





Manufacturer **H-Bau Technik GmbH**

Product Name **PENTAFLEX® Sealing technology**

Product Rating

- The product fulfills the requirements for paints and coatings and contribute to achieve one LEED credit within IEQ Credit 4.2.
- The product contains 22.5% recycled materials and contribute to achieve LEED credits within MR Credit 4.

Indoor Environmental Quality (IEQ) - LEED Category

IEQ Credit 4.1: Low Emitting Materials: Adhesives and Sealants	1 Point	
IEQ Credit 4.2: Low Emitting Materials: Paints and Coatings	1 Point	
IEQ Credit 4.3: Low Emitting Materials: Flooring Systems	1 Point	
IEQ Credit 4.4: Low Emitting Materials: Composite Wood and Agrifiber Products	1 Point	

Materials and Resources (MR) - LEED Category

MR Credit 4: Recycled Content	1-2 Points	23%
MR Credit 5: Regional Materials	1-2 Points	See Location
MR Credit 6: Rapidly Renewable Materials	1 Point	
MR Credit 7: Certified Wood	1 Point	






Product Characteristics

PENTAFLEX® is a joint sealing system for producing watertight concrete structures (white tank). The PENTAFLEX® elements are completely provided with a special coating and have been designed for structures with premium utilisation. They reliably seal joints in the wall/foot or wall/ceiling area, joints in the wall/wall or floor/floor area and joints in cast-in-situ concrete and component wall constructions reliably.

About LEED & Products - www.usgbc.org

This declaration helps to assess products easily according the certification system LEED® 2009 New Construction and Major Renovations NC & CS (excluded SCHOOLS). Products are not reviewed or certified by LEED. LEED credit requirements cover the performance of materials in aggregate, not the performance of individual products or brands. For more information about LEED visit www.usgbc.org/leed. The project team or the manufacturer is responsible to declare the compliance with the project requirements to achieve LEED points.

Below you find an explanation of the symbols. Detailed information are on the next pages.

-  **Credit requirements fulfilled - the credit point can be achieved**
-  **Credit is not applicable to this product**
-  **X% of the product comply with the credit requirement**
-  **Required data not specified - for required data contact manufacturer**
-  **Credit requirements are not fulfilled**

Manufacturer **H-Bau Technik GmbH**
Product Name **PENTAFLEX® Sealing technology**

No	Product Name	Manufacturer	Mass per unit* [%]	VOC in g/l	VOC-Limit in g/l	Flooding Systems	Composite Agrifiber product	Recycled Content		Regional Materials		Rapidly Renewable Material	Certified Wood
								Post-Consumer	Pre-Consumer	Location Harvesting/ Extraction	Location Manufacturing		
A1	Steel plate	H-BAU Technik GmbH	~ 90%	N/A	N/A	N/A	N/A	25%**	Not specified	Not specified	Klettgau (D)	N/A	N/A
A2	Waterreactive coating	H-BAU Technik GmbH	~ 10%	0	100	N/A	N/A	Not specified	Not specified	Europe	Klettgau (D)	N/A	N/A
A3													
A4													
A5													
A6													
A7													
A8													
A9													
A10													
				✓		○	○	22.5%	—	If the location of 'Harvesting & Extraction' and 'Manufacturing' is within a radius of 500 miles of the project the subproduct contributes to the credit.		○	○
			100.0					22.5%					
		PENTAFLEX® Abdichtungssystem											
		H-Bau Technik GmbH											

*All values are based on the unit: **LEED default recycled content for steel

Manufacturer	H-Bau Technik GmbH
Product Name	PENTAFLEX® Sealing technology

IEQ 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 caused by adhesives and sealants applied on site.

Requirement

All adhesive, sealants and sealant primers used on the interior of the building (defined as inside of the weatherproofing system and applied on-site) must comply shall comply with the VOC content limits of the following:

- SCAQMD Rule #1168 (effective date of July 1, 2005 and rule amendment date of January 7, 2005),
- Aerosol Adhesives must comply with Green Seal Standard for Commercial Adhesives GS-36 requirements in effect on October 19, 2000.

IEQ 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 caused by paints and coatings applied on site.

Requirement

Paints and coatings used on the interior of the building (defined as inside of the weatherproofing system and applied on-site) must comply with the VOC content limits of the following:

- Green Seal Standard GS-11, Paints Edition, May 20, 1993,
- Green Seal Standard GC-03, Anti-Corrosive Paints, Second Edition, January 7, 1997, and
- South Coast Air Quality Management District (SCAQMD) Rule 1113, Architectural Coatings, rules in effect on January 1, 2004.

Detailed Rating

No	Product Name	Manufacturer	Related Credit	Product Type	VOC-Content		Contribution of Product	
					Allowable	Product		
A1	Steel plate	H-BAU Technik GmbH	N/A	N/A	N/A	N/A	The product is no adhesive, sealant, paint or coating.	
A2	Waterreactive coating	H-BAU Technik GmbH	IEQ Credit 4.2	Primers, Sealers and Undercoaters (SCAQMD Rule 1113)	100g/l	0g/l	The product fulfills the requirements for paints & coatings.	

Manufacturer **H-Bau Technik GmbH**

Product Name **PENTAFLEX® Sealing technology**

MR Credit 4: Recycled Content (1-2 Points)

Intent

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

Requirement

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%/20% (based on cost) of the total value of the materials in the project.

The minimum percentage materials recycled for each point threshold is as follows:

- 10% Recycled Content -> 1 Point
- 20% Recycled Content -> 2 Points.

* Recycled content is defined in accordance with the International Organization of Standards document, ISO 14021 — Environmental labels and declarations — Self-declared environmental claims (Type II environmental labeling).

** Postconsumer 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.

*** Preconsumer material is defined as material diverted from the waste stream during the manufacturing process. Reutilization of materials (i.e., rework, regrind or scrap generated in a process and capable of being reclaimed within the same process that generated it) is excluded.

Detailed Rating

No	Product Name	Manufacturer	Recycled Content		Contribution of Product	
			Post-Consumer	Pre-Consumer		
A1	Steel plate	H-BAU Technik GmbH	25%**	Not specified	Accountable recycled content according to LEED is 25% (1 x Post-Consumer + 0.5 x Pre-Consumer). **LEED default recycled content for steel	25%
A2	Waterreactive coating	H-BAU Technik GmbH	Not specified	Not specified	No recycled content specified.	—

Manufacturer **H-Bau Technik GmbH**

Product Name **PENTAFLEX® Sealing technology**

MR Credit 5: Regional Materials (1-2 Points)

Intent

To 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.

Requirement

Use building materials or products that have been extracted, harvested or recovered, as well as manufactured, within 500 miles of the project site for a minimum of 10% or 20%, based on cost, of the total materials value. If only a fraction of a product or material is extracted, harvested, or recovered and manufactured locally, then only that percentage (by weight) must contribute to the regional value. The minimum percentage regional materials for each point threshold is as follows:

- 10% Regional Materials -> 1 Point
- 20% Regional Materials -> 2 Points.

Detailed Rating

No	Product Name	Manufacturer	Location Harvesting/ Extraction	Location Manufacturing
A1	Steel plate	H-BAU Technik GmbH	Not specified	Klettgau (D)
A2	Waterreactive coating	H-BAU Technik GmbH	Europe	Klettgau (D)