Hydewa PIR-Sandwichpanel
Glasbord®/ FRP-PIR-Glasbord®/ FRP / Sheet / Alu

Hydewa GmbH
Hydewaplatz 1-3
95466 Weidenberg

TECHNICAL DATA SHEET (14.08.2024 / Rev 4)

Description

Hydewa PIR sandwich systems are suitable as facing shells, self-supporting partition walls or ceiling elements in the interior of the building envelope without structural verification.
PIR (polyurethane rigid foam), a thermosetting high-performance insulating material, serves as the insulating core, which can be laminated on one or both sides with Glasbord® / FRP cover layers, sheet metal or coarse-grain aluminum foil
The PIR core achieves very good insulating properties. At the same time, the panels remain stable and transportable.
The chemically resistant, easy-to-clean cover layer made of Glasbord®/FRP (glass fiber reinforced plastic) ensures optimum hygiene conditions thanks to its unique surface (Surfaseal® for Glasbord®).

Technical data

Length(l) x width(w) :	2 m - 12 m x 1.19 m (other lengths on request) Please note the material expansion due to climatic conditions!
Cover layer front side:	Glasbord® / GRP flat or structured in thicknesses of 1.5 mm - 2.3 mm in various designs (see separate surface data sheets). Standard color: white (other colors possible).
Technical data insulation core:	polyurethane rigid foam in accordance with EN 13165 and EN 14308 d< 80mm 0.027 W/m.K., 80 ≤d< 120 mm 0.026 W/m.K., d≥ 120 mm 0.025 W/m.K. non-glowing, non-melting, non-burning dripping
Thickness:	20-140 mm
Dimensions:	Width 1190 mm / possible production length max. 12 m **Lengths depend on the structural conditions and the panel thickness**
Panel connection:	butt cut at the top / bottom, groove milling on the side for a loose PIR tongue Design adapted to the respective panel thickness
Fire classification:	E according to DIN EN 13501-1
Rear cover layer:	See front side or 0.5 mm sheet steel S250GD with 25ym protective lacquer RAL 9010 (only available from 60 mm thickness), Aluminum coarse-grain foil 0.08 mm with protective lacquer (grey) or FRP 1,2 mm

Weight & U-value

For insulation, we use polyurethane rigid foam (PU) in accordance with EN 13165 and EN 14308, quality-protected, biologically and ecologically harmless, recyclable, rot-proof, mold and rot-resistant. The following data for the respective panel thicknesses can be derived from the design values.

Panel thickness	**~**	**20 mm**	**40 mm**	**60 mm**	**80 mm**	**100 mm**
Weight (min./max.kg/m²)FRP/FRP	~	4,97-8,05	5,81-8,89	6,65-9,73	7,49-10,57	8,33-11,41
Weight (min./max.kg/m²) FRP/Smetall	~	7,44-8,86	8,28-9,70	9,12-10,54	9,96-11,38	10,80-12,22
Weight (min./max. kg/m²) FRP/Alu	~	3,48-4,90	4,32-5,74	5,16-6,58	6,00-7,42	6,84-8,26
U-value WLG 025 W/(m² * K)	~	-	-	-	-	-
U-value WLG 026 W/(m² * K)	~	-	-	-	0,325	0,260
U-value WLG 027 W/(m² * K)*	~	1,350	0,675	0,450	-	-
*U-value insulation core						

Paneel thickness	**~**	**120 mm**	**140mm**
Weight (min./max.kg/m²)FRP/FRP	~	9,21-12,29	10,01-13,06
Weight (min./max.kg/m²) FRP/Smetall	~	11,68-13,10	12,48-13,90
Weight (min./max. kg/m²) FRP/Alu	~	7,72-9,14	8,52-9,94
U-value WLG 025 W/(m² * K)	~	0,208	0,179
U-value WLG 026 W/(m² * K)	~	-	-
U-value WLG 027 W/(m² * K)*	~	-	-
*U-value insulation core			

Weight varies due to the possible material combinations
U-values only refer to the insulation core

Technical data / characteristic values Hydewa RP sandwich panel

Fire behavior as a system: E according to DIN EN 13501

Joint cover: Hydewa hps-1c (soft joint sealant)
Hydewa hps-2k (hard joint sealant)
H plastic profile

Sound insulation values: ~ 25dB

European waste code: Glasbord® / FRP 20 01 39 Plastics
RP
PIR (HBCD free) 17 06 04 Insulation material
Sheet steel Recycled metals

The surface layers must be separated and disposed of separately.
If this is not possible, the panel can only be incinerated.

Quality, production tolerances and defects

Hydewa manufactures sandwich panels to a high quality standard.
In accordance with EN 14509, we not only comply with the required limit values, but usually even manufacture with lower tolerances (see table).
Compliance with the parameters is ensured by continuous production control during the ongoing process and by our own final product inspection before packaging.
If the panels deviate, they are immediately readjusted. Deviations from the parameters are therefore possible in individual cases.
However, this is not a defect if the panel as a whole is within the tolerance and the use of the products for the intended purpose is not impaired.
If defects nevertheless occur, we will find an adequate solution in consultation with the customer and the installation company.
It is the responsibility of the installation company to install only flawless elements. If defective elements are installed, claims for reimbursement of expenses for removal and installation will not be recognized.
The quality of ceilings and walls depends not only on dimensional accuracy but also on the quality of the installation.

Dimensional tolerances - continuous production

Panel width (usable width / cover dimension)	1190 mm	+/- 2 mm
Panel length	Nominal dimension	+/- 5 mm
Angularity		+/- 3 mm
Panel thickness (incl. cover layers)		+/- 2 mm*
Joint width	5 mm	+/- 1 mm

Dimensional tolerances - Manual production

Panel width (usable width / cover dimension)	Nominal dimension	+/- 3 mm
Panel length	Nominal dimension	+/- 3 mm
Angularity		+/- 3 mm
Panel thickness (incl. cover layers)		+/- 2 mm*
Joint width	5 mm	+/- 1 mm

Values at standard climate - 23°C /50% r.h.)
***The thicknesses of the PIR core material vary: please refer to EN 13165**

Notes on storage and processing

Sandwich panels should not be stored outdoors in order to protect them from all weather influences such as sunlight (UV radiation). Store with as much surface area as possible.
The processing temperature should be slightly higher than the later application temperature.
Wear gloves and personal protective equipment (PPE) during installation.
The panels can be sawn, drilled and sanded. Care must be taken not to damage the surface during processing.
Open cut edges must be formed in such a way that the panel is not damaged by moisture, animal damage or insect infestation, for example. This may require constructive measures, which must be assessed in each individual case.
Do not place any loads on the surface.
Fastening according to on-site statics!
Observe the respective installation instructions (available from Hydewa GmbH).

Please note:
We would like to point out that we as a company can only provide a warranty if the material provided by us is also processed with our system components.
The combination of our material and our specific
The combination of our material and our specific components has been carefully tested and found to be safe and reliable (please refer to the system components listed in the installation recommendation).
We can therefore accept no responsibility for any damage or problems
resulting from the use of our material in conjunction with other system
system components that have not been provided or tested by us. We therefore strongly recommend that you use our system components together with our material to ensure optimum
ensure optimum performance and safety.

Application

It is used indoors, where not only increased hygiene requirements but also thermal insulation are important.
Hydewa sandwich systems are suitable for use in e.g:
Production facilities, storage facilities, cold stores, deep-freeze stores, etc.

Color tolerances

The materials used for panel production are all subject to color drift. This is dependent
e.g. on age, environmental influences, product influences. This means that even with the same surface, there can sometimes be from batch to batch. Glasbord® has a maximum deviation of 2 Δ E during production.

Production, development and sales

In order to provide you, our customer, with consistently high quality, we are constantly developing and improving our products and our production facilities.
If you have any questions about our products or would like to make suggestions, please contact:

Hydewa GmbH, Hydewaplatz 1-3, 95466 Weidenberg
Tel: (+49) 09278/970-0 | Fax: 09278/970-50 | Mail: info@hydewa.com | www.hydewa.com

Certificates

MPA Dresden

LFGB § 31
indirekter Kontakt mit
Lebensmitteln
für Glasbord Oberflächen

Klassifiziert nach
DIN EN 13501-1

TÜVRheinland®
LGA