

Craig Boucher
Specialty Building Materials
Commercial Construction-Americas

September 6, 2007

RE: Grace Roof Underlayments and Window, Door & Deck Flashing
LEED® Product Information

To Whom It May Concern:

This letter is intended to detail the contribution of Grace Roof Underlayments and Window, Door & Deck Flashing materials to the LEED Green Building Rating System in accordance with LEED-NC Version 2.2 for New Construction and Major Renovations of existing buildings.

MR Credit 2.1: Construction Waste Management, Divert 50% from Disposal

MR Credit 2.2: Construction Waste Management, Divert 75% from Disposal

In areas where facilities exist, the following Grace Roof Underlayments and Window Door & Deck Flashing packaging materials are recyclable and can contribute to earning Materials and Resources Credit 2.1 or Credit 2.2.

		<u>Maximum Weights</u>
• Wooden Pallet	wood	45 lbs
• Underlayment Core	cardboard	2.5 lbs/core
• Underlayment Carton	cardboard	3.5 lbs/carton
• Flashing Core	cardboard	0.06 lbs/inch length Flashing Available in Several Lengths
• Flashing Carton	cardboard	2.5 lbs/carton
• Pail	steel	2 lbs/pail
• Pail	HDPE (plastic)	2 lbs/pail

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

MR Credit 5.2: Regional Materials, 20% Extracted, Processed & Manufactured Regionally

Grace Roof Underlayments and Window, Door & Deck Flashing materials are manufactured in North America. If these locations fall within a 500-mile radius of the project site and the location the raw materials used to make the finished product are extracted, recovered or harvested within a 500-mile radius of the project, then these materials or a portion of the materials can contribute to earning Materials and Resources Credit 5.1 and Credit 5.2.

The following are the locations of the Grace Roof Underlayments and Window, Door & Deck Flashing materials main manufacturing plants (Grace has other smaller satellite plants):

- Bedford Park, IL
- Mount Pleasant, TN

Please contact your local Grace Representative to request a project specific letter pertaining to Credit 5.1 and Credit 5.2. The letter will provide the location of the manufacturing plant and percentage of the raw materials that are extracted, recovered or harvested within 500 miles of the location of the project.



EA Category Prerequisite 2: Minimum Energy Performance

Buildings must meet a minimum level of energy efficiency and comply with several mandatory and prescriptive requirements of ASHRAE Standard 90.1-2004 (without amendments).

One method to improve energy efficiency is to reduce uncontrolled air leakage through the building envelope. The use of Grace Roof Underlayments as full coverage roof underlayments and Grace Window, Door & Deck Flashings in conjunction with an air barrier substantially reduces uncontrolled air leakage through the building envelope, reducing energy consumption.

EA Credit 1: Optimize Energy Performance – 1 to 10 Points

Up to 10 Points can be earned with this one credit alone. One method to achieve the points is to conduct a whole building project simulation per ASHRAE Standard 90.1-2004. The points are based on the amount of percentage improvement compared to baseline building performance in the Standard. Achieving a 42% energy performance improvement for the proposed new building earns the full 10 points.

Using Grace Roof Underlayments installed as full coverage roof underlayments and Grace Window, Door & Deck Flashings in conjunction with an air barrier dramatically improves energy efficiency. Eliminating uncontrolled air leakage reduces the energy load on a building required to condition and replace the air that escaped through holes and voids in the building.

EQ Prerequisite 1: Minimum Indoor Air Quality (IAQ) Performance

Currently the LEED-NC Version 2.2 Rating System has a prescriptive requirement for this Prerequisite to meet the minimum requirements of sections 4 through 7 of ASHRAE 62.1-2004. Grace Roof Underlayments and Window, Door & Deck Flashing used in conjunction with an air barrier can be used to reduce uncontrolled air leakage into and out of a building. Air carries a significant amount of moisture into the insulating layers of a building. If that air reaches its dew point temperature, it will deposit liquid moisture or water. This moisture source combined with mold spores and an organic food source could lead to organic growth such as mold, thus negatively impacting the Indoor Air Quality. Use of Grace Roof Underlayments and Window, Door & Deck Flashing can be used to control the air leakage and help eliminate the moisture and water source that is necessary to support organic growth.

EQ Credit 3.1: Construction Indoor Air Quality (IAQ) Management Plan – 1 Point

The goal of this credit is to reduce indoor air quality problems resulting from the construction process. One of the requirements is to protect installed absorptive materials from moisture damage. Grace Roof Underlayments and Window, Door & Deck Flashing act as water shedding barriers. Typical roof and wall construction may include water absorptive insulation and sheathing materials. These water absorptive materials can be protected from moisture damage by using a Grace Window, Door & Deck Flashing while the building is being built and after the weather resistive exterior cladding is installed. Grace Roof Underlayments can be used in a similar manner to protect roofing materials prior to and after installation of shingles and other roof coverings.

EQ Credit 4.2: Low Emitting Materials, Paints & Coatings

EQ Credit 4.2 pertains to products that are to be used in the interior of a building. Grace Roof Underlayments and Window, Door & Deck Flashing materials are applied onto the exterior of a structure and therefore would not contribute to this credit. However, Grace has provided the volatile organic content (VOC) of the Grace Roof Underlayments and Window, Door & Deck Flashing primer material listed below.

<u>Grace Product</u>	<u>VOC Content g/L</u>
Perm-A-Barrier WB Primer	10

Please feel free to contact me with any additional questions or information.

Sincerely,



Craig Boucher LEED AP
Grace Technical Services Manager