

CUSTOMER INFORMATION

Sustainability with Dillinger plates

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Scoring with Dillinger heavy plates

Topics as sustainability and efficiency of resources gain more and more importance in the construction industry. Nowadays constructions are sought that show high economic, ecologic and social quality – so called sustainable constructions.

Barely any material is as suitable for sustainable construction as steel. Especially when talking about modern high quality heavy plates, as e.g. offered from Dillinger.

If you want to add ecological aspects to your offers, you will find all the relevant data for a sustainability evaluation in our current environmental product declaration (EPD) for heavy plates.

- Environmental product declaration (EPD) for heavy plates ([Download](#))

But not only our products are convincing. Environmental impact and sustainability play an important role also in our production and processes. Our mills are therefore certified according to ISO 14001 (Environmental management system) and ISO 50001 (Energy management system).

- Certificates of Dillinger ([more details](#))

In the past various certifying systems for buildings have established, that value the sustainability. How to score with Dillinger heavy plates at the most commonly used rating systems, is depicted here:

1. DGNB (Deutsches Gütesiegel für nachhaltiges Bauen)
2. LEED (Leadership in Energy and Environmental Design)
3. BREEAM (Building Research Establishment Environmental Assessment Methodology)

DGNB (Deutsches Gütesiegel für nachhaltiges Bauen)

The system to get the German seal of quality for sustainable constructions (DGNB) consists of 3 columns (ecologic quality, economic quality and social, functional quality). These columns are connected via 2 transverse qualities (technical quality and quality of processes). At the moment there are 41 different criteria in these qualities which are used to evaluate a new building. In every criterion it is possible to gain 10 points. By weighing each single criterion the award “Bronze, Silver, or Gold” is granted.

Criteria	Notes
ENV 1.1 Ökobilanz – Emissionsbedingte Umweltwirkungen ENV 2.1 Ökobilanz- Primärenergie	All relevant data for environmental evaluation can be extracted from the EPD (Environmental product declaration) for Dillinger heavy plates. By using Dillinger heavy plates one can insert significantly lower values (min. 35%, acc. to EPD) compared to the industrial standard ökobau.dat. Please also consider Module D – potential for recycling

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ENV 1.2 Risiken für die lokale Umwelt SOC 1.2 Innenraumlufthqualität	Steel, even galvanized, is per se emission-free VOC=0. When coated please respect the manufacturer's data.
TEC 1.6 Rückbau und Demontagefreundlichkeit	For constructional steel: 99% collection with 11% reuse and 88% recycling The recycled content of constructional steel can also be extracted from the current EPD for Dillinger heavy plates
ECO 1.1 Gebäudebezogene Kosten im Lebenszyklus	By using higher strength steel grades (e.g. DI-MC 460 or DILLIMAX 690) ->Reserves in ductility and loading capacity ->Shorter construction time

LEED (Leadership in Energy and Environmental Design)

The LEED System (Leadership in Energy and Environmental Design) is a rating system for buildings founded by the U.S. Green Building Council. It originated in the USA and is nowadays used all over the world. Mainly it rates the ecological quality of a building while classifying the evaluation in four levels: Certified, Silver, Gold, and Platinum. At the moment the current LEED Version is V4 with various guidelines. Usually the Guideline "Building Design and construction" for new buildings is applicable. With the application of Dillinger heavy plates it is possible to gain credit points in different categories:

Category	Criteria	Notes
<i>Material and Resources</i>	Building Product Disclosure and Optimization – Environmental Product Declaration (EPD)	+ 1 Credit Point, if there exists an EPD (Environmental product declaration) for more than 20 of the used materials. The respective EPD for heavy plates of Dillinger can be downloaded with the link on page 1. Another credit point can be achieved, if the relevant values for environmental evaluations (e.g. Global Warming etc.) of the main portion of the used products lie beyond the industrial standard. By using Dillinger heavy plates one can insert significantly lower values (min. 35%, acc. to EPD) compared to the industrial standard ökobau.dat.
<i>Material and Resources</i>	Building Product Disclosure and Optimization – Sourcing of Raw Material	Here one can score with the high recycled content of constructional steel. The respective values are also depicted in the current EPD
<i>Indoor Environmental Quality</i>	Low Emitting Materials	Steel, even galvanized, is per se emission-free VOC=0. When coated please respect the manufacturer's data.

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BREEAM (Building Research Establishment Environmental Assessment Methodology)

The BREEAM (British Research Establishment Environmental Assessment Method) system can be recognized as the father of green building certifications. It is therefore also more motivated by ecology than by economy. The current version dates back to 2011. Although the focus of the system is Great Britain, it is nowadays applied in various countries in the world. It consists of different measures, structured in 10 categories that describe quality attributes of a building. The realization of these measures is rated with points. Following this, the building is then classified respecting some weighing factors to the levels: "unclassified, acceptable, pass, good, very good, excellent, and outstanding".

Criteria	Notes
Mat 01 Life cycle impacts	All relevant data for environmental evaluation can be extracted from the EPD (Environmental product declaration) for Dillinger heavy plates. By using Dillinger heavy plates one can insert significantly lower values (min. 35%, acc. to EPD) compared to the industrial standard ökobau.dat.
Mat 03 Responsible sourcing of materials Hea 02 Indoor air quality	Steel, even galvanized, is per se emission-free VOC=0. When coated please respect the manufacturer's data.
Mat 03 Responsible sourcing of materials	For constructional steel: 99% collection with 11% reuse and 88% recycling The recycled content of constructional steel can also be extracted from the current EPD for Dillinger heavy plates
Mat 05 Designing for robustness Man 05 Life cycle cost and service life planning	By using higher strength steel grades (e.g. DI-MC 460 or DILLIMAX 690) -> Reserves in ductility and loading capacity -> Shorter construction time

Source: Bauforumstahl e.V.

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Marketing and Technical Support