NEW PRODUCT DISCLOSURE MOVEMENT IN BUILDING PRODUCTS

~

NEW OPPORTUNITIES FOR GREEN CHEMISTRY

Bill Walsh, Executive Director
Search Results for Board Insulation

CSI Masterformat 2004 Designation: 07 21 13

There are 30 products that meet your search criteria.

Sort by: VOC | ToxCon | MfrTox | RnMtrl | RnErg | Manufacturer Participation | Product Title | Manufacturer

<table>
<thead>
<tr>
<th>Product Name</th>
<th>VOC</th>
<th>ToxCon</th>
<th>MfrTox</th>
<th>RnMtrl</th>
<th>RnErg</th>
<th>Manufacturer Participation</th>
<th>Supplier Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roxul ComfortBatt mineral semi-rigid batt insulation (Grand Forks, BC only)</td>
<td>7</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>No Manufacturer Participation</td>
<td>Roxul</td>
</tr>
<tr>
<td>Knauf Insulation Board with Ecosic technology (Unfaced)</td>
<td>7</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>No Manufacturer Participation</td>
<td>Knauf Insulation</td>
</tr>
<tr>
<td>FOAMULAR® Rigid Board Insulation</td>
<td>7</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>Complete Manufacturer Participation</td>
<td>Owens Corning Sales LLC</td>
</tr>
<tr>
<td>Roxul ComfortBatt mineral semi-rigid batt insulation (Milton, Ontario only)</td>
<td>7</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>Manufacturer Participation In Process</td>
<td>Roxul</td>
</tr>
</tbody>
</table>
Search Results for Board Insulation

CSI Masterformat 2004 Designation: 07 21 13

There are 4 products that meet your search criteria.

Sort by: VOC | ToxCon | MfrTox | RnWtr | RnErg | Manufacturer Participation | Product Title | Manufacturer

<table>
<thead>
<tr>
<th>Product Description</th>
<th>VOC</th>
<th>ToxCon</th>
<th>MfrTox</th>
<th>RnWtr</th>
<th>RnErg</th>
<th>Participation Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roxul ComfortBatt mineral semi-rigid batt insulation (Grand Forks, BC only)</td>
<td>7</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>No Manufacturer Participation</td>
</tr>
<tr>
<td>Roxul ComfortBatt mineral semi-rigid batt insulation (Milton, Ontario only)</td>
<td>7</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>Manufacturer Participation In Process</td>
</tr>
<tr>
<td>Rmax Eco-Max wall insulation board</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>No Manufacturer Participation</td>
</tr>
<tr>
<td>Vacuum Insulation Panels</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>Complete Manufacturer Participation</td>
</tr>
<tr>
<td>Dow Corning</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>No Halogenated Flame Retardants</td>
</tr>
</tbody>
</table>

Filter by Minimum Manufacturer Participation Level
- No Participation
- Participation In Process
- Incomplete Participation
- Complete Using Common Ingredients
- Complete Participation

Filter by Restricted Substance List
- No EPA Chemicals of Concern
- No Living Building Challenge Red List
- No LEED Pilot Credit 11 Chemicals

Filter by Attributes
- No Bisphenol A
- No Added Formaldehyde
- No Phthalates
- No Halogenated Flame Retardants
Dedication to a responsible supply chain leads to responsible innovation and products

Did you know violent militias and rebel groups control many mines in the Democratic Republic of Congo (DRC) and surrounding countries, reaping millions of dollars from the sale of minerals extracted by exploited workers to fund conflict and human rights violations? With a firm conviction that a corporation can make a positive difference in the lives of global citizens by changing the way it does business, Intel is leading efforts to help address this problem by striving to eliminate these so-called “conflict minerals” from our supply chain. And today we are proud to offer the world’s first conflict-free microprocessors as one major step on this continuing journey.

Efforts on the ground and across the world

Additional Resources

Conflict Minerals Sourcing Policy
Our Conflict Minerals Sourcing Policy outlines our commitment to addressing the issue of conflict minerals.

Read our policy >
We saw a few [suppliers] that said oh, it's not my problem. I don't need to do this. And when customers said: You know, you have to validate this in enough customers said it, they actually changed their systems. Before that time, they just didn't care. They would just buy what was cheapest. After enough supply chain pressure came in, they did start to care and implemented those systems.

Carol Duran – Supply Chain Management Director, Intel
Changing the rules to make transparency the norm is easier said than done, but it is potentially transformative in a way that Restricted Substances Lists are not. A focus on enforcing transparency for all ingredients, rather than cracking down on a handful considered especially bad, creates at least three drivers of toxicity reduction across a much larger range of chemicals:

- Manufacturers may quietly eliminate ingredients already known to be problematic, so as not to be obligated to disclose them.
- Manufacturers will begin to scrutinize ingredients they may not have realized were in their products.
- Customers and advocates will provide feedback on disclosed ingredients, driving product reformulations.

Lindsay James,  
Vice-President of Restorative Enterprise
Traditional Innovation Model

“Virtuous Cycle”

Open Innovation slides courtesy of Vittori Consulting

“Open” Innovation Process

Use both internal and external ideas and paths to the users
“Open” Innovation Process

Allow sharing of your ideas with potential collaborators
Traditional Innovation Model Challenged by Changes Like These

• Mobility of talent increasing
  – Frequent switching of jobs becomes common

• New funding sources exploding
  – Private equity, angel investors, crowdsourcing

• Barriers to using technology vanishing
  – Develop a web business on your cellphone

• Competition increasing
  – Shrinking product life cycles

• Customers and supply chain becoming much more knowledgeable

• Universities embracing entrepreneurship
In the Open Model, Innovation Can and Does Happen Anywhere

• Not limited to large organizations that can afford to fund R&D
  • Funding needed to start is low
  • Many sources of sufficient start-up funding and resources available
• Ideas can flow to users through many public – and free or low-cost – channels
  • Many internet-based options
  • Partnering to fill internal gaps is the norm
• Talented people are highly mobile
  • Old model – work hard and hope new idea is accepted and funded
  • New model – work on new idea and spinout when ready
NON-PROFIT LED OPEN INNOVATIONS HAVE DRAMATICALLY CHANGED BUSINESS MODELS
Open Innovation in the Non-Profit World – Kiva

We are a non-profit organization with a mission to connect people through lending to alleviate poverty. Leveraging the internet and a worldwide network of microfinance institutions, Kiva lets individuals lend as little as $25 to help create opportunity around the world.

Since Kiva was founded in 2005:
1,008,797 Kiva lenders
$491,002,450 in loans
99.00% Repayment rate

227 Field Partners
450 volunteers around the world
73 different countries

Source: Kiva website
Started in 2001, Wikipedia is written collaboratively by largely anonymous Internet volunteers who write without pay. Anyone with Internet access can write and make changes to Wikipedia articles.

There are more than 77,000 active contributors working on more than 22,000,000 articles in 285 languages.

Source: Wikipedia website
Open Innovation in the Non-Profit World – Creative Commons

December 2002 - Creative Commons released its first set of copyright licenses for free to the public.

In the years following the initial release, the licenses have been further improved, and ported to over 50 jurisdictions.

Over 350 million works licensed.

Source: Creative Commons website
Open Innovation in the Non-Profit World – Health Product Declaration
Standardized reporting format for each ingredient:

- Substance name
- Health Hazard Warnings (authoritative listings)
- CAS number (or species)
- % of weight of the product
- GreenScreen Benchmark
- Recycled content
- Uses nanotechnology
- Role or function

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>CAS number</th>
<th>% Weight</th>
<th>GS</th>
<th>RC</th>
<th>o</th>
<th>Role or function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bisphenol A diglycidyl ether (BADGE)</td>
<td>293733-21-8</td>
<td>35-42.6%</td>
<td>P1</td>
<td>No</td>
<td>No</td>
<td>Resin</td>
</tr>
<tr>
<td>Alkyl (C12, C14) Glycidyl Ether</td>
<td>68609-97-2</td>
<td>16.52-20.3%</td>
<td>P1</td>
<td>No</td>
<td>No</td>
<td>Viscosity reducer</td>
</tr>
<tr>
<td>Skin or Eye</td>
<td>EU R-Phrases: R38: Irritating to skin. (also in EU H-Statements)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple</td>
<td>VWV/S: Class 2 Hazard to Waters</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phenyl Glycidyl Ether</td>
<td>122-60-1</td>
<td>10-12%</td>
<td>BM1</td>
<td>No</td>
<td>No</td>
<td>Diluent</td>
</tr>
<tr>
<td>Cancer</td>
<td>Prop 65: Cancer (also in EU CMR (1, EU R-Phrases, EU H-Statements, NIOSH-C, MAK, IARC)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reproductive</td>
<td>Prop 65: Male reproductive toxicity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gene mutation</td>
<td>EU H-Statements: H341 Suspected of causing genetic defects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple</td>
<td>SIN: Classified CMR (Carcinogen, Mutagen &amp;/or Reproductive Toxicant) (also in VWV/S)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple</td>
<td>Skin or Eye and Mammalian</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACME Zap It</td>
<td>Unknown</td>
<td>6.0%</td>
<td>No</td>
<td>No</td>
<td>Antimicrobial</td>
<td></td>
</tr>
<tr>
<td>Unknown</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
What if manufacturer doesn’t disclose 100%?
(IP concern or component from another manufacturer)

- HPD defines full disclosure and what to say if can’t disclose
- Complete HPD requires disclosure of health warnings role, and explanation of rationale and timeline
What if the manufacturer thinks that the authoritative hazard doesn’t apply in this product?

The HPD facilitates this dialogue (about exposures and related issues).
### Standardized Reporting for Certifications & Compliance:

- **Type** (VOC content, emissions or recycled content)
- **Certifying program** (or standard), incl scenario for VOC emissions
- **Certifier/laboratory**
- **Certifier type** (1\(^{st}\), 2\(^{nd}\), 3\(^{rd}\))
- **Date of testing & Expiration & URL**
- **Applicable Facilities**
- **Notes to explain**

### Certifying Program

<table>
<thead>
<tr>
<th>Standard or Certification</th>
<th>Certifier or Laboratory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indoor Advantage Gold (Residential)</td>
<td>Scientific Certifications Systems/Berkeley Analytic Associates</td>
</tr>
<tr>
<td>SCAQMD Rule 1113</td>
<td>Self-declared by manufacturer</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type</th>
<th>Certifying Party</th>
<th>Issue Date</th>
<th>Expiry Date</th>
<th>URL</th>
</tr>
</thead>
<tbody>
<tr>
<td>none</td>
<td>Smithville, TX</td>
<td>29-Apr-2009</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

- Maple Grove, AR is undergoing testing and should be certified by mid 2012.
### Required or recommended products

**ACCESSORY MATERIALS**

*This section is for additional products required by warranty or recommended by the manufacturer for installation (such as adhesives, fasteners, or factory coatings) or for maintenance, cleaning, or operations. Refer to Health Product Declarations, published separately, for a complete view of these products. Note: This declaration is not intended to address hazards of the installation process.*

<table>
<thead>
<tr>
<th>Required or recommended product</th>
<th>URL for companion Health Product Declaration</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>01</strong> Tactiles (not wet applied, zero VOC adhesive tape)</td>
<td>No HPD available</td>
</tr>
<tr>
<td>Recommended system for installation (exceptions: areas with steep ramps or heavy rolling traffic on small wheels)</td>
<td></td>
</tr>
<tr>
<td><strong>02</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Additional discussion

**NOTES**

Nylon in this product is supplied by Aquafil, which does not disclose pigments used in each color of yarn, but has been approved by the European GUT (carpet industry association) after being screened against the substances on the PRODIS-GUT list [http://www.prodis.info/chemicals.html?&L=0#c4713](http://www.prodis.info/chemicals.html?&L=0#c4713) (some chemicals are banned and others have limit values). Aquafil also publicizes its yarns as Oeko-Tex certified, which screens our the use of hazardous textile chemicals. [Link to Oeko-Tex certificate](http://www.eurolast.it/Oeko-Tex-ENG-Aquafil.pdf)
Summary

- All ingredients disclosed?
- All hazards disclosed?
- Level of residuals disclosed?
- Explanation

Ajax is committed to full disclosure and intends to reformulate with disclosed ingredients by 2014.
Ajax is committed to full disclosure and intends to reformulate with disclosed ingredients by 2014.

Contents in Descending Order of Quantity:
- Bisphenol A diglycidyl ether
- Kaolin
- Phenyl Glycidyl Ether
- Butylated hydroxytoluene
- Acme Zap-It
- Electronics
- Mixed hardware
- Formaldehyde
- Palladium

Hazard Summary:
- PBT (Persistent Bioaccumulative Toxic): [X]
- Development: [X]
- Reproductive: [X]
- Endocrine: [X]
- Gene mutation: [X]
- Neurotoxicity: [ ]
- Mammal: [ ]
- Skin or Eye: [ ]
- Respiratory: [ ]
- Aquatic toxicity: [X]

Total VOC Content:
- Material (g/l): 30
- Regulatory (g/l): 50

Does the product contain exempt VOCs? [ ] No [ ] Yes [X] NA

Are there VOC-free tints available? [X] Yes [ ] No [ ] NA

Notes:
The Breathe Free tint system is available from qualified distributors. Contact Ajax Manufacturing to find your nearest distributor.

Certifications and Compliance:
- VOC Content
- SCAQMD Rule 1113
- VOC Emissions
- Indoor Advantage - Gold (Residential)
- Cradle to Cradle - Silver
Open Innovation Process
Mission Driven Non-Profit as Catalyst & Convener

Rapid Acceleration
Rapid Acceleration of Income

HPD Collaborative Revenue Growth
Open Innovation Model: Changing Industry Culture To Customer Leadership

Manufacturers Resist Full Transparency

Customers Push for Full Transparency
Open Innovation Model: Changing Industry Culture To Customer Leadership

Architects, Designers, Building Owners

Manufacturers

Thought Leaders

Standards & Certifiers

Independent Experts
Our Sponsors
HDR’s Initiative for Product Content

Dear Valued Product Manufacturers,

HDR Architecture, Inc. is committed to the materials we select and specify. As our knowledge of our clients’ demands and industry advances, our focus on profiles, greener chemistry, and supporting the USGBC moves forward with the development of the information and tools at hand to achieve.

Going forward, HDR will be evaluating the information. We will also use the power of preferences for safer alternatives—adding maintenance, availability, and cost.

The following product information should resources we access, through the following 1. **Healthy Building Network’s Pharos Project**
2. **The Health Product Declaration (HPC)** emissions and the associated health risk factors
3. **Cradle to Cradle Certified (C2C)**

December 11, 2012

RE: HKS’s Building Material Disclosure Initiatives

Dear Product Manufacturer:

HKS is dedicated to making environmentally informed decisions regarding our designs. When selecting these products, it is key to have access to transparent data. Product specification and selection is a complex process, and it is important to understand the chemical content, life cycle, performance and maintenance issues, as well as the health impact on occupants.

One tool HKS uses to gather knowledge about the chemical content of materials is the Pharo Project. If not, we encourage our partners in the building industry, together we can deliver healthier buildings by providing full, transparent disclosure of their product content and health impact.

A second, newer industry initiative is the Health Product Declaration (HPD) as a voluntary standard to disclose product content and health information so that similar products can be compared.

Certifications and disclosures are important and necessary in the current climate of health and sustainability.
LEED v.4 Materials Credits

- MRc2 – How was it made?
- MRc3 – Where did it come from?
- MRc4 – What is inside?
- EQ c2 – What is emitted?
LEED Material Credit Strategy

Option 1 - Declaration (1 point)
(Manufacturer disclosure)

Option 2 - Optimization (1 point)
(Better products)
Thank You!

Healthybuilding.net

Pharosproject.net

Hpdcollaborative.org