

GRAHAM LEED[®] 2009 Certification Contribution

ASSA ABLOY, the global leader in door opening solutions



GRAHAM Sketch Doors constructed with an agrifiber core were used on the LEED Gold Fairmont Pittsburgh.

Materials & Resources (MR)

Credit 1.2 Building Reuse -Maintain Existing Interior Non-Structural Elements CI HC NC R S

MR Credit 4 Recycled Content CI CS HC NC R S "The Leadership in Energy and Environmental Design (LEED) Green Building Rating System™ is the nationally accepted benchmark for the design, construction, and operation of high performance green buildings. LEED promotes a whole-building approach to sustainability by recognizing performance in seven key areas of human and environmental health: sustainable sites, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality, innovation in design and regional priority credits."

Graham Wood Doors began as a small, residential wood door company out of Marshfield, Wisconsin in 1968. Today, Graham is the nation's fastest growing provider of architectural wood doors. In addition to offering you a wide selection of flush doors (including fire rated, acoustical, pairs, decorative, dutch, wicket, and transoms) and accessories (such as lites, applied moulding, and machining), we have an entire team of individuals that are here for one purpose... to serve you.

GRAHAM can help to achieve prerequisites and accumulate points in the following categories and credit areas of LEED. For further information, please call 641-423-2444 or refer to our website www.grahamdoors.com or www.assaabloydss.com/sustainability



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Extend the life cycle of existing building stock, conserve resources, retain cultural resources, reduce waste and reduce environmental impacts of new buildings as they relate to materials manufacturing and transport. The longevity and durability of openings constructed with products from GRAHAM should allow re-use on LEED projects and help in the attainment of this credit.

Increase demand for building products that incorporate recycled content materials, thereby reducing impacts resulting from extraction and processing of virgin materials. Use materials with recycled content such that the sum of post-consumer recycled content plus 1/2 of the pre-consumer content constitutes at least 10% or 20%, based on cost, of the total value of the materials in the project. The recycled content value of a material assembly is determined by weight. The recycled fraction of the assembly is then multiplied by the cost of assembly to determine the recycled content value. All products from GRAHAM contain recycled content and can assist in the attainment of this credit.

GRAHAM Product	Post-consumer Recycled Content	Pre-consumer Recycled Content*	Total LEED Recycled Content Percentage*
Particleboard Core (PC)	0%	70%	35%
Particleboard Core (PC FSC)	0%	40%	20%
Agrifiber Core (AP, AF)	0%	40%	20%

* Based on 1-3/4" x 3'0" x 7'0" Nominal Birch Door

Post-consumer material is defined as waste material generated by households or by commercial, industrial and institutional facilities in their role as end-users of the product, which can no longer be used for its intended purpose.

Pre-Consumer (Post-industrial) recycled content refers to scraps that are left over during industrial or manufacturing processes and which are subsequently recycled and reused.

MR Credit 5 Regional Material Cl	Increase demand for building materials and products that are extracted and manufactured within the region, thereby supporting the use of indigenous resources and reducing the environmental impacts resulting from transportation. Use building materials or products that have been extracted, harvested or recovered, as well as manufactured, within 500 miles of the project site for a minimum of 10% or 20%, based on cost, of the total materials value. CI allows One point if 20% material by cost is manufactured within 500 miles, second point if 10% is manufactured AND extracted, harvested or recovered). Graham doors can qualify for Regional Material credit under LEED CI. Please see chart below for regional material data by product line for other LEED systems .

GRAHAM Product	Regional Material Information
EC, SL, FD45, FD60, FD90	Final assembly is in Mason City, IA*
Particleboard Core (PC)	70% of the door is harvested and processed within 500 miles of Mason City, IA
Agrifiber Core (AP), AP45	Final assembly is in Mason City, IA*

* Sub assemblies for these product lines are harvested greater than 500 miles from Mason City, IA. and only qualify under LEED CI.

MR Credit 6 Rapidly Renewable HC NC R S CI	Reduce the use and depletion of finite raw materials and long-cycle renewable materials by replacing them with rapidly renewable materials. Use rapidly renewable building materials and products for 2.5% of the total value of all building materials and products used in the project, based on cost. Rapidly renewable building materials and products are made from plants that are typically harvested within a 10-year or shorter cycle. Graham AP and AP45 doors contain 70% agri-based core (based on 1-3/4" x 3'0"x7'0" Nominal Birch Door). Bamboo veneers can also be used to assist with this credit.
MR Credit 7 Certified Wood CI NC R S (MRc6 in CS)	Encourage environmentally responsible forest management. Use a minimum of 50% (based on cost) of wood-based materials and products that are certified in accordance with the Forest Stewardship Council's (FSC) principles and criteria, for wood building components. These components include at a minimum, structural framing and general dimensional framing, flooring, sub-flooring, wood doors and finishes. Graham has FSC certified products across their product lines to help projects

GRAHAM Product	Wood Content of Door*	Wood That is FSC Certified	Total LEED Certified Wood Percentage*
Particleboard Core (PC FSC)	60%	78%	78%
Agrifiber Core (AP, AF)	21%	85%	18%
Stave Lumber Core (SL FSC)	100%	78%	78%
Mineral Core (FD)	15%	80%	12%
Engineered Core (EC FSC)	100%	78%	78%

qualify for this credit.

* Based on 1-3/4" x 3'0" x 7'0" Nominal Door

MR Credit 53 (Pilot Credit) Responsible Sourcing of Raw Materials CS HC NC R S CI EBOM To encourage the use of products and materials for which life cycle information is available and that have environmentally, economically, and socially preferable life cycle impacts. To reward project teams for selecting products verified to have been extracted or sourced in a responsible manner. Graham doors and frames meet the recycled content option and materialsreuse option (doors are salvaged, refurbished or reused via ASSA ABLOY Product End of Life Recycling Program).

MR Credit 77 (Pilot Credit) Material Ingredient Optimization CS HC NC R S CI EBOM To reward project teams for selecting products verified to minimize the use and generation of harmful substances. To reward raw material manufacturers who produce products verified to have improved life-cycle impacts. Graham doors and frames are third party certified and document fully inventoried ingredients via Health Product Declaration (free of Benchmark 1 Greenscreen chemicals). Products are salvaged, refurbished or reused via ASSA ABLOY Product End of Life Recycling Program.

Indoor Environmental Quality (IEQ)

IEQ Credit 3.2 Construction Indoor Air Quality Management Plan – Before Occupancy CI CS HC NC R S



To reduce indoor air quality (IAQ) problems resulting from construction or renovation to promote the comfort and well-being of construction workers and building occupants. Project teams specify GRAHAM doors meeting GREENGUARD Children and Schools testing will assist with IEQ 3.2 compliance.

IEQ Credit 4.1 & 4.2 Low-Emitting Materials-Adhesives & Sealants, Paints & Coatings CI CS HC NC R S Reduce the quantity of indoor air contaminants that are odorous, irritating and/or harmful to the comfort and well-being of installers and occupants. This credit only applies to materials applied within the weatherproofing system however, GRAHAM offer solutions including pre-finished door openings and pre-installed glazing. This allows LEED projects to avoid applying materials on site.

IEQ Credit 4.4 Low-Emitting Materials -Composite Wood & Agrifiber Products CI CS NC (HC, R and S requires 1350 test, GREENGUARD, CHPS)



Reduce the quantity of indoor air contaminants that are odorous, irritating and/or harmful to the comfort and well-being of installers and occupants. Composite wood and agrifiber products used on the interior of the building (i.e., inside the weatherproofing system) must contain no added urea-formaldehyde (NAUF) resins. GRAHAM has NAUF, CARB 2 and GREENGUARD certified products available across all product lines.

GRAHAM Product	Urea Formaldehyde Statement
Particleboard Core (PC) Engineered Core (EC) Stave Lumber Core (SL) Agrifiber Core (AP, AF) Mineral Core (FD)	GRAHAM Particleboard Core (PC), Engineered Core (EC), Stave Lumber (SL), Agrifiber Core (AP, FD 45 AP and AF) and Mineral Core (FD) doors do not contain any added Urea Formaldehyde ¹ . ¹ With optional Urea Formaldehyde Free Skins; contact Factory for pricing, lead-time, and availability.

* Based on 1-3/4" x 3'0" x 7'0" Nominal Door

IEQ Credit 4.6 Low-Emitting Materials -Ceiling & Wall Systems HC R S



Reduce the quantity of indoor air contaminants that are odorous, irritating and/or harmful to the comfort and well-being of installers and occupants. All gypsum board, insulation, acoustical ceiling systems and wall coverings (including doors) installed in the building interior must meet the testing requirements of CA 01350. All Graham doors are GREENGUARD Indoor Air Quality certified to meet this requirement. IEQ Credit 8.1 & 8.2 Daylight & Views CI CS NC S (IEQc.2.4 in EBOM) Provide building occupants with a connection between indoor spaces and the outdoors through the introduction of daylight and views into the regularly occupied areas of the building. Adding glazing and sidelights to openings built with products from GRAHAM will assist projects in achieving this LEED credit.

IEQ Credit 9 Enhanced Acoustical Performance HC S Pilot Credit 24 - Acoustics To provide workspaces and classrooms that promote occupants' well-being, productivity, and communications through effective acoustic design. Design the building shell, classroom partitions and other core learning space partitions to meet the Sound Transmission Class (STC) requirements of ANSI Standard S12.60-2002, Acoustical Performance Criteria, Design Requirements and Guidelines for Schools. GRAHAM's Serenity door line offers a wide range of STC door solutions from 29 to 46 fully operable. These STC tested assemblies include user friendly seal sets and can help LEED projects gain credit for Enhanced Acoustical Performance.

LEED EBOM Specific Credits

MR Credit 3 Sustainable Purchasing -Facility Alterations & Additions EBOM Reduce the environmental and air quality impacts of the materials acquired for use in the upgrade of buildings. Maintain a sustainable purchasing program covering materials for facility renovations, demolitions, refits and new construction additions. GRAHAM can help sustainable purchasing programs meet many of the requirements to obtain this credit.

MR Credit 9 Solid Waste Management -Facility Alterations & Additions EBOM To divert construction and demolition debris from disposal to landfills and incineration facilities. Redirect recyclable recovered resources back to the manufacturing process and reusable materials to appropriate sites. Many GRAHAM products can be recycled and reused. We strive to make durable sustainable products that can assist projects in attaining this credit.

CI: Commercial Interiors CS: Core and Shell EBOM: Existing Buildings Operations & Maintenance HC: Healthcare NC: New Construction R: Retail S: Schools

Natural Solutions

Wood is a natural material with inherent growth patterns. The uniqueness offered by wood makes it appealing and interesting in the realm of design and beauty. This same uniqueness, along with variations caused by printing, is why actual colors and door face veneers may vary from what is pictured here.



GRAHAM Doors

For more information call 641-423-2444 or visit us online at www.grahamdoors.com or www.assaabloydss.com/sustainability

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ASSA ABLOY is the global leader in door opening solutions, dedicated to satisfying end-user needs for security, safety and convenience



Rainforest Alliance

GRAHAM WOOD DOORS 2510 19TH ST. S.W. MASON CITY, IOWA, UNITED STATES 50401-6237

IS CERTIFIED FOR FOREST STEWARDSHIP COUNCIL[™] CHAIN OF CUSTODY

Certificate Scope

Certificate Type: Single Chain of Custody

Standard(s): FSC-STD-40-004 V2-1

Product group(s): Wood Doors

Valid from October 20, 2013 to October 19, 2018

Certificate Registration Code: RA-COC-003530

FSC License Code: FSC-C001724

Certificate Issue Number: IN-2013-1

Additional details regarding the scope, including a full list of products and species, are available at info.fsc.org.

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