# HSE profile and Green Building contribution
## Hilti Firestop Filler Mastic CFS-FIL

**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 Filler Mastic 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 Filler Mastic** helps to protect combustible and non-combustible penetrations for up to a 4 hour fire rating. It protects against the most typical firestop penetration applications and is easy to work with and to clean up. It consists on a water based high performance intumescent acrylic sealant.

| | | LEED | | BREEAM | |
|---|---|---|---|---|---|
| **Sustainable sites management** | | **Criteria** (Up to # points) **& Evaluation** | | | |
| Construction site waste | No waste or dust generation during installation | **SS Prerequisite 1** | ★★★ | **Wst 1** (3)<br>**Man 3d** (4 for Man 3) | ★★★ |
| Life cycle assesment, Product Carbon Footprint | PCF (GWP 100 years): 1.65 kg CO2-eq - low global warming potential | **SS Credit 5.2** (1) | ★★★ | **Man 3a** (4 for Man 3)<br>**Mat 1** (4) | ★★★ |
| Water consumption | No water demand during installation | **WE Credit 2** (2) | ★★★ | **Man 3c** (4 for Man 3) | ★★★ |
| Water pollution | No waste water generation during installation | | ★★★ | **Man 3e** (4 for Man 3) | ★★★ |
| Application | No electric tool needed for installation, only a manual dispenser | - | ☆☆☆ | - | ☆☆☆ |
| **Energy Optimization, Atmosphere and Pollution** | | | | | |
| Air tightness* | Air permeability: <0.001 m3/h m2 at 50 Pa (acc to EN 1026) - see test report dated Sept. 08, 2005 | **EA Prerequisite 2** | ★★★ | **Ene 1** (15)<br>**Ene 6** (1) | ★★★ |
| Thermal insulation* | Not determined | **EA Credit 1** (1-19)<br>**IEQ Credit 7.1** (1) | ★☆☆ | **Ene 1** (15)<br>**Mat 6** (2) | ★☆☆ |
| Ozone Depletion Potential | ODP, catalytic: < 0,00001 kg R11-eq per unit | **EA Prerequisite 3** | ★★★ | **IC** (1) | ★★★ |
| **Materials and Resources** | | | | | |
| Reusability | The Hilti Firestop Sealants are not reusable | **MR Credit 1.1** (1-3)<br>**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 quality. | **MR Credit 4** (1-2) | ☆☆☆ | **Mat 5** (3) | ☆☆☆ |
| | The packaging is partially manufatured with recycled material | | ★★☆ | | ★★☆ |
| Product origin | Raw materials origin: Europe | **MR Credit 5** (1-2) | ★☆☆ | | ★☆☆ |
| | Manufacturing location: Germany | | ★☆☆ | | ★☆☆ |
| 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)<br>**IEQ Credit 3.2** (1) | ★★★ | - | |
| | Halogen Free Flame Retardants | | ★★★ | | |
| Low-Emitting Materials Volatile Organic Compounds | VOC acc to LEED 2009 / EPA #24: 77 g/l - see certificate dated July 20, 2009 | **IEQ Credit 4.1** (1)<br>**IEQ Credit 4.2** (1) | ★★★ | **Hea 9** (1) | ★★★ |
| Acoustic Performance & Soundproofing | Dn,w** = 58 dB and STC** = 56 (refer to test report P42-A 46971en/3093 and 3018 02 31937-2). Protection to the sound passage and noise reduction. | - | | **Hea 13** (1) | ★★★ |

★★★ *Product highly contributes to Green Building certification under this clause*
★★☆ *Product contributes to Green Building certification under this clause*
★☆☆ *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*

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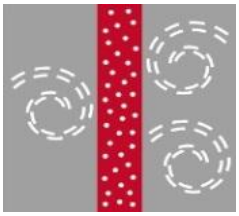
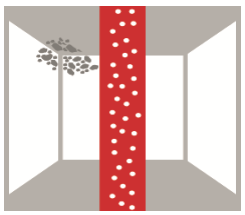
# The sustainability of sites is improved with Hilti Firestop Filler Mastic by supporting LEED, BREEAM and the following extra properties and highly important characteristics of a building, as well as, preventing effectively from the spread of a fire:

The spread of fire in a building is probably the worst scenario owners or occupants can imagine. When it comes to effectively minimizing the effects of fire, the interplay of a variety of systems and elements is required. Active fire protection – including components such as fire alarms and fire extinguishers – is taken into account in many buildings. On the other hand, often less emphasis is placed to measures, which help to contain fire at its point of origin and prevent the spread of fire and smoke effectively. This should ideally be designed already in the planning phase. Components of passive fire protection create effective barriers against the passage of fire, smoke and toxic gases through openings in walls or floors, resulting from through-penetrations of cables and pipes, from construction joints or other damages.



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 Filler Mastic has 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 Filler Mastic is 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 Filler Mastic is considered household waste at the end of the life of the building. Please consider your national law regarding the disposal of the Firestop Filler Mastic and contact your local Hilti partner for further information.

Volatile Organic Compounds are compounds emitted as gases from certain solids or liquids. Depending on their concentration and the exposure time, they can be harmful for the health causing effects like eye, nose, and throat irritation, headaches, loss of coordination, nausea, damage to liver, kidney, and central nervous system. And some are even suspected to cause cancer. French VOC labelling regulation foresees that from 1st January 2012, any covered product placed on the market has to be labelled with emission classes based on their emissions after 28 days, tested in line with ISO 16000 standards and calculated for the European Reference


**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.**

BASTA

Hilti Firestop Filler Mastic has been registered in the Swedish database BASTA. BASTA registration means that we confirm that this product meets agreed properties criteria regarding properties that are harmful to the environment and health. See www.bastaonline.se.

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