

How DuPont Surfaces contribute to Sustainable Design

Residential Application: LEED® for Homes Rating System and NAHB Green Home Guidelines

Key Attributes	What does it mean and we may contribute to earning credits and points?	Credits and points to which Corian® and Zodiaq® may contribute	Certifications
<p>Durability & Reduced maintenance</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Corian® <input checked="" type="checkbox"/> Zodiaq® <p>Thermoformable</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Corian® <p>Nontoxic and Non-allergenic to humans</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Corian® <input checked="" type="checkbox"/> Zodiaq® 	<ul style="list-style-type: none"> o Long life cycles. o Require less replacement over time. o Cost-effectiveness with reduced waste. o Corian® can be easily renewed to its original appearance. o Design versatility: less waste than other materials and functionality. o Comply with the EU Directive 2002/95EC on the Restriction of Hazardous Substances (RoHS). 	<p>LEED® credits to which we may contribute:</p> <p>ID Credit 3: Innovative or Regional Design (1 point).</p>	<p>Third party certified for RoHS compliance.</p> <p>Most colors are NSF/ANSI 51 Food Contact Certified.</p>
<p>Low-VOC emissions</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Corian® <input checked="" type="checkbox"/> Zodiaq® <input checked="" type="checkbox"/> Sealants & Adhesives 	<p>Meet or exceed emissions guidelines for volatile organic compounds (VOCs) and hazardous air pollutants (HAPs).</p>	<p>LEED® credits to which we may contribute:</p> <p>MR Credit 2.2: Environmentally Preferable Products b) <u>Low emissions.</u> (0.5 point per component)</p> <p>Green Building Rating System™ cites South Coast Air Quality Management District (SCAQMD) Rule #1168 as a requirement for LEED® points (for <u>Adhesives & Sealants only</u>).</p> <p>NAHB Green Home Building Guidelines we may contribute:</p> <p>7.1.3 Use low-VOC sealants. Low VOC concentrations for construction adhesives and sealants (5 points).</p>	<ul style="list-style-type: none"> • GREENGUARD Indoor Air Quality Certified®. • GREENGUARD for Children and Schools™ • Complies with SCAQMD Rule #1168.
<p>Pre-consumer Recycled content</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Corian® Terra Collection <input checked="" type="checkbox"/> Zodiaq® Terra Collection 	<p>Corian® Terra Collection: a palette of 25 colors that feature 18 colors certified to contain at least 6% pre-consumer recycled content and 7 additional colors containing at least 13% pre-consumer recycled content.</p> <p>- These surfaces contain material diverted from the waste stream in the manufacturing process.</p> <p>Zodiaq® Terra Collection: includes four colors that contain at least 50 percent pre-consumer recycled glass.</p>	<p>LEED® credits to which we may contribute: Zodiaq® only</p> <p>MR Credit 2.2: a) <u>Environmentally Preferable Products</u> (0.5 point per component).</p> <p>Material that includes at least 25% postconsumer or 50% preconsumer (postindustrial) recycled material.</p> <p>NAHB Green Home Building Guidelines we may contribute:</p> <p>2.4.1 Use recycled-content building materials</p> <p>To minimize the impact of home building on the environment (3 points).</p>	<p><u>Corian® Terra Collection:</u> Scientific Certification Systems (SCS) for recycle content.</p> <p><u>Zodiaq® Terra Collection:</u> Submitted for certification review by SCS.</p>
<p>Regional Manufacturing</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Corian® <input checked="" type="checkbox"/> Zodiaq® 	<p>Building materials or products that have been extracted, harvested or recovered, as well as manufactured within 500 miles of the project site. Supporting the use of indigenous resources and reducing the environmental impacts resulting from transportation.</p> <p>Corian®: manufactured in Buffalo, NY. Zodiaq®: majority is manufactured in Theford Mines, Quebec.</p>	<p>LEED® credits to which we may contribute:</p> <p>MR Credit 2.2: Environmentally Preferable Products – c) <u>Local production</u> (0.5 point per component).</p> <p>NAHB Green Home Building Guidelines we may contribute:</p> <p>2.8.1 Use locally available, indigenous materials (3 points).</p>	

Key points on LEED® for Homes (v. January 2008) and NAHB Model Green Home Building Guidelines

LEED® for Homes		NAHB Model Green Home Building Guidelines																																					
What is LEED®?	The Leadership in Energy and Environmental Design (LEED) Green Building Rating System™ is a third party certification program and the nationally accepted benchmark for the design, construction and operation of high performance green buildings.	What is the NAHB Model Green Home Building Guidelines?	It is a document that provides guidance for builders engaged in or interested in green building products and practices for residential design, development and construction.																																				
Who developed LEED®?	LEED® is a registered trademark of the U.S. Green Building Council (USGBC).	Who developed these guidelines?	Under the coordination of the National Association of Home Builders (NAHB), these guidelines were written by a group of builders, researchers, environmental experts, and designers.																																				
Does LEED® certify products?	No. This Green Building Rating System™ is for the design, construction and operation of high performance green <u>buildings</u> as well as sustainable <u>design and construction in homes</u> nationwide. → Our products may contribute to obtain LEED® credits towards <u>a building or home certification</u> .																																						
What is the scope of LEED® for Homes?	LEED for Homes promotes the design and construction of high-performance green homes. It is tailored for the construction of new single family or low-rise multi-family homes. Existing homes undergoing extensive renovations are also eligible to participate.	What is the purpose of these guidelines?	Provide a framework and a tool for builders to reduce a home's environment impact by highlighting ways in which a mainstream home builder can effectively and holistically weave environmental concerns into a new home.																																				
What other type of Rating Systems does LEED® have?	Neighborhood development (in pilot); Commercial interiors; Core & Shell; New Construction; Schools, Healthcare, Retail.	Does NAHB have a Green Building Standard?	Yes, the National Green Building Standard is now in development and it is a joint project of NAHB and the International Code Council (ICC). It encompasses single-family construction, remodeling and multifamily construction. It is expected to be available late Summer 2008.																																				
What are the categories that LEED® for Homes reviews performance on?	<table style="width: 100%; border-collapse: collapse;"> <tr><td>Innovation & Design Process (ID)</td><td style="text-align: right;">11 points</td></tr> <tr><td>Location & Linkages (LL)</td><td style="text-align: right;">10 points</td></tr> <tr><td>Sustainable Sites (SS)</td><td style="text-align: right;">22 points</td></tr> <tr><td>Water Efficiency (WE)</td><td style="text-align: right;">15 points</td></tr> <tr><td>Energy & Atmosphere (EA)</td><td style="text-align: right;">38 points</td></tr> <tr><td>Materials & Resources (MR)</td><td style="text-align: right;">16 points</td></tr> <tr><td>Indoor Environmental Quality (EQ)</td><td style="text-align: right;">21 points</td></tr> <tr><td>Awareness & Education (AE)</td><td style="text-align: right;"><u>3 points</u></td></tr> <tr><td style="text-align: center;">Maximum points</td><td style="text-align: right;">136 points</td></tr> </table>	Innovation & Design Process (ID)	11 points	Location & Linkages (LL)	10 points	Sustainable Sites (SS)	22 points	Water Efficiency (WE)	15 points	Energy & Atmosphere (EA)	38 points	Materials & Resources (MR)	16 points	Indoor Environmental Quality (EQ)	21 points	Awareness & Education (AE)	<u>3 points</u>	Maximum points	136 points	What are the areas or guiding principles these Guidelines cover?	<table style="width: 100%; border-collapse: collapse;"> <tr><td>1. Lot Design</td><td style="text-align: right;">12 points</td></tr> <tr><td>2. Resource Efficiency</td><td style="text-align: right;">77 points</td></tr> <tr><td>3. Energy Efficiency</td><td style="text-align: right;">100 points</td></tr> <tr><td>4. Water Efficiency</td><td style="text-align: right;">19 points</td></tr> <tr><td>5. Indoor Environmental Quality</td><td style="text-align: right;">72 points</td></tr> <tr><td>6. Homeowner Education</td><td style="text-align: right;">9 points</td></tr> <tr><td>7. Global Impact</td><td style="text-align: right;">6 points</td></tr> <tr><td style="text-align: center;">Additional points required</td><td style="text-align: right;"><u>100 points</u></td></tr> <tr><td style="text-align: center;">Maximum points</td><td style="text-align: right;">395 points</td></tr> </table>	1. Lot Design	12 points	2. Resource Efficiency	77 points	3. Energy Efficiency	100 points	4. Water Efficiency	19 points	5. Indoor Environmental Quality	72 points	6. Homeowner Education	9 points	7. Global Impact	6 points	Additional points required	<u>100 points</u>	Maximum points	395 points
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How many points does one need to get LEED® certification?	LEED® for Homes has four levels of certification. Certified: 45-59 points Silver: 60-74 points Gold: 75-89 points Platinum: 90-136 points	Does NAHB have different levels of achievement?	Yes. NAHB established various thresholds to delineate different levels of green building effort. a) Bronze: 237 points b) Silver: 311 points c) Gold: 395 points																																				
How does the rating system for LEED® for Homes work?	It's third-party verification through LEED® for Homes Providers and Green raters. The system requires a minimum level of performance through 18 Prerequisites measures (mandatory and must be completed during the design of construction phase) and 67 Optional measures (a minimum number of points must be earned).	How does this rating system work?	There are a minimum number of points required for each of the seven guiding principles. After reaching the thresholds, an additional 100 points must be achieved by implementing any of the remaining line items.																																				
To which LEED® for Home credits DuPont Surfaces may contribute? *please review previous table to learn about how our products contribute to each credit.	<p>ID Credit 3: <u>Innovative or Regional Design</u> Minimize the environmental impact of the home by incorporating additional green design and construction measures that have tangible and demonstrable benefits beyond those in the LEED® for Homes Rating System.</p> <p>MR Credit 2: <u>Environmentally Preferable Products</u> Increase demand for environmentally preferable products and products or building components that are extracted, processed, and manufactured within the region.</p> <p>a) Low emissions: N/A for solid surfaces, OK for adhesives and sealants. b) Local production: products extracted, processed, and manufactured within 500 miles of the home.</p>	To which NAHB green guiding principles DuPont Surfaces may contribute?	<p>2.4.1 <u>Use recycled-content building materials</u> To minimize the impact of home building on the environment</p> <p>2.8.1 <u>Use locally available, indigenous materials.</u> To make the home building process more environmentally acceptable by minimizing transportation and processing costs and using materials that are common to the local region (300-mile radius or within a 1000-mile radius if shipped by rail, or a combination of the two distances).</p> <p>7.1.3 <u>Use low-VOC sealants.</u> VOC concentrations for construction adhesives and sealants.</p>																																				