PRODUCT DECLARATION (HPD) – WHAT IS IT?

- Addresses ecotoxicity and human toxicity of product ingredients
- Format administered by the Health Product Declaration Collaborative
- Guided by the HPD Open Standard – standardized process to disclose content, emissions, and health information
- References existing hazard lists (e.g. Pharos)
HPD OPEN STANDARD WORKING GROUP
HPD – HOW IS ONE CREATED?

- Fill out product description
- Inventory product contents
- Contents screenings focus on hazard, not risk
- Review contents against Authoritative Lists
- Provide details of testing and compliance
- Note accessory materials
- Summarize and publish
inventory of content and hazards... as information is known

Full Disclosure of Intentional Ingredients

Full Disclosure of Known Hazards

Disclosure Notes
### Residuals Disclosure

- Measured 100 ppm
- Measured 1000 ppm
- Predicted by process chemistry
- As per MSDS (1,000 & 10,000 ppm)
- Not disclosed
- Other

### Health Product Declaration

**Summary**

The content of this product was assessed for health hazard warnings as required using:

- Measured 100 ppm
- Measured 1000 ppm
- Predicted by process chemistry
- As per MSDS (1,000 & 10,000 ppm)
- Not disclosed
- Other

### Hazardous Substances

<table>
<thead>
<tr>
<th>Substance</th>
<th>Development</th>
<th>Neurotoxicity</th>
<th>Skin toxicity</th>
<th>Mammal</th>
<th>Physical hazard</th>
<th>Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total VOC Content</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material (g/l)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regulatory (g/l)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Content Notes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**VOC Emissions**

- N/A
- Yes
- No

**Certifications and Compliance**

<table>
<thead>
<tr>
<th>Certification</th>
<th>Security</th>
<th>VOC Content</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Continuous Improvement... start where you are.**

[www.HPDcollaborative.org](http://www.HPDcollaborative.org)
HEALTH PRODUCT DECLARATION
HAZARDS SUMMARY

Hazard Summary:
- X PBT (Persistent and Bioaccumulative Toxic)
- X Development
- X Endocrine

Total VOC Content:

Aggregated content hazard screening results
<table>
<thead>
<tr>
<th>Hazard</th>
<th>Development</th>
<th>Reproductive</th>
<th>Mammal</th>
<th>Physical hazard</th>
<th>Multiple</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer</td>
<td>Endocrine</td>
<td>Respiratory</td>
<td>Skin or Eye</td>
<td>Global warming</td>
<td>Aquatic toxicity</td>
</tr>
<tr>
<td>Total VOC Content</td>
<td>Material (g/l)</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regulatory (g/l)</td>
<td>N/A</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Content Notes</td>
<td>N/A</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Highest concern GreenScreen score** - Benchmark 1

quick reference highest GreenScreen score from content inventory
HEALTH PRODUCT DECLARATION
CONTENT INVENTORY

HEXABROMOCYCLODODECANE (HBCD)

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>CAS number</th>
<th>PBT Development</th>
<th>Endocrine Development</th>
<th>Multiple Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexabromocyclododecane</td>
<td>25637-99-4</td>
<td>Stockholm: Persistent Organic Pollutant (POP) - under review</td>
<td>EU H-Statements: H361 Suspected of damaging fertility or the breast</td>
<td>TEDX: Potential Endocrine Disruptor (also in OSPAR)</td>
</tr>
</tbody>
</table>

Allows foam insulation to meet the stringent fire safety requirements governed by the chemical industry has announced the development of an innovative new flame retardant is currently underway but will take time to be fully implemented.

context for content hazard screening data

Flame Retardant
The HPD Standard is solely a declaration of product content and does not address health hazards associated with exposure to its individual contents. It is not a full assessment of environmental impacts from the life cycle of this product. It is not an assessment of risks associated with actual use of the product. It does not address the potential health impacts of substances used or created during manufacture that do not appear as residues, nor substances created during combustion or other degradation processes.

This Health Product Declaration was generated following the requirements of the noted Standard version and is valid for a total of three years after the date of issue or three months after a substantive change of product contents occurs. Users should verify that this Health Product Declaration is consistent with the most current version of the HPD Standard. Accuracy of claims made in this Health Product Declaration is the sole responsibility of the listed manufacturer and certifier (if applicable). The HPD Collaborative does not warrant any claim made herein, explicit or implied. The HPD Standard is an "open standard," developed and managed by the HPD Collaborative, a nonprofit organization. For more information, visit hpdcollaborative.org.

### CONTENT IN DESCENDING ORDER OF QUANTITY

All ingredients must be assessed for health warnings against Priority Hazard Lists, regardless of disclosure level. Priority Hazard Lists and information on the GreenScreen Benchmark can be found at green.screene.org/hazardlists.

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>CAS number</th>
<th>% Weight</th>
<th>GS</th>
<th>RC</th>
<th>Nano</th>
<th>Rg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hazard B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hazard C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hazard D</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hazard E</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Notes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### HEALTH PRODUCT DECLARATION CONTENT INVENTORY

<table>
<thead>
<tr>
<th>0.5%</th>
<th>LT-1</th>
<th>No</th>
<th>No</th>
<th>Fl</th>
</tr>
</thead>
</table>

www.HPDcollaborative.org
<table>
<thead>
<tr>
<th>Certifying Party</th>
<th>Issue Date</th>
<th>Expiry Date</th>
<th>Certification &amp; Compliance Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRI Green Label Plus</td>
<td>2014-03-31</td>
<td></td>
<td>Carpet &amp; Rug Institute</td>
</tr>
<tr>
<td>Second Party</td>
<td></td>
<td>2014-11-14</td>
<td><a href="http://www.carpet-rug.org/co">www.carpet-rug.org/co</a></td>
</tr>
<tr>
<td>All facilities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UL Environmental Claim Validation Procedure - 2809 - Recycled Content</td>
<td>2009-11-08</td>
<td>2014-11-14</td>
<td>Underwriters Laboratories</td>
</tr>
<tr>
<td>Required or recommended product</td>
<td>Condition when required or recommended and/or other notes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mirror</td>
<td>4&quot; x 6&quot; acrylic mirror with double-sided adhesive tape. Assembled at the job site.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acrylic Number Plate</td>
<td>Constructed of acrylic with black top coat. Number plates are secured with stainless steel fasteners on the job site by installer.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coat Hook</td>
<td>Double hook constructed of black polycarbonate. Furnished in stainless steel for standard 4&quot; locker top in 2-tier lockers. Secured with stainless steel fasteners.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The manufacturer has divulged all known intentional and unintentional ingredients, with the exception of the exact identity of one component as a means to preserve Intellectual Property. Given the nature of the components and supplier quality assurance programs, the manufacturer has a high degree of certainty that all ingredients have been evaluated. Potassium Hydroxide appears in this formulation as a pH modifier included with one of the raw materials. This ingredient does not substantially alter the product in a platform for communication share any additional product or company details.
PRODUCT DATABASES: HPD ‘LIBRARIES’
CONTEX FOR REPORTING PRODUCT INFORMATION

- Product Contents and disclosure levels
- VOC Emission
- VOC Content
- Energy Use
- Water Use
- Materials Use
- Emissions
- Hazard Screening
- VOC Certifications
- Life Cycle Analysis
  e.g., embodied carbon, embodied energy, fossil fuel depletion, materials depletion, acid rain emissions
- Health Product Declaration via Product Category Rules
- Environmental Product Declaration
LETTERS OF COMMITMENT ISSUED BY 31 FIRMS TO DATE
NEW MR CREDITS IN LEEDv4

- **MRc Building Product Disclosure and Optimization - EPDs**
  - Possible 2 points
  - Offers credit for products with EPDs

- **MRc Building Product Disclosure and Optimization – Sourcing and Raw Materials**
  - Possible 2 points
  - Offers credit for products with publicly released reports from raw material suppliers

- **MRc Building Product Disclosure and Optimization - Material Ingredients**
  - Possible 2 points
  - Offers credits for products that use any of following programs of chemical inventory – transparency:
    - Publicly available ingredient inventory
    - HPD
    - C2C
Clients demanding HPDs
- Adobe
- Genentech
- Google
- Salesforce

Manufacturers providing HPDs
- Interface
- Shaw
- ThyssenKrupp
- View Glass

Top reasons for participating
- Corporate responsibility
- To promote transparency
- To have a market advantage

Biggest challenges compiling information
- Extensive data required
- Internal resistance
- Supplier resistance, lack of information/time
- Too many standards
“The transparency documents become the baseline for discussions with vendors in the supply chain to improve their processes and products supplied to the “down-channel” manufacturers.”

From “The Handbooks of Transparency: How EPDs and HPDs will drive the next generation of green” - by InPro Corporation 2014