



**Leadership in Energy and Environmental Design
Contributions to LEED-NC 2.2**





Isolatek Contributions to LEED-NC Version 2.2

As the world’s leading manufacturer of structural steel fire protection products, Isolatek International recognizes the value of designing buildings to meet the standards of the Leadership in Energy and Environmental Design (LEED) Program.

Attached you will find a detailed breakdown of how Isolatek products help contribute to certain LEED credits and the corresponding points. There is no such thing as a LEED certified product. The intent of the LEED program is to apply products to the outlined criteria for the various LEED credits.

The following are the areas of the LEED program Version 2.2, where Isolatek products will contribute toward the credit(s):

Credit - Section	Page
➤ EA – Energy and Atmosphere	
◆ Prerequisite 2.....	1
◆ Credit 1(Optimize Energy Performance).....	1
➤ MR – Materials and Resources	
◆ Credit 1.1 (Building Re-use, 75% of Existing Walls, Roofs and Floors).....	2
◆ Credit 1.2 (Building Re-use, 95% of Existing Walls, Roofs and Floors).....	2
◆ Credit 2.1 (Construction Waste, Divert 50% from Disposal).....	3
◆ Credit 2.2 (Construction Waste, Divert 75% from Disposal).....	3
◆ Credit 4.1 (Recycled Content, 10% Post-Consumer + ½ Pre-Consumer).....	4
◆ Credit 4.2 (Recycled Content, 20% Post-Consumer + ½ Pre-Consumer).....	5
◆ Credit 5.1 (Regional Materials, 10% Extracted, Processed, & Manufactured Regionally).....	6
◆ Credit 5.2 (Regional Materials, 20% Extracted, Processed & Manufactured Regionally).....	7
◆ Manufacturing Map.....	8
➤ EQ – Indoor Environmental Quality	
◆ Credit 4.1 (Low-Emitting Materials, Adhesives and Sealants).....	9
◆ Credit 4.2 (Low-Emitting Materials, Paints and Coatings).....	9

The contents of this informational package should be used as a guide only. Please contact our Technical Services Department with any questions concerning this package.



Isolatek International - Cafco Fire Protection Products

Contributions to LEED - NC Version 2.2



Energy and Atmosphere

Prerequisite 2

Intent: Establish the minimum level of energy efficiency for the proposed building system

Requirements: Design the building project to comply with both the mandatory provisions of ASHRAE/IESNA Standard 90.1-2004 (without amendments), and the prescriptive requirements of ASHRAE/IESNA Standard 90.1-2004 (without amendments)

Potential Technologies & Strategies: Design the building envelope, HVAC, Lighting and other systems to maximize energy performance

How CAFCO Contributes: Both CAFCO Wet-Mix and Dry-Mix materials provide thermal resistance and NRC (Noise Reduction Coefficient) values. This will reduce the amount of energy needed for climate control, and reduce any added materials needed for soundproofing. This credit only applies to CAFCO materials when used within the building envelope.

CAFCO Products that Contribute:

*CAFCO 300/304, CAFCO 400/404, FENDOLITE M-II/TG
*BLAZE-SHIELD II, BLAZE-SHIELD HP, HEAT-SHIELD
*CAFCO-BOARD, SOUND-SHIELD, CAFCO 300SB

EA Credit 1: Optimize Energy Performance 1-10 Points

Intent: Achieve increasing levels of energy performance above the baseline in the prerequisite standard to reduce environmental and economic impacts associated with excessive energy use.

Requirements: Select one of three compliance path options described in the LEED-NC Version 2.2 page 35

How CAFCO Contributes: Both CAFCO Wet-Mix and Dry-Mix materials provide thermal resistance and NRC (Noise Reduction Coefficient) values. This will reduce the amount of energy needed to for climate control, and reduce any added materials needed for soundproofing. This credit only applies to CAFCO materials when applied within the building envelope.

CAFCO Products that Contribute:

*CAFCO 300/304, CAFCO 400/404, FENDOLITE M-II/TG
BLAZE-SHIELD II, BLAZE-SHIELD HP, HEAT-SHIELD
CAFCO-BOARD, SOUND-SHIELD, CAFCO 300SB



MR Credit 1.1: Building Reuse: Maintain 75% of Existing Walls, Roofs & Floor
1 Point

Intent: 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 transportation.

Requirements: Maintain at least 75% (based on surface area) of existing building structure (including structural floor and roof decking) and envelope (exterior skin and framing, exclude window assemblies and non-structural roofing material)

Potential Technologies & Strategies: Remove elements that pose contamination risk to the building occupants and upgrade components that would improve energy and water efficiency.

How CAFCO Contributes: CAFCO Wet-Mix and Dry-Mix products are utilized for retrofit/rehab construction. They will provide fire resistance ratings to unprotected structural members which will bring the existing building up to code. This will eliminate the need to replace the structural elements, that were not code compliant. An example would be wood floors. Remember that this credit only applies when at least 75% of the surface area of the building is maintained.

CAFCO Products that Contribute:

*CAFCO 300/304, CAFCO 400/404, FENDOLITE M-II/TG
BLAZE-SHIELD II, BLAZE-SHIELD HP
CAFCO-BOARD, CAFCO 300SB

MR Credit 1.2: Building Reuse: Maintain 95% of Existing Walls, Roofs & Floor
1 Point in Addition to MR Credit 1.1

Intent: 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 transportation.

Requirements: Maintain at least 95% (based on surface area) of existing building structure (including structural floor and roof decking) and envelope (exterior skin and framing, exclude window assemblies and non-structural roofing material)

Potential Technologies & Strategies: Remove elements that pose contamination risk to the building occupants and upgrade components that would improve energy and water efficiency.

How CAFCO Contributes: CAFCO Wet-Mix and Dry-Mix products are utilized for retrofit/rehab construction. They will provide fire resistance ratings to unprotected structural members which will bring the existing building up to code. This will eliminate the need to replace the structural elements, that were not code compliant. Examples would be wood floors and cast iron beams and columns. Remember that this credit only applies when at least 95% of the surface area of the building is maintained.

CAFCO Products that Contribute:

*CAFCO 300/304, CAFCO 400/404, FENDOLITE M-II/TG
BLAZE-SHIELD II, BLAZE-SHIELD HP
CAFCO-BOARD, CAFCO 300SB

Materials and Resources (cont)



MR Credit 2.1: Construction Waste Management: Divert 50% from Disposal **1 Point**

Intent: Divert construction, demolition and land clearing debris from disposal in landfills and incinerators. Redirect recyclable recovered resources back to the manufacturing process. Redirect reusable materials to the appropriate sites.

Requirements: Recycle and/or salvage at least 50% of non-hazardous construction and demolition debris. Develop and implement a construction waste management plan that, at a minimum, identifies the materials to be diverted from disposal and whether the materials will be sorted on-site or commingled. Excavated soil and land-clearing debris do not contribute to this credit. Calculations can be done by weight or volume, but must be consistent throughout.

Potential Technologies & Strategies: Establish goals for diversion from disposals in landfills and incinerators and adopt a construction waste management plan to achieve these goals. Consider recycling construction materials.

How CAFCO Contributes: CAFCO products are supplied in either plastic or kraft paper bags that are able to be recycled. The pallets our products are shipped on can also be recycled. Our pallet products are supplied in 5 gallon plastic containers which are able to be sent to a recycling site. None of our products are hazardous materials.

CAFCO Products that Contribute:

*CAFCO 300/304, CAFCO 400/404, FENDOLITE M-II/TG
BLAZE-SHIELD II, BLAZE-SHIELD HP
BOND-SEAL, SPRAYFILM, CAFCO-BOARD,
CAFCO 300SB

MR Credit 2.2: Construction Waste Management: Divert 75% from Disposal **1 Point in addition to MR Credit 2.1**

Intent: Divert construction, demolition and land clearing debris from disposal in landfills and incinerators. Redirect recyclable recovered resources back to the manufacturing process. Redirect reusable materials to the appropriate sites.

Requirements: Recycle and/or salvage an additional 25% beyond MR Credit 2.1 (75% total) on non-hazardous Construction and demolition debris.

Potential Technologies & Strategies: Establish goals for diversion from disposals in landfills and incinerators and adopt a construction waste management plan to achieve these goals. Consider recycling construction materials.

How CAFCO Contributes: CAFCO products are supplied in either plastic or kraft paper bags that are able to be recycled. The pallets our products are shipped on can also be recycled. Our pallet products are supplied in 5 gallon plastic containers which are able to be sent to a recycling site. None of our products are hazardous materials.

CAFCO Products that Contribute:

*CAFCO 300/304, CAFCO 400/404, FENDOLITE M-II/TG
BLAZE-SHIELD II, BLAZE-SHIELD HP, BOND SEAL,
SPRAYFILM, CAFCO-BOARD, CAFCO 300SB



**MR Credit 4.1: Recycled Content: 10%
Post-Consumer + 1/2 Pre-Consumer)
1 Point**

Intent: Increase demand for building products that incorporate recycled content materials, thereby reducing impacts resulting from extraction and processing of virgin materials.

Requirements: Use materials with recycled content such that the sum of post-consumer recycled content plus one-half of the pre-consumer content constitutes at least 10% (based on cost) of the total value of the materials in the project.

The recycled content value of a material assembly shall be determined by weight. The recycled fraction of the assembly is then multiplied by the cost of the assembly to determine the recycled content.

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 materials is defined as material diverted from a waste stream during the manufacturing process. Excluded is the reutilization of materials such as rework, regrind, or scrap generated in a process and capable of reclaimed within the same process that generated it.

Potential Technologies & Strategies: Establish a project goal for recycled content and identify material suppliers that can achieve this goal. During construction ensure that the specified recycled content materials are installed.

How CAFCO Contributes: Various CAFCO products are manufactured with recycled materials. See the breakdown listed below, which identifies the recycled content percentage.

CAFCO Products that Contribute:

- CAFCO BLAZE-SHIELD II - 67% Pre-consumer
 - **Total Recycled content for this credit is 33.5%**
- CAFCO BLAZE-SHIELD HP - 56% Pre-consumer
 - **Total Recycled content for this credit is 28%**
- CAFCO 300/304/300SB - 10% Post-consumer
 - **Total Recycled content for this credit is 10%**
- CAFCO 400/404 - 10% Post-consumer
 - **Total Recycled content for this credit is 10%**
- CAFCO-BOARD - >75% Pre-consumer
 - **Total Recycled content for this credit is 45%**
- CAFCO HEAT-SHIELD - 90% Pre-consumer
 - **Total Recycled content for this credit is 45%**



MR Credit 4.2: Recycled Content: 20% Post-Consumer + 1/2 Pre-Consumer) 1 Point in addition to MR Credit 4.1

Intent: Increase demand for building products that incorporate recycled content materials, thereby reducing impacts resulting from extraction and processing of virgin materials.

Requirements: Use materials with recycled content such that the sum of post-consumer recycled content plus one-half of the pre-consumer content constitutes at least 10% beyond MR Credit 4.1 (Total of 20% based on cost) of the total value of the materials in the project. The recycled content value of a material assembly shall be determined by weight. The recycled fraction of the assembly is then multiplied by the cost of the assembly to determine the recycled content.

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 materials is defined as material diverted from a waste stream during the manufacturing process. Excluded is the reutilization of materials such as rework, regrind, or scrap generated in a process and capable of reclaimed within the same process that generated it.

Potential Technologies & Strategies: Establish a project goal for recycled content and identify material suppliers that can achieve this goal. During construction ensure that the specified recycled content materials are installed.

How CAFCO Contributes: Various CAFCO products are manufactured with recycled materials. See the breakdown listed below, which identifies the recycled content percentage.

CAFCO Products that Contribute:

- CAFCO BLAZE-SHIELD II - 67% Pre-consumer
 - **Total Recycled content for this credit is 33.5%**
- CAFCO BLAZE-SHIELD HP - 56% Pre-consumer
 - **Total Recycled content for this credit is 28%**
- CAFCO-BOARD - >75% Pre-consumer
 - **Total Recycled content for this credit is 45%**
- CAFCO HEAT-SHIELD - 90% Pre-consumer
 - **Total Recycled content for this credit is 45%**



**MR Credit 5.1: Regional Materials: 10%
Extracted, Processed & Manufactured
Regionally
1 Point**

Intent: 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.

Requirements: Use building materials that have been extracted, harvested or recovered, as well as manufactured, within 500 miles of the project site for a minimum of 10% (based on cost) of the total materials value. If only a fraction of a product or material is extracted/harvested/recovered and manufactured locally then only that percentage (by weight) shall contribute to the regional value.

Potential Technologies & Strategies: Establish a project goal for locally sourced materials, and identify materials and material suppliers that can achieve this goal. During construction, ensure that the specified local are installed and quantify the total percentage of local materials installed.

How CAFCO Contributes: Isolatek has strategically placed manufacturing facilities located in key areas. A map has been supplied to show manufacturing facilities and the required 500 mile radius to earn this credit.

CAFCO Products that Contribute:

CAFCO BLAZE-SHIELD II

- **Manufactured in Huntington, IN and Birmingham, AL**

CAFCO BLAZE-SHIELD HP

- **Manufactured in Huntington, IN**

CAFCO HEAT-SHIELD

- **Manufactured in Huntington, IN**

CAFCO 300, CAFCO 304, CAFCO 300SB

- **Manufactured in Stanhope, NJ, Houston, TX and San Bernardino, CA**

CAFCO 400, CAFCO 404

- **Manufactured in Stanhope, NJ and Houston, TX San Bernardino, CA**

FENDOLITE M-II/TG & SOUND-SHIELD 40

- **Manufactured in Stanhope, NJ and Houston, TX San Bernardino, CA**

SPRAYFILM & BOND-SEAL

- **Manufactured in Lawrence, MA**

CAFCO-BOARD

- **Manufactured in Warren, IN**



**MR Credit 5.2: Regional Materials: 20%
Extracted, Processed & Manufactured
Regionally
1 Point in addition to MR Credit 5.1**

Intent: 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.

Requirements: Use building materials that have been extracted, harvested or recovered, as well as manufactured, within 500 miles of the project site for an additional 10% beyond MR Credit 5.1 (total of 20% based on cost) of the total materials value. If only a fraction of a product or material is extracted/harvested/recovered and manufactured locally then only that percentage (by weight) shall contribute to the regional value.

Potential Technologies & Strategies: Establish a project goal for locally sourced materials, and identify materials and material suppliers that can achieve this goal. During construction, ensure that the specified local are installed and quantify the total percentage of local materials installed.

How CAFCO Contributes: Isolatek has strategically placed manufacturing facilities located in key areas. A map has been supplied to show manufacturing facilities and the required 500 mile radius to earn this credit.

CAFCO Products that Contribute:

CAFCO BLAZE-SHIELD II

- **Manufactured in Huntington, IN and Birmingham, AL**

CAFCO BLAZE-SHIELD HP

- **Manufactured in Huntington, IN**

CAFCO HEAT-SHIELD

- **Manufactured in Huntington, IN**

CAFCO 300, CAFCO 304, CAFCO 300SB

- **Manufactured in Stanhope, NJ, Houston, TX and San Bernardino, CA**

CAFCO 400, CAFCO 404

- **Manufactured in Stanhope, NJ and Houston, TX San Bernardino, CA**

FENDOLITE M-II/TG & SOUND-SHIELD 40

- **Manufactured in Stanhope, NJ and Houston, TX San Bernardino, CA**

SPRAYFILM & BOND-SEAL

- **Manufactured in Lawrence, MA**

CAFCO-BOARD

- **Manufactured in Warren, IN**



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**EQ Credit 4.1: Low-Emitting Materials:
Adhesives and Sealants
1 Point**

Intent: Reduce the quantity of indoor air contaminants that are odorous, irritating, and/or harmful to the comfort and well-being of installers and occupants.

Requirements: All adhesives and sealants used on the interior of the building (defined as inside of the weather-proofing system and applied on-site) shall comply with the requirements of the following reference standards as outlined in page 67 of the LEED-NC version 2.2.

Potential Technologies & Strategies: Specify low VOC materials in construction documents. Ensure that VOC limits are clearly stated in each section of the specification where adhesives and sealants are addressed.

How CAFCO Contributes: CAFCO BOND-SEAL, BOND-SEAL X and TOP-COTE are all VOC Compliant and meet the standards set forth by South Coast Air Quality Management District Rule #1168.

CAFCO Products that Contribute:
CAFCO BOND-SEAL
CAFCO BOND-SEAL X
CAFCO TOP-COAT

**EQ Credit 4.2: Low-Emitting Materials:
Paints and Coatings
1 Point**

Intent: Reduce the quantity of indoor air contaminants that are odorous, irritating, and/or harmful to the comfort and well-being of installers and occupants.

Requirements: Paints and coatings used on the interior of the building (defined as inside of the weatherproofing system and applied on-site) shall comply with the following criteria:

Architectural paints, coatings and primers applied to interior walls and ceilings: Do not exceed the VOC limits established in Green Seal Standard GS-11, Paints, First Edition, May 20, 1993:

* Flats : 50 g/L

* Non-Flats: 150 g/L

Potential Technologies & Strategies: Specify low VOC materials in construction documents. Ensure that VOC limits are clearly stated in each section of the specification where paints and coatings are addressed.

How CAFCO Contributes: CAFCO SPRAYFILM products and CAFCO TOP-SEAL all meet the required VOC limits as outlined in this credit.

CAFCO Products that Contribute:
CAFCO SPRAYFILM WB 2, 3, and 4
CAFCO TOP-SEAL