RECYCLED CONTENT & THE LEED RATING SYSTEM

The LEED (Leadership in Energy and Environmental Design) Green Building Rating System™ is a voluntary, consensus-based national standard for developing high-performance, sustainable buildings. It is a self-assessing measurement tool, based on a point system, which focuses on a number of design and construction strategies aimed at reducing a building’s environmental footprint. The rating system is divided into five environmental categories with opportunities for innovation credits as well. The accumulation of credits or points, awarded for compliance with requirements defined by the rating system, determines the level of certification of that building – certified, silver, gold, or platinum. For more information about the U.S. Green Building Council and to access the complete LEED rating system and updates, please visit www.usgbc.org.

Carpet specifications may impact the following credits: Construction Waste Management, Recycled Content, Local/Regional Materials, Rapidly Renewable Materials, and Low-emitting Materials: Carpet. This data sheet addresses Recycled Content credits. For the purpose of this data sheet, NC refers to LEED for New Construction version 2.1, CI refers to LEED for Commercial Interiors (pilot draft), EB refers to LEED for Existing Buildings (pilot draft), and CS refers to LEED for Core and Shell (pilot draft).

This document has been assembled to aid in the selection of carpet containing recycled content and the subsequent calculation and documentation of credit requirements for the LEED rating system.

Recycled Content Credit Intent:
The intent of the Recycled Content Credit is to increase the market demand for building products that incorporate recycled content materials, therefore reducing virgin material use and extraction and solid waste disposal.

Not only do select carpets of Antron® contain recycled content nylon, they can also be recycled at the end of their useful life through the third-party certified INVISTA™ reclamation program.

Materials & Resources Credit 4.1: Recycled Content 5%  1 Point

Requirement: Use materials with recycled content such that the sum of post-consumer recycled content plus one-half of the post-industrial content constitutes at least 5% of the total value of the materials in the project.*

Requirement: Use materials with recycled content such that post-consumer recycled content constitutes at least 5% of the total value of the materials in the project or combined post-consumer and post-industrial recycled content constitutes at least 10%.*

Materials & Resources Credit 4.2: Recycled Content 10%  1 Point

in addition to credit 4.1

Requirement: Use materials with recycled content such that the sum of post-consumer recycled content plus one-half of the post-industrial content constitutes at least 10% of the total value of the materials in the project.*

Requirement: Use materials with recycled content such that post-consumer recycled content constitutes at least 10% of the total value of the materials in the project or combined post-consumer and post-industrial recycled content constitutes at least 20%.*

Materials & Resources Credit 4: Recycled Content  1 Point

Requirement: Specify that 50% of any building materials used in the building or on the site: Contain at least 20% post-consumer recycled materials on a weighted average basis, or contain at least 40% post-industrial recycled materials on a weighted average basis.

* Mechanical and electrical components shall not be included in this calculation.
Referenced Standards
Recycled content materials shall be defined in accordance with the Federal Trade Commission guidelines:

Federal Trade Commission Guidelines
Guides for the Use of Environmental Marketing Claims, 16 CFR 260.7(e)

A recycled content claim may be made only for materials that have been recovered or otherwise diverted from the solid waste stream, either during the manufacturing process (pre-consumer), or after consumer use (post-consumer). To the extent the source of recycled content includes pre-consumer material, the manufacturer or advertiser must have substantiation for concluding that the pre-consumer material would otherwise have entered the solid waste stream. In asserting a recycled content claim, distinctions may be made between pre-consumer and post-consumer materials. Where such distinctions are asserted, any express or implied claim about the specific pre-consumer or post-consumer content of a product or package must be substantiated.

Complete guideline available at: www.ftc.gov/bcp/grrule/guides980427.htm

Calculations
To facilitate calculation and documentation, a spreadsheet is provided in the LEED Letter Template to calculate the percentage and value of recycled content materials used in a project. The following calculations support that spreadsheet.

Step 1. Determine the percentage of recycled content
When a product is an assembly, for example carpet, the following preliminary formulas are used to calculate the amount of recycled content in that assembly:

\[
\text{Assembly Recycled Content (PI)} = \frac{\text{material weight (lbs)}}{\text{total weight (lbs)}} \times \text{Post-Industrial recycled content (%)}
\]

\[
\text{Assembly Recycled Content (PC)} = \frac{\text{material weight (lbs)}}{\text{total weight (lbs)}} \times \text{Post-Consumer recycled content (%)}
\]

Example
This assumes that the carpet face fiber is 32oz (40% of total weight), and the backing is 48oz (60% of total weight). Please note that this type of information is easily obtained from the architectural folder, mill representative or fiber representative.

<table>
<thead>
<tr>
<th>Carpet Components</th>
<th>% of Total Weight</th>
<th>PI Recycled Content %</th>
<th>PC Recycled Content %</th>
<th>Overall %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face Material Antron Lumena® w/ HBC</td>
<td>40%</td>
<td>90%</td>
<td>0%</td>
<td>36% PI</td>
</tr>
<tr>
<td>Primary Backing Material Mill “X”</td>
<td>10%</td>
<td>0%</td>
<td>0%</td>
<td>0% PC</td>
</tr>
<tr>
<td>Secondary Backing Material Mill “X”</td>
<td>50%</td>
<td>30%</td>
<td>30%</td>
<td>23% PI 13% PC</td>
</tr>
<tr>
<td>TOTAL Carpet Recycled Content</td>
<td></td>
<td></td>
<td></td>
<td>81% PI 13% PC</td>
</tr>
</tbody>
</table>

All Antron® carpet face fiber recycled content claims have been third-party certified by an independent certification organization, Scientific Certification Systems (SCS). For more information please visit antron.invista.com
Antron® Product Offerings with Recycled Content

<table>
<thead>
<tr>
<th>Product</th>
<th>% &amp; type recycled content</th>
</tr>
</thead>
<tbody>
<tr>
<td>1245 denier Antron® Lumena® solution dyed nylon</td>
<td>4% post-industrial</td>
</tr>
<tr>
<td>1245 denier Antron® Lumena® solution dyed nylon with High Recycled Content</td>
<td>90% post-industrial</td>
</tr>
<tr>
<td>1245 denier Antron® Legacy nylon with High Recycled Content</td>
<td>90% post-industrial</td>
</tr>
<tr>
<td>Ecosoft® carpet cushion</td>
<td>100% recycled content *</td>
</tr>
</tbody>
</table>

Antron Lumena® solution dyed nylon (1245 denier)
The production of virtually all 1245 denier Antron Lumena® with 4% recycled content is now standard practice. Each color is tested to ensure that the addition of the recycled content nylon does not compromise fiber manufacturing or carpet end-use performance. So it meets the highest fiber performance standards for carpet durability in the industry while having a significant effect on reducing consumption of virgin raw materials. This claim is certified by Scientific Certification Systems (SCS), as containing at least 4% post-industrial recycled content.

Antron Lumena® solution dyed nylon (1245 denier) with High Recycled Content
There are 7 select colors of Antron Lumena® with high recycled content nylon. This claim is certified by Scientific Certification Systems (SCS) as containing at least 90% post-industrial recycled content nylon. Contact your local design consultant for product availability.

Antron® Legacy nylon with High Recycled Content:
Antron® Legacy is available with high recycled content nylon on a special order basis. This claim is certified by Scientific Certification Systems (SCS) as containing at least 90% post-industrial recycled content nylon. Contact your local design consultant for product availability.

Ecosoft® carpet cushion
EcoSoft® carpet cushion is made with 100% recycled content, at least 50% from post-consumer material.

Step 2. Determine the value of the recycled content
The value of the recycled content portion of a material or furnishing is determined by dividing the weight of recycled content in the item by the total weight of all material in the item, then multiplying the resulting percentage by the total value (cost) of the item. Material costs DO NOT include installation costs (labor & equipment).

To determine a product’s recycled content value:

\[
\text{Recycled Content Value} = \text{Product Value} \times \left( \frac{\text{PC} \%}{2} + \frac{\text{PI} \%}{2} \right)
\]

Note: The LEED rating system places a higher value on post-consumer recycled content. The calculation reflects this weighted value by dividing the post-industrial recycled content percentage by two.

Example
Step 2
If the material cost of the carpet is $200,000 then:

\[
\text{Recycled Content Value} = 200,000 \times \left( \frac{15\% \text{(PC)}}{2} + \frac{30.5\% \text{(PI)}}{2} \right)
\]

= $91,000

If the total building material cost** is $10,000,000 then the selected carpet with high recycled content contributes 0.91% toward the necessary 5% for credit 4.1.

**Most credits in the Material & Resource category are calculated using a percentage of total building materials. The specification of carpet alone is not likely to earn a point for recycled content, rather, it may contribute to credit earning potential. Carpet may have a significantly greater impact on LEED-CI recycled content contributions due to the scope of Commercial Interiors projects.
Beyond Single Environmental Attributes

The strongest environmental statement any one of us can make is to specify products that are durable and can be used longer. This may include, but is not limited to, carpet with recycled content. It is important to remember that “sustainability” by definition is any practice that would ensure the continued viability of a product well into the future. A carpet of Antron®, the most specified brand of carpet fiber, is engineered to look and perform better for a longer period of use than any other carpet. This performance yields the best life cycle and lowest total environmental impact.

All Antron® BCF carpet fiber is certified as an Environmentally Preferable Product (EPP). Environmentally Preferable Products are defined by the 1998 Executive Order 13101 as a product that has a lesser or reduced effect on human health and the environment when compared to other products that serve the same purpose. The EPP standard is based on EPA guidelines and ISO standards. Critical factors in this certification are product performance, total environmental impact, use of green energy, safety and health in manufacturing and use, and end-of-life responsibility.

For more information call 1.877.5.ANTRON or visit us at antron.invista.com