

The following LEED® v4 credit summary has been developed to support the design, specification and installation of Armstrong suspended ceiling systems in a wide range of buildings.

Supporting evidence is contained in the Armstrong Green Building Rating Tool performance tables on page 2 of this document and further details can be downloaded on the [Armstrong website](#).

Theme	Credit	LEED Credit	Points	Armstrong Contribution
<b>Cradle to Cradle</b>	MRc4 BD&C MRc5 ID&C	<b>Building Disclosure and Optimisation - Material Ingredients</b>	BD&C - 1-2 ID&C - 1-2	<ul style="list-style-type: none"> <li>Option 1: Material Ingredient Reporting</li> <li>Option 2: Material Ingredient Optimisation - <b>Select Armstrong Bronze Cradle to Cradle certified suspended ceiling products - ULTIMA+ or PERLA.</b> <a href="#">More details on Armstrong website.</a></li> </ul>
<b>Recycling Programme</b>	MRp2 MRc6	<b>Construction and Demolition Waste Management</b> Now a Prerequisite - Identify at least 5 materials	MRp2 Required MRc6 1-2	<ul style="list-style-type: none"> <li>MRp2 - Add ceilings to Waste Management plan to increase diversion % from landfill. Ceilings qualify as 1 non-structural material. <b>Armstrong end-of-life and off-cut recycling programmes.</b> <a href="#">More details on Armstrong website.</a></li> <li>Ceilings qualify as 1 non-structural material.</li> <li>MRc6 Option 1: Ceilings qualify as a material stream meeting 50-75% diversion from landfill.</li> <li>MRc6 Option 2: Reduction in total waste: specify products with minimal waste; e.g. Axiom perimeter trims with full tiles to eliminate off-cuts.</li> </ul>
<b>Regional Materials</b>	MR Credits	<b>Regional Materials</b> (Extracted, manufactured and purchased within 100 miles)	200% of base contributing cost	<ul style="list-style-type: none"> <li>Armstrong has the largest number of ceiling and suspension plants across Europe. <a href="#">Contact Armstrong for help with this credit calculation.</a></li> </ul>
<b>Life cycle Impacts &amp; Environmental Product Declarations</b>	MRc1 BD&C MRc2 ID&C	<b>Building Life Cycle Impact Reduction Interiors Life Cycle Impact Reduction</b>	BD&C - 3 ID&C 1-3	<ul style="list-style-type: none"> <li>BD&amp;C Option 4: Provide EPD or Embodied Energy for whole building LCA calculations. <a href="#">Contact Armstrong for EDP documents.</a></li> <li>ID&amp;C Option 1: Ceilings qualify for reuse of non-structural elements.</li> <li>ID&amp;C Option 3: Design for Flexibility - Install accessible ceiling systems including baffles, and islands. Also meet requirement for recyclability. <b>Armstrong tiles can be 100% recycled at end of life.</b></li> </ul>
<b>Life cycle Impacts &amp; Environmental Product Declarations</b>	MRc2 BD&C MRc3 ID&C	<b>Building Disclosure and Optimisation - Environmental Product Declaration</b>	BD&C - 1 ID&C - 1-2	<ul style="list-style-type: none"> <li>Option 1: Armstrong Third Party Certified Type III EPDs AND/OR</li> <li>Option 2: Armstrong EPDs show reductions in 3 impact categories <a href="#">Contact Armstrong for EPD documents.</a></li> </ul>
<b>Recycled Content Recycling Programme</b>	MRc3 BD&C MRc4 ID&C	<b>Building Disclosure and Optimisation - Sourcing of Raw Materials</b>	BD&C - 1-2 ID&C - 1-2	<ul style="list-style-type: none"> <li>Option 1: Supply Armstrong self-declared sustainability report (1/2 value). <a href="#">More details on Armstrong website.</a></li> <li>Option 2: Leadership Extraction Practices - Meet one of the following criteria: Extended Producer Responsibility (Armstrong Recycling Programme), Wood (FSC), Recycled Content (Post-consumer plus 1/2 Pre-consumer Recycled Content).</li> </ul>
<b>VOC Emissions</b>	EQc2	<b>Low Emitting Materials</b>	BD&C - 1-3 ID&C - 1-3	<ul style="list-style-type: none"> <li>Select ceilings that meet the requirements of the AgBB or French legislation on VOC emission class labelling. <a href="#">Contact Armstrong for VOC Certificates.</a></li> </ul>
<b>Thermal Comfort</b>	EQc5	<b>Thermal Comfort</b>	BD&C - 1 ID&C - 1	<ul style="list-style-type: none"> <li>Option 1: ASHREA Standard - Offer Armstrong CoolZone phase change material as an option to optimise thermal comfort. <a href="#">More details on Armstrong website.</a></li> </ul>
<b>Lighting</b>	EQc6	<b>Interior Lighting - Lighting Quality</b>	BD&C - 1 ID&C - 1	<ul style="list-style-type: none"> <li>Option 2: Lighting Quality - Choose Armstrong ceilings with light reflectance greater than 85%. E.g. <b>ULTIMA+</b>.</li> </ul>
<b>Acoustics</b>	EQc9	<b>Acoustic Performance</b>	BD&C - 2 ID&C - 2	<ul style="list-style-type: none"> <li>Reverberation time - <b>Armstrong ceilings contribute to a reduction in reverberation time by adding absorption.</b> Select OP ceiling products. <a href="#">More details on Armstrong website.</a></li> </ul>
<b>Energy Performance</b>	EA	<b>Minimum Energy Performance (Prerequisite)</b>	BD&C ID&C	<ul style="list-style-type: none"> <li>Option 1: Whole Building Energy Simulation - Armstrong CoolZone phase change material as an option to reduce energy consumption. <a href="#">More details on Armstrong website.</a></li> </ul>
<b>Energy Performance</b>	EAc2	<b>Optimise Energy Performance (Prerequisite)</b>	BD&C - 1-18 ID&C - 1-18	<ul style="list-style-type: none"> <li>Option 1: Whole Building Energy Simulation - Armstrong CoolZone phase change material as an option to reduce energy consumption. <a href="#">More details on Armstrong website.</a></li> </ul>

BD & C = Building Design and Construction  
ID & C = Interior Design and Construction








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[www.armstrongceilings.ie](http://www.armstrongceilings.ie)

# Armstrong Green Building Rating Tool performance tables

CI/SfB

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05/2017

Certificates and resources can be downloaded on [Armstrong website](#).

	Sustainability					Acoustics				Indoor Air Quality			
													
	Armstrong Recycling Programme	Cradle to Cradle	Environmental Product Declaration EN ISO 14025	Recycled content (%) EN ISO 14021	Light reflectance (%)	$\alpha_w$	Class	NRC	Attenuation (3) D <sub>nfw</sub> (dB)	ISO	VOC	Formaldehyde	
LEED Credit	MRp2 / MRc6	MRc4 BD&C MRc5 ID&C	MRc1 BD&C MRc2 ID&C	MRc3 BD&C MRc4 ID&C	EQc6	<----- EQc9 ----->				-	EQc2	-	
BREEAM Credit	Wst1 / Wst4	-	Mat 01	Mat 06	Hea 01	<----- Hea 05 ----->				-	-	Hea 02	
Ska	D13 / P03 / P04 / D09 / D19	M10	M10 / D19 / D21	D21 / D19	P10 / D01 / D04 / D30	<----- D29 ----->				D21 / D19 / D63	D63	D63	
Mineral	ULTIMA+	✓	✓	✓	50	87	≤ 0.75(H)	C	≤ 0.75	≤ 40	ISO 5	A+	E1
	ULTIMA+ dB	✓	✓	✓	64	87	0.60(H)	C	0.65	≤ 43		A+	E1
	ULTIMA+ OP	✓	✓	✓	36	87	1.00	A	0.95	25	ISO 5	A+	E1
	OPTIMA	✓			77	87	≤ 1.00	A	≤ 1.00	24		A	E1
	PERLA	✓		✓	50	86	0.65(H)	C	0.70	35	ISO 5	A+	E1
	PERLA dB	✓		✓	64	86	≤ 0.60(H)	≤ C	≤ 0.65	≤ 43	ISO 5	A+	E1
	PERLA OP 0.95	✓	✓	✓	≤ 52	85	0.95	A	0.90	≤ 27	ISO 5	A+	E1
	PERLA OP 1.00	✓		✓	36	85	1.00	A	0.95	25	ISO 5	A+	E1
	DUNE SUPREME	✓		✓	44	≤ 85	≤ 0.55	C	≤ 0.50	35		A	E1
	DUNE dB	✓			59	84	0.60	C	0.55	39		A	E1
	DUNE MAX	✓			46	84	0.65	C	0.60	35		A	E1
NEVADA	✓			20	82	≤ 1.00	A	≤ 0.95	≤ 27		A	E1	
SIERRA OP	✓			51	84	0.95	A	0.85	≤ 29	ISO 5	A+	E1	
PLAIN	✓			≤ 40	87	0.20(L)	E	0.20	35		A	E1	
Metal	Ultra Microperforated Rg 0501	*	✓	✓	≤ 30	83	0.45(L)	D	0.55	18		A+	E1
	Extra Microperforated Rg 0701 (1)	*	✓	✓	≤ 30	80	0.55(L)	D	0.65	21		A+	E1
	Microperforated Rd 1522 (1)	*	✓	✓	≤ 30	65	0.70	C	0.70	16		A+	E1
	Standard Perforated Rg 2516 (1)	*	✓	✓	≤ 30	70	0.75(L)	C	0.80	18		A+	E1
	Plain (Unperforated)	*	✓	✓	≤ 30	85	0.10(L)	-	0.10	44	ISO 3 / ISO 5 (2)	A+	E1
	Premium B15	*			40	depends on perforation	≤ 0.65	C	≤ 0.60	≤ 47		A	E1
	Premium OP19	*			34		≤ 1.00	A	≤ 0.90	≤ 31		A	E1
Wood	WOOD Veneers				≤ 57	≤ 0.65(L)	≤ C	≤ 0.70	41		≤ A+	E1	
Specific Solutions	BIOGUARD ACOUSTIC	✓	✓	✓	42	85	0.60(H)	C	0.60	36	ISO 5	A+	E1
	BIOGUARD PLAIN	✓			≤ 40	87	0.20(L)	E	0.20	35	ISO 5	A+	E1
	METAL BIOGUARD Extra Microperforation Rg 0701+B15	*			40	80	0.65	C	0.60	40	ISO 5	A	E1
	METAL BIOGUARD PLAIN	*	✓	✓	≤ 30	85	0.10(L)	-	0.10	44	ISO 3 (2)	A+	E1
	PARAFON HYGIEN	✓			20	82	0.95	A	0.95	-	ISO 5	A	E1
	CLEAN ROOM FL	✓			39	78	0.15	E	0.10	36	ISO 5	A	E1
	CERAMAGUARD	-			37	79	0.55(MH)	D	0.60	39		A+	E1
	HYDROBOARD	✓			20	82	0.95	A	0.90	22		A	E1
COOLZONE	*				85	0.25	E	0.20	40		A	E1	
Suspension systems	PRELUDE 15/24/35/SIXTY <sup>2</sup>	*			25							A+	E1
	INTERLUDE HRC	*			≤ 63							A+	E1
	SILHOUETTE	*			25							A+	E1
	AXIOM	*			25							A+	E1

(1) Typical values for product with fleece acoustic inlay. For other acoustic solutions, see metal technical pages.

(2) Valid for Q-Clip (ISO 3) and R-Clip F (ISO 5).

(3) Some values will be Dncw. Although superseded by Dnfw, Dncw test results continue to be valid.

\* Steel can be easily recycled and processed into new products.

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