## LEED<sup>®</sup> v4 & v4.1

## How Armstrong<sup>®</sup> Templok<sup>®</sup> Ceilings Can Contribute to LEED

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SUSTAINABLE PRODUCT SEARCH TOOL

24/7 access to LEED® information and documentation you need in the design or submittal process for any Armstrong® Ceiling and Wall System

Theme	Category	LEED <sup>®</sup> Credit	Points	Armstrong Ceilings Contribution			
Energy and Atmosphere							
Energy Performance	Energy and Atmosphere	Minimum Energy Performance	Required Prerequisite	Armstrong <sup>®</sup> Templok <sup>®</sup> ceilings can contribute to the reduction in energy use by contribution to a minimum level of energy efficiency for the building and its systems. Thermal mass can contribute to reduced EUI in appropriate climates.			
				Include Templok ceilings in your energy simulation model to show potential savings.			
Energy Performance	Energy and Atmosphere	Optimize Energy Performance	BD&C - 1-18 ID&C - 1-24	Armstrong Templok ceilings can contribute to increasing levels of energy performance beyond the prerequisite standard. This solution is an energy efficiency measure that focuses on HVAC load reduction. Thermal mass can contribute to reduced EUI in appropriate climates.			
Energy Performance	Energy and Atmosphere	Demand Response Grid Harmonization	BD&C - 1-2	Case 1. Demand response program available			
			O+M – 1	Case 3. Permanent load shifting			
Material and Resources							
Life Cycle Impacts	Material and Resources	Building Life Cycle Reduction Interiors Life Cycle Impact Reduction	BD&C - 3 ID&C - 1-3 Up to 5	ARMSTRONG PRODUCT CARBON FOOTPRINT <b>ID&amp;C, Option 1 – Reuse of nonstructural elements:</b> Ultima panels are made of reclaimed ceilings that are returned to our recycling program with a high level of post-consumer recycled content. ARMSTRONG ACCESSIBLE CEILING SYSTEMS <b>ID&amp;C, Option 3 – Design for Flexibility:</b> Specify Ultima Templok accessible and demountable ceiling system for easy reconfiguration and access to building systems.			
Sourcing of	Material and	Building	BD&C - 1-2	Use products that meet responsible sourcing and extraction criteria:			
Raw Materials	Resources	Disclosure and Optimization – Responsible Sourcing of Raw Materials	ID&C - 1-2	<b>Extended Producer Responsibility:</b> ARMSTRONG® RECYCLING PROGRAM – Armstrong is responsible for extended producer responsibility with our acoustical ceiling products. Armstrong mineral fiber and fiberglass ceiling products contribute to this credit.			
				<b>Biobased Materials:</b> ARMSTRONG BIOBASED PRODUCTS – Specify Armstrong mineral fiber panels that contain plant-based binders, or biobased alternatives to petroleum-based binders. Armstrong products are tested using ASTM D6866 and are noted in the USDA BioPreferred Database.			
				<b>Material Reuse:</b> Armstrong products are designed for disassembly and are flexible and adaptable to your environment.			
				<b>Recycled Content:</b> Specify Armstrong Templok ceilings which has a recycled content of 34% pre-industrial and 7% post-consumer content.			
Material Ingredient Disclosure	Material and Resources	Building Disclosure and Optimization – Material Ingredients	BD&C - 1-2	HEALTH PRODUCT DECLARATIONS <b>BD&amp;C, Option 1: Material Ingredient Reporting:</b> Health Product Declarations qualify for Manufacturer Inventory (1 point).			
			ID&C - 1-2				
				All products and accompanying certifications are listed on our Transparency site www.armstrongceilings.com/transparency; and on Mindful Materials.			

Armstrong<sup>®</sup> World Industries

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Material and Resources						
Recycling Program	Material and Resources	Construction Waste Management	Option 1: Diversion – 1 Option 2: Waste Prevention – 1-2	ARMSTRONG® CEILINGS RECYCLING PROGRAM – As you upgrade to more efficient energy measures, use the ceilings recycling program to reduce existing ceiling tile waste from your project.		
				Add the <u>Armstrong Ceilings Recycling Program</u> to the Waste Management Plan to provide a solution to divert materials from the waste stream, increasing diversion percentage. Ceilings qualify as one nonstructural material. Available throughout the US and Canada.		
				<b>Option 1: Diversion</b> Divert at least 50% of the total construction and demolition materials from landfills and incineration facilities.		
				Option 2: Reduction in Total Waste		
				Follow the Waste Management Plan and prevent waste through reuse and source reduction design strategies. Divert at least 50% of all renovation and demolition waste, if any. Generate less than 7.5 LBS/FT <sup>2</sup> (37.5 kg/m <sup>2</sup> ) of waste materials from all new construction activities (2 points). Specify products with minimal waste; the Armstrong digital and preconstruction service team, <u>ProjectWorks</u> <sup>®</sup> , will reduce waste by optimizing project layouts.		
Regional Materials	Material and Resources	Regional Materials (Extracted, manufactured, and purchased within 100 miles)	200% base contributing cost	ARMSTRONG® CEILING MANUFACTURING LOCATIONS Armstrong® Ultima® Templok® final point of assembly is Hilliard, OH. Use the Armstrong Ceilings Sustainable Product Search Tool to calculate mileage for manufacture and extraction locations; product meeting 100 mile criteria is valued at 200% of base cost.		
Indoor Environmental Quality						
VOC Emissions & Occupant Health and Comfort	Indoor Environmental Quality	Low Emitting Materials	BD&C – 1-3 ID&C – 1-3	ARMSTRONG® LOW OR NO-ADDED FORMALDEHYDE CEILINGS Armstrong Ultima Templok ceilings meet the California Department of Public Health (CDPH Standard) v1.2.1 2017, and comply with VOC limits. All CDPH testing apply to both the office and school testing scenarios. VOC Certificates of compliance are available on the Armstrong® ceilings Transparency website.		
Occupant Health and Comfort	Indoor Environmental Quality	Thermal Comfort	BD&C - 1 ID&C - 1	Templok ceilings provide thermal mass to help stabilize temperature fluctuations and improves building's ability to satisfy ASHRAE 55-2017 thermal comfort design.		
Lighting	Indoor Environmental Quality	Interior Lighting – Lighting Quality	BD&C - 1 ID&C - 1	ARMSTRONG® HIGH LIGHT-REFLECTIVE CEILINGS AND WALLS Choose Armstrong Ultima Templok ceilings (LR 0.88) to aid in improving lighting quality in the space.		
Acoustics & Occupant Health and Comfort	Indoor Environmental Quality	Acoustic Performance	BD&C - 2 ID&C - 2	ARMSTRONG® ACOUSTICAL CEILINGS Sound Transmission: Choose Armstrong Ultima Templok ceiling to meet the composite Sound Transmission Class (STC) ratings or Noise Isolation Class (NIC) for adjacent spaces. Reverberation Time: Armstrong acoustical ceilings absorb sound, contributing to the reduction of Reverberation Time and increased speech intelligibility for all room types and applications.		

