HSE profile and Green Building contribution Hilti Firestop Coating CP 670 & Coated Board System

LEED and **BREEAM** are third-party certification programs which provide a benchmark for the design, construction and operation of high-performance green buildings. Both promote a whole-building approach to sustainability and evaluate it by scoring points based on a set of criteria. Individual products cannot be certified under LEED or BREEAM but they can contribute to criterion compliance (prerequisites or credits).

The following information shows the areas where Hilti Firestop Coating and Coated Board System can potentially contribute, as well as the maximum number of points that can be achieved by accomplishing each criteria and state the required values and explanations for the building certification process.

Hilti Firestop Coating and Coated Board System is an innovative system for fast, reliable and cost effective firestopping of wall and floor openings. It is specially suited to large openings. The Coated Board is precoated with a water based acrylic coating.



| | | LEED | | BREEAM | |
|---|--|--|-------|-----------------------------------|------------|
| Sustainable sites management | | Criteria (Up to # points) & Evaluation | | | |
| Construction site waste | Some dust and waste generation during installation | SS Prerequisite 1 | ☆☆☆ | Wst 1 (3) Man 3d (4 for Man 3) | ☆☆☆ |
| Life cycle assesment, Product Carbon Footprint | PCF (GWP 100 years): 43.2 Kg CO2-eq (17.5 Kg pail) / 31.6*** Kg CO2-eq - low global warming potential | SS Credit 5.2 (1) | ☆☆☆ | Man 3a (4 for Man 3) Mat 1 (4) | * * |
| Water consumption | No water demand during installation and repenetration | WE Credit 2 (2) | ☆ ☆ ☆ | Man 3c (4 for Man 3) | ☆☆ |
| Water pollution | No waste water generation during installation and repenetration | | 🖈 🖈 🖈 | Man 3e (4 for Man 3) | ☆☆☆ |
| Application | Can be painted or sprayed and no electric tool is needed during installation | - | | - | |

Energy Optimization, Atmosphere and Pollution

| Air fightness" | Air permeability: \leq 0.0319m3/h m2 at 50 Pa (acc to EN 1026) - see test report dated June 05, 2006 | EA Prerequisite 2 | ☆☆☆ | Ene 1 (15) Ene 6 (1) | ☆☆☆ |
|---------------------------|--|--|-------|-------------------------|---------------------------------------|
| Thermal insulation* | $\lambda \le 0.0385^{***}$ W/mK - see test report dated Feb. 26, 2010 | EA Credit 1 (1-19) IEQ Credit 7.1 (1) | ☆☆☆ | Ene 1 (15) Mat 6 (2) | ☆☆☆ |
| Ozone Depletion Potential | ODP, catalytic: < 0,00001 kg R11-eq per unit | EA Prerequisite 3 | ☆ ☆ ☆ | IC (1) | $\Rightarrow \Rightarrow \Rightarrow$ |

Materials and Resources

| Reusability | It is not reusable | MR Credit 1.1 (1-3) MR Credit 1.2 (1) | ☆ ☆ ☆ | Wst 1 (3) | * * * |
|-----------------------------|--|--|--------------|------------------|-------------|
| Product recycling | The product cannot be recycled or salvaged but the packaging can be totally recycled or salvaged | MR Credit 2 (1-2) | ☆ ☆ ☆ | Wst 1 (3) | ☆☆ ☆ |
| Recycled content | No, since firestop products require the traceability of their raw materials to guarantee uniform and constant product performance and guality. | MR Credit 4 (1-2) | ☆☆☆ | | ☆☆☆ |
| | The packaging is not manufactured with recycled material | | ☆☆☆ | Mat 5 (3) | *** |
| Product origin | Raw materials origin: Europe | MR Credit 5 (1-2) | ☆☆☆ | | ☆☆☆ |
| | Manufacturing location: The Netherlands / United Kingdom*** | | ☆☆☆ | 3 | 숨 ☆ ☆ |
| Rapidly Renewable Materials | Raw materials are not rapidly renewable | MR Credit 6 (1) | ☆☆☆ | - | |

Indoor Environmental Quality, Health and Wellbeing

| IAQ (Indoor Air Quality) Management | No dangerous good or labelling needed and no content of carcinogens | IEQ Credit 3.1 (1) | * * * | - | |
|--|--|--------------------|--------------|------------|--------------|
| | Halogen Free Flame Retardants | IEQ Credit 3.2 (1) | ☆☆☆ | | |
| Low-Emitting Materials | VOC acc to LEED 2009 / EPA #24: 38 g/l - see certificate dated | IEQ Credit 4.1 (1) | <u>~ ~ ~</u> | Hea 9 (1) | <u>~~</u> ~~ |
| Volatile Organic Compounds | July 20, 2009 | IEQ Credit 4.2 (1) | | | x x x |
| Acoustic Performance & | Rw** = 53*** dB (refer to test report 16441706/2 dated Nov. 16, | | | Hea 13 (1) | <u>~~</u> ~ |
| Soundproofing | 2009). Protection to the sound passage and noise reduction. | - | | | x x x |

 $rac{1}{2}$ $rac{1}{2}$ Product highly contributes to Green Building certification under this clause

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ightarrow Product contributes to Green Building certification under this clause

 \gtrsim_{i} Not applicable for this product or dependent on each situation and so not possible to evaluate in general terms

Product makes no contribution to Green Building certification under this clause

* Lower heating and cooling costs ** Sound reduction Index ***This clause only applies when using the Board supplied by Hilti.

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BU Chemicals, CETsp&CMT

www.hilti.com

The data herein is for information reasons only. Hilti expressly reserves the right to change characteristics, properties, features and attributes of the product and alter, amend or remove information, data and specification. Please contact your local Hilti representative for detailed and actual information on installation and approvals prior to the use of Hilti Firestop Products. This document has been prepared considering LEED 2009 for New Construction and Major Renovations and BREEAM Europe Commercial 2009, so all this information may not apply to other versions of the documents. Consider also that the number of points presented here is just a suggestion of the possible contribution, the total amount of points cannot be calculated since it depends on the whole building project and not on the products.





The sustainability of sites is improved with Hilti Firestop Coating and Coated Board System by supporting LEED, BREEAM and the following extra properties and highly important characteristics of a building, as well as, preventing effectively from the spread of a fire:



Sound insulation is of great importance to the health and well-being of the occupants of a building. Hilti firestop products are tested for this purpose and individually tailored to the requirements of the installation and building structure. Hilti Firestop Coating and Coated Board System, tested in accordance with ISO 140-3, 20140-10 and 717-1 standard, allow compliance with the applicable sound insulation specifications for fireproofed penetrations through walls and floors, and joints between building components.



Hilti products meet stringent environmental requirements, thereby supporting environmentally friendly building construction. Energy conservation within a building is important and highly considered when evaluating the sustainability of a building. In addition, it supposes also a reduction in energy costs. Hilti Firestop Coating and Coated Board System have been tested with the latest energy conservation regulations.



Mold in a building can attack and weaken many types of build materials and fungus, caused by moisture and humidity, can be seriously detrimental to the health of building users. Measures to successfully prevent the formation of mold and mildew in a building must be taken at the planning stage. Hilti Firestop Coating and Coated Board System are manufactured with materials that provide no nutrition for fungi and tested in accordance with ISO 846 and ASTM G21, to ensure that functionality is not compromised.

All the packagings and cans used by Hilti can be recycled. Hilti Firestop Coating and Coated Board System are considered household waste at the end of the life of the building. Please consider your national law regarding the disposal of the Firestop Coating and Coated Board System and contact your local Hilti partner for further information.



If you need additional information or documentation on a certain HSE issue, please do not hesitate to contact your local Hilti partner - we are happy to provide you with additional information required to make your green building project a success.



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