



HILTI FIRESTOP PRODUCTS AND “GREEN” BUILDING CONSTRUCTION

“Green” building projects are becoming increasingly popular in today’s construction market. This is why the number of Green buildings certified and registered by the Leadership in Energy & Environmental Design (LEED™) Green Building Rating System has dramatically increased over the last few years. As of early 2005, there are more than 1,500 large construction projects across all 50 states that are LEED™ certified and registered.

The Leadership in Energy and Environmental Design (LEED™) Green Building Rating System represents the U.S. Green Building Council’s effort to provide a national standard for what constitutes a “green building”. This consists of a voluntary rating system document that states the basic intent, requirements and documentation submittals that are necessary to achieve each credit. Projects earn one or more points toward certification by meeting or exceeding each credit’s technical requirements. Points add up to a final score that relates to one of four possible levels of certification.

The intent of LEED™ is to create a guideline for new commercial construction, major renovations and high-rise residential buildings that are environmentally responsible, profitable and provide a healthy place to live and work.

LEED™ is divided up into six credit sections, Sustainable Sites, Water Efficiency, Energy & Atmosphere, Materials & Resources, *Indoor Environmental Quality*, and Innovation & Design Process.

Each section has certain limits or minimums that must be met in order to receive a credit for a particular section.

The section that is truly relevant to Firestop Sealants is **Indoor Environmental Quality**

Credit 4.1, Low-Emitting Materials, Adhesives & Sealants

In this section, the stated requirement is that the **VOC (Volatile Organic Compound)** content of each adhesive and/or sealants being used on this project is **below 250 g/l**. South Coast Air Quality Management District (SCAQMD Rule #1168) and Bay Area Air Quality Management District Regulation (BAAQMD Rule #51) is referenced in this section.

Credit 4.2, Low-Emitting Material, Paints and Coatings

In this section, the stated requirement is that the **VOC (Volatile Organic Compound)** content of paints being used on this project is **below 150 g/l** for non-flat paints. FIRESTOPs are not classified as paints, although if an individual insist that firestop products be classified as such, Hilti Firestop products do meet this requirement.



- CP672 – 0 g/l
- CP606 – 71 g/l
- CP604 – 53 g/l
- CP601S – 3 g/l
- FSONE – 75 g/l
- CP620 – 15 g/l

All Hilti Firestop Sealants listed above are well below the requirement for LOW-EMITTING MATERIALS, Section 4.1, Adhesives & Sealants and Section 4.2, Paints & Coatings.

Please make sure that you are submitting MSDS sheets that are current. There were some older MSDS sheets that overstated VOC values as exceeding the 250 g/l threshold that is required for the project to meet LEED™ Credit 4.1 and / or 4.2.

Some of the LEED™ credit (point) requirements other than Credits 4.1 and 4.2 discussed above call for significant percentage (e.g. 10%, 20%) of the building's construction materials to meet various requirements. Some of these requirements could potentially be thought of as applying to firestop products. Practically speaking, there is absolutely no need for firestop buying decisions to be affected by these requirements. Typically FIRESTOP products used represent less than .02% (2/10 of one percent) of the construction materials used. Therefore even if we met every requirement in LEED™, the contribution to the LEED™ points that could be provided by the relatively tiny weight or volume of firestop products would be essentially inconsequential. From a practical standpoint, the LEED™ credit requirements that call for a large percentage of building construction materials to meet certain requirements need to be met by the proper purchase of bulk-type material (e.g. concrete, steel, wood, flooring, roofing, site fill).

Along the line of these large percentage requirements, one LEED™ section that is sometimes thought to apply to Firestop Sealants is **Materials & Resources**. This is sometimes referred to as the "most commonly misunderstood credit". There are a few credits in this section that firestop sealants often get categorized into but possibly should not. This is because for the project as a whole, firestop is limited in its scope and this section does not specifically call out firestop products.

In the Material & Resource section, Credit 2.1 and 2.2, Construction Waste Management the intent is to recycle a specific percentage of the construction waste on a project. Hilti product packaging is 100% recyclable and is produced with recycled materials.

In the Materials & Resources section, Credit 4.1 and Credit 4.2, Recycled Content request that a 5% and 10% respectively of building material contain recycled materials. Hilti Firestop sealants are not made with recycled materials; this is the nature of firestop products.

In the Materials & Resources section, Credit 5.1 and Credit 5.2, Regional Materials, call for 20% and 50% respectively of the total building products be manufactured within a 500 mile

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radius of the project. Currently only one Hilti firestop sealant, CP672 is manufactured in the United States. Every other product is manufactured in Europe.

Reiterating, FIRESTOP products used on a project typically represent less than .02% of the construction materials used. In most cases Hilti firestop products do not meet or apply to the "Material and Resource" credit (point) requirements, which should never be a concern due to the small volume/weight of firestop products used.

We hope that this clarifies many of the questions and concerns that you or your customers encounter as they are attempting to construct "green" buildings.

Please contact the Firestop / Chemicals Business unit if you have any further questions.

Best regards,

A handwritten signature in black ink that reads "Chad D. Stroike". The signature is written in a cursive, slightly stylized font.

Chad D. Stroike, CFPS
Fire Protection Engineering Manager
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For further information on LEED™ or to help educate your customers please visit the U.S. Green Building Council website, http://www.usgbc.org/leed/leed_main.asp.