

1.) Variants (FRP, Glasbord®)

2.) Technical specifications

3.) Mounting & Details

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Direct fix

1.) Variants (Sandwichpanels)

2.) Technical specifications

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Sandwichpanels

1.) Bar systems

2.) Ceiling suspension

3.) Mounting accessories

4.) Sealant & adhesive

5.) Mounting hints & data sheets

Accessories

hydewa®

PROSPERE S.R.O.

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PROSPERE s.r.o.

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LED

1.) Variants (FRP, Glasbord®)

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hydewa[®]



Properties

FRP = Fibre Reinforced Plastics. In the manufacture of glass fibre or glass fibre mats are combined with synthetic resin and optionally sealed, so that a homogeneous composite is formed. The resulting continuous sheets are cut to the size of portable drives. These are glued in the field with Hydewa Special adhesive directly onto various substrates and the joints are sealed. This creates a moisture-proof, easy to clean protective layer - like a protective skin. This is ideal for areas where it is important for increased hygiene requirements. In our FRP we distinguish between standard requirements (storage rooms, stables, etc.) and areas with the highest standards (cheese ripening rooms, sausage making, etc.). For each area, we offer the ideal solution. FRP standard for standard ranges and glass board as our premium product for applications at the highest level. Of course, all products for use in food processing plants are suitable.

■ Surface

- Very smooth, either flat or textured surface.
- Corrosion free.
- Permanently elastic: Even with small radii an installation without stress cracks is possible.
- Permanently aesthetic

■ Durability

- Mechanical durability.
- Extremely resistant against impact and scratches
- Chemical and acid stable.
- Insensitive to moisture.

■ Working with FRP

FRP is just as easy to edit like a wooden plate:

- Saw
- Sanding
- Drilling
- Cutting

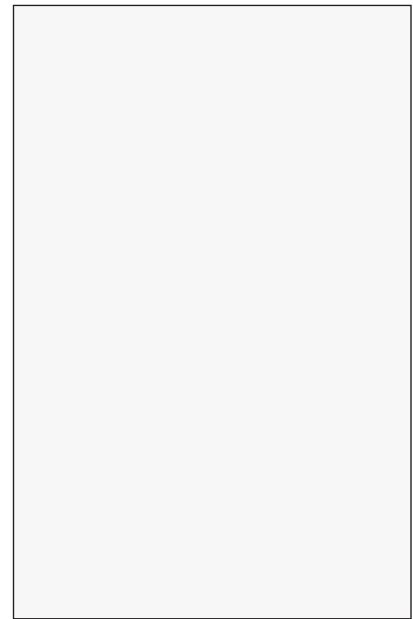


FRP - Variants



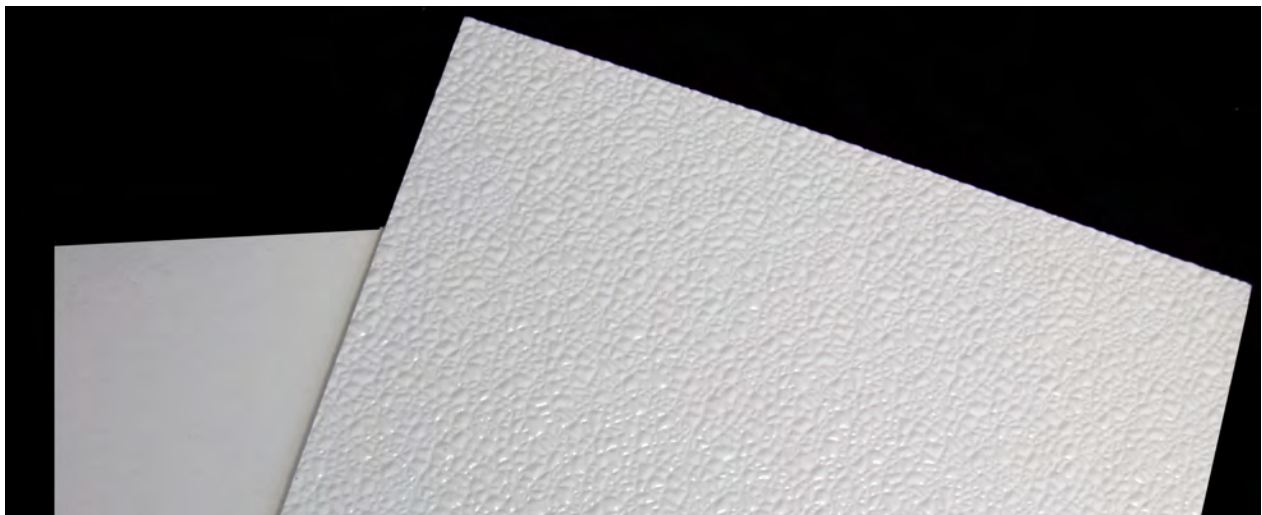
Benefits of flat material

- You can print on flat material
- It is designable
- Special colours available (500m² min quantity)
- You can easily write upon flat material & put stickers onto it.
- Bars and rubber seals close more easily



Benefits of structured material

- You can hardly detect damage such as scratches and unevenness
- Slow drop of cleaning foam -> longer exposure time-> lower concentration needed
- reduces eye fatigue due to diffuse reflection of light
- High-quality impression.



FRP - Variants



Surface finish

■ FRP without finishing

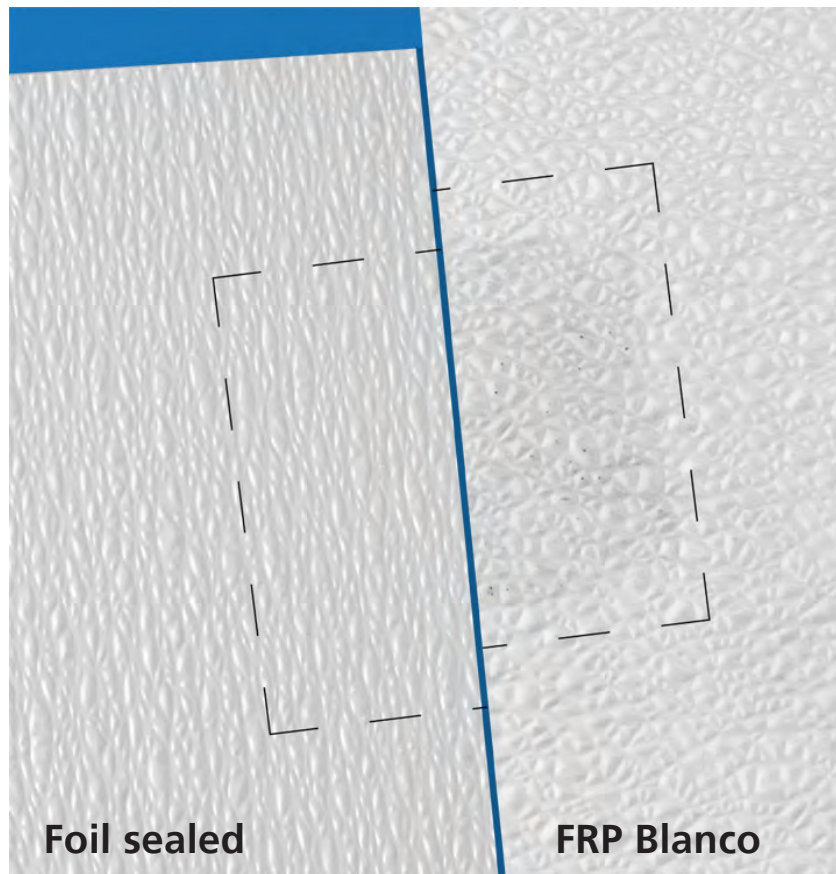
The panels made of fibreglass-reinforced plastics are produced with no special surface finish. This is the cheapest way. As always resin products have small voids (pores) in which particles can remain. Pure FRP material is therefore suitable for areas with lower hygienic requirements.

■ Gelcoat

Gelcoat means that the FRP surface is sealed with a special hard coating based on synthetic resin. Open pores are sealed and an increased resistance to chemicals is achieved (such as cleaning agents).

■ Foil sealing

A foil is applied to the FRP during production on the visible side and permanently laminated. This film covers all open pores, provides excellent resistance to acids and alkalis and protects the surface.





Technical details

■ FRP panel

Fibreglass reinforced panel with a structured surface.

■ Surfaseal®-Surface

Thanks to the superb surface finish Surfaseal® Glasbord® ensures a non-porous surface with high-quality properties.

■ Variations

Different variations of Material (PWI, FX, PI20, Armor-Tuf etc.) designed for special purposes. Thickness (1,2 up to 6,1 mm) and weight (1,54 kg/m² up to 4,84 kg/m²).

■ Identification

Included features make it easy for the customer to identify the material even when the material is mounted.

■ Rated „Challenging“

Glasbord® combines superior material properties that meet the hygiene requirements of the class.

■ Scope

Designed especially for construction and application.

Surfaseal®- Surface

This unique surface coating ensures an absolutely non-porous, flexible and highly resilient wall and ceiling panel. Guarantor of the non-porous surface is a polyester film, which is due to a special processing technology incorporated homogeneously into the Glasbord® interface offers significant advantages over other surfaces.



Status quo

■ Status of development

Development according to the highest standards of quality and safety for consumers in terms of hygiene and cleanliness.

■ Production

Industrial manufacturing and development for current and future requirements by the company KEMLITE®. Main Production in Joliet/Illinois (USA).

■ Tests

Lots of test results and certifications are available.

■ Standards

All relevant EU- Standards are matched. Continuous controls by DIN / EU

■ Glasbord® is the leading FRP panel for wall and ceiling solutions all over the world.

Development

■ Continuous development

of our Material on a very high level. Research in the laboratories of the company Crane Composites®, Tests in independent test institutes and a quality management system according to ISO 9002.



Variants - Glasbord



Glasbord® (Premium FRP)

■ Surface

- very smooth, of your choice: plain or structured surface.
- without pinholes.
- without corrosion.
- retains elastic: even if you mount the material in small curves there are no cracks.
- coloursafe, doesn't go yellow – even when in contact with Ammonia.
- diffused light reflection helps to reduce the fatigue of the eyes
- always an aesthetic surface.

■ Resistance

- mechanical high resistance.
- resistant to impact and scratches because of a high content of fibreglass.
- resistant to chemicals and acid.
- resistant to humidity.

■ Cleaning

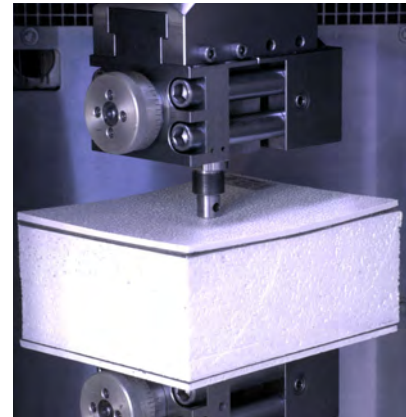
- easy, quick and cheap cleaning even with a pressure washer
- no special cleaners are necessary.
- When using normal cleaners the embossed surface creates a better result than other surfaces

■ Hygiene

- very low biomicrobial remains.
- Matches all requirements of hygiene und quality in the supported companies (EU, HACCP etc.).

■ Specifications

- multiple specifications of the different materials guarantee the best solution for each requirement.



Very resistant because of a high content of glass.



Resistant against chemicals and acid.



Easy to clean



Low biomicrobial remains



Resistant against water.

Technical specifications

Overview

Materials without foil sealing

FRP Material	Material thickness in mm	Surface	Fire Class (4102-1 / 13501-1)	Weight	width	length
LX-E	2,0	structured	B2	2,7 kg/m ²	1,20 m	2,10 m 2,50 m 2,75 m 3,00 m
LX-E	4,4	structured	B2	5,6 kg/m ²	1,20 m	
LX-P	2,0 / 3,0	flat	B2	2,70 kg/m ²	1,20 m	

Materials foil sealed

FRP Material	Material thickness in mm	Surface	Fire Class (4102-1 / 13501-1)	Weight	width	length
PWI	3,0	structured	B2 / E	4,65 kg/m ²	1,20 m	2,10 m 2,50 m 2,75 m 3,00 m
PWI-P	2,3	structured	B2 / E	3,42 kg/m ²	1,20 m	
PSI-FT	1,9	flat	B2 / E	3,22 kg/m ²	1,20 m	
FXE	2,3	structured	B1 / B-S2-D0	3,60 kg/m ²	1,20 m	
LX-SP	2,0 / 3,0	flat	B2	3,60 kg/m ²	1,20 m	

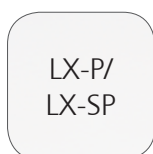
Hydewa LX Material

Colours



LX-E

RAL 9010
(Standard)



LX-P/
LX-SP

RAL 9010
(Standard)

LX from 500 m² in div. RAL -colours available

Glasbord[®] - foil sealed with Surfaseal:

Colours:



085 white

(Standard -
similar to RAL 9010)



066 silver



084 ivory



070 beige



048 pearl
grey

special colours: on request available (min. 2.000 m²)

Technical specifications



Hydewa special adhesive

We offer a special mounting adhesive to bond GfK directly onto various substrates. The adhesive is a white paste and is characterised by excellent processing properties.

- Easy to use
- Curing based on humidity
- Available in 600ml or 1800ml bags
- Only mild odour
- Solvent free
- Not harmful to food



■ By plump, full-surface application unevenness can be well balanced to about 2mm..

■ The adhesive stays pliable long enough. So you can re-adjust the FRP sheet.

■ The adhesive is powerful enough to secure the FRP panel to the wall. However, we recommend additionally stops to avoid the plates from slipping.

■ The adhesive is viscous at low temperatures (below 20 ° C) and more fluid at higher temperatures (above 30 ° C).

■ After curing the adhesive is still so elastic that it can accommodate the temperature-induced expansion and contraction movements of FRP.

Technical specifications



Surface

Our adhesive can be used on many surfaces, many of which don't even require pre-treatment. The amount of adhesive should be adjusted depending on the substrate (eg absorbent surfaces).

The adhesive is very powerful although some conditions have to be fulfilled:

- Read the instructions and data sheets carefully
- The surface has to be dry, clean and free of grease
- There must be no diffusing water (take care about the max. humidity).
- If the substrate is diffusion-density, it is recommended that it is moistened a little. (e.g. metal sheet or tiles)
- An adhesive test has to be performed, even if the adhesive is enabled for this type of surface! There are so many chemical additives that they never can all be tested in advance!
- Take care when working on grounded surfaces or when facing remainings of chemicals (e.g. detergents)
- Contact your dealer in case of any questions.



Installation instructions



Adhesive in 600ml bags

Preparation:

The substrate must be free of grease, dust-free and sustainable.
Clean the adhesive surface of the panels (eg with Hydewa Cleaner).
The moisture content of the substrate must be checked in each case.
Never glue on wet surfaces (water pressure).
Diffusion density surfaces should, however, be slightly moistened.
The relevant technical data sheet must be noted!
In case of any doubt contact Hydewa.

Please note:

Substrate, adhesive and panels must be at room temperature (at least 10 ° C!)

If the room is later operated at higher temperatures, the Glasbord panels should be warmed - due to Thermal expansion - at this temperature (min. 24 hours),

Process the panels in short lengths for rooms with large temperature fluctuations and create horizontal joints. (take care about the thermal expansion of the material)

Never exceed the „open time“ of the adhesive (Test with a glue dot if possible).

Select the appropriate adhesive for the particular substrate (s. technical data sheet)

All around comply with ~4mm jointing for expansion.



Features:

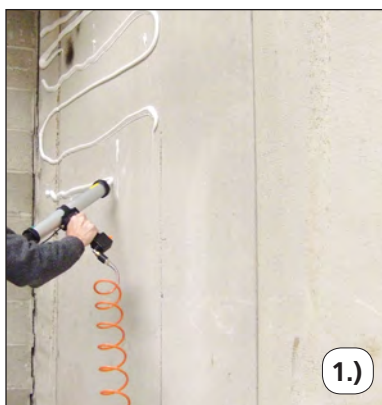
- easy and quick application directly on walls
- no contamination to the floor, hands or clothing
- almost no waste
- almost complete emptying of the bag
- No loss by curing
- easy and flexible use of the Applicators
- established and proven method

Mounting



Use of 600ml bags adhesive

- Please note technical data sheets and safety data sheets.
- Prepare your tools and surface. Diffusion density surfaces should, be slightly moistened.
- Fill the Applicators with the fitting bags and connect them correctly to pressure air if necessary.
- After finishing be sure to clean all your tools properly.



Apply the glue

Apply glue from the Applicator in uniform stripes on the prepared surface or on the panels (rear)

1.)



Disperse

...disperse the adhesive evenly with a special trowel (5mm gaps between the forks)...

2.)



set the panels

...adjusting and pressure of the panels. A subsequent dislodgement is very difficult (if necessary, use mounting rails)

3.)



press the panel

... press the panel (best effect is achieved when using a pressure roll) ...

4.)



Jointing

.. Mask and grout. Allow to cure At least 24h. (value measured under standard conditions) All necessary expansion and compensatory joints must be observed! ...

5.)



Surface

... ready is the perfect hygienic surface. easy to clean, few joints, durable

6.)

Installation instructions



Adhesive in 1800ml bags

Preparation:

The substrate must be free of grease, dust-free and sustainable.
Clean the adhesive surface of the panels (rear - eg with Hydewa Cleaner).
The moisture content of the substrate must be checked in each case.
Never glue on wet surfaces (water pressure).
Diffusion density surfaces should, however, be slightly moistened.
The relevant technical data sheet must be noted!
In case of any doubt contact Hydewa.

Please note:

Substrate, adhesive and panels must be at room temperature (at least 10 ° C!)

If the room is later operated at higher temperatures, the Glasbord panels should be warmed - due to the Thermal expansion - at this temperature (min. 24 hours),

Process the panels in short lengths for rooms with large temperature fluctuations and embarrass with horizontal joints. (take care about the thermal expansion of the material)

Never exceed the „open time“ of the adhesive (Test with a glue dot if possible).

Select the appropriate adhesive for the particular substrate (s. technical data sheet)

All around comply with ~4mm jointing for expansion.



Applicator 1800 und 5800

Features:

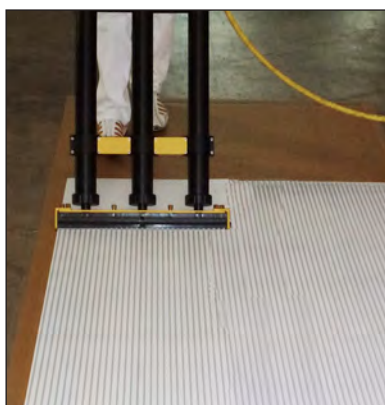
- Quick and evenly dispersed
- Up to ten times faster than working manual
- Working while standing possible
- Easy to handle
- Easy to clean
- Constant need of adhesive
- Almost no adhesive left in the bags
- Clean working
- Certified by INQA „Beispiel gute Praxis“ by BG Bau

Mounting



Use of 1800ml bags adhesive

- Please note technical data sheets and safety data sheets.
- Prepare your tools and surface. Diffusion density surfaces should, be slightly moistened.
- Fill the Applicators with the fitting bags and connect them correctly to pressure air if necessary.
- After finishing be sure to clean all your tools properly.



Disperse

Large areas can be processed quickly. This device is easily pulled over the surface. The adhesive is dispersed by the pressure at the applicator head.



Set the panels

... Fitting and pressure of the panels. A subsequent dislodgement is difficult to (if necessary use mounting rails) ...



press the panel

... press the panel (best effect is achieved when using a pressure roll) ...



Cleaning

There is no need for constant cleaning of the head, simply pull off the dried glue before the next use. The device can be stored up to 10 days this way. Then a complete clean is needed.



Jointing

.. Mask and grout. Allow to cure At least 24h. (value measured under standard conditions) All necessary expansion and compensatory joints must be observed! ...



big Surfaces

In this way big Surfaces can be handled very easy.

Mounting with hps-1c sealant



Properties

We have many years' experience with our 1-component sealant

In 2015 the recipe was further improved and is now more resistant to mildew

Due to its high elasticity and good adhesion edge it can absorb movement and is the ideal sealant in environments with large temperature fluctuations.

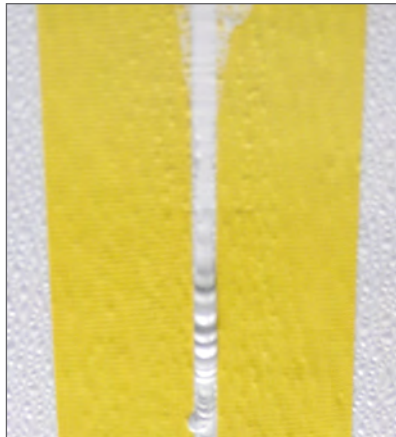


In this way the sealant of the panel is obvious and controllable. The cut borders of our sandwich panels allow either the use of a cover (T bar) or a visible jointing

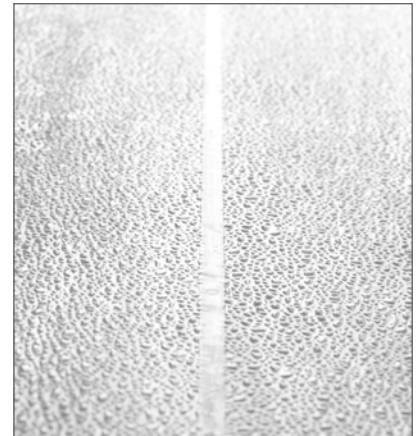
This procedure ensures that the joints can be covered perfectly

Application

Historically the vertical joints of the panels were covered with strips, however today the „open“ jointing is favoured



Best results are obtained when the joints are covered with tape before grouting.



Be careful when using chemicals to smooth the sealant and ensure that they are completely removed when the sealant is dried.

Sealant	Feature	Applications	Properties	Benefits
hps-1c-Hybrid-sealant	elastic	Connection and expansion joints with low to medium motion recording for indoor and outdoor use.	hps-1c-sealant	Solvent-free, odourless, no blistering, very low shrinkage, wide adhesion spectrum, silicone and isocyanates, good UV resistance

Complete instructions for mounting can be found under „accessories“

Mounting hps-2C

Properties

Hydewa sealants in hard or soft design ensure a self-developed and food-acceptable element. They are an ideal sealing material for sealing sandwich elements.

Our 2-C-joint can be described as a maintenance-free and has similar properties to the glasbord-surface. It is not prone to yellowing and the sealed surface rejects mould



Application

The material is tailored specifically to the sheet surface and provides a pleasing overall result.

The 2-C-joint material fully meets the expectations of the installer, as well as of the end user, with regard to processing, colour stability and resilience.

The routed edges allow both the use of a cover profile (T-bar) as well as a visible jointing.

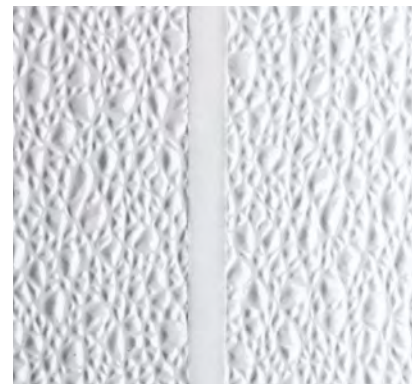


Best results are obtained when the panel edging is covered with tape prior to jointing.

This ensures that the porous cutting edges of the panels are covered.

No trowelling compounds are needed as the joint is removed best with a rubber spatula.

Don't use water or leveling agents.



Sealant	Feature	Applications	Properties	Benefits
hps-2c Sealant	hard	Connection and expansion joints without movement recording indoors. Repair of small defects of glass board fibre-glass panels.	2-component PU system	Flexibility, Quick setting, wide adhesion range

Glasbord® - solutions



Direct fix

The hygienic wall- and ceiling system Glasbord® has been used for over 25 Years in Europe and has been successful in many applications.

Especially in food producing companies where Glasbord® should be the first choice when hygiene in production and storage areas is needed. This applies equally to new builds as well as renovations.



Cheese



Dairy



Meat production



Fish production



Bakery



Drinks



Catering



Health



Medical rooms



Non Food & others

Gallery



Direct fix



Mounting directly upon tiles



Big kitchens

Gallery



Direct fix



Cheese maturing



Hygienic portal

Gallery



Direct fix



Meat packaging



Humid areas (shower)

Gallery



Direct fix



Food Preparation - Retirement Home



Bauaufsichtlich anerkannte Prüf-, Überwachungs- und Zertifizierungsstelle
Amtlich anerkannte Prüfstelle für Feuerlöschmittel und -geräte
DIN EN ISO/IEC 17025: DAP-PL-1137.00; DIN EN 45011: DAP-ZE-4348.00;
DIN EN 17020: DAP-IS-4347.00
ZLS-P-860/09; ZLS-ZE-707/09
Notified Body no. 0767
Mitglied des VMPA e.V.



Allgemeines bauaufsichtliches Prüfzeugnis

1. Ausfertigung

Prüfzeugnisnummer:	P-2013-B-1453/01
Gegenstand:	Glasbord® (Glasfaserverstärktes Kunstharzpaneel) glatt oder strukturiert (PIF-E, PWI, PWI-P, PI 20)
Verwendungszweck:	Bauregelliste A Teil 2 lfd. Nr. 2.10.1.2 - Ausgabe 2012/2: Baustoffe, an die nur Anforderungen an das Brandverhalten gestellt werden und die normalentflammbar (Klasse E) sind
Auftraggeber:	Hydewa GmbH Hydewaplatz1 95466 Weidenberg DEUTSCHLAND
Ausstellungsdatum:	17. Juni 2013
Geltungsdauer bis:	16. Juni 2018

Aufgrund dieses allgemeinen bauaufsichtlichen Prüfzeugnisses ist der oben genannte Gegenstand im Sinne der Landesbauordnungen verwendbar.

Dieses allgemeine bauaufsichtliche Prüfzeugnis umfasst 6 Seiten Text und keine Anlagen.

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Steuernummer: 220/114/03011
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www.mpa-dresden.de
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09599 Freiberg
Kto. 3115024672
BLZ 870 520 00

UST-IdNr. DE234220069
IBAN DE68 8705 2000 3115 0246 72
BIC WELADED1FGX



Test reports & certificates



LGA QualiTest GmbH
Chemische Produktprüfung / *Chemical Product Testing*



Zertifiziert nach DIN EN ISO 9001/14001

Prüfbericht / *Test Report*

L G A QualiTest GmbH • Postfach 3022 • 90014 Nürnberg

568 2003

Hydewa GmbH
Herrn Helbig
Hydewaplatz 1

95466 Weidenberg

Auftraggeber / *Orderer:* wie Adressat / *see consignee*

Auftrag vom / *Order Date:* 08.10.2008 + 24.10.2008

Prüfgegenstand /
Test Specimen: Artikel / *Article:* Glasbord Paneele / *Glasbord Panels*

Inhalt des Auftrages /
Scope: Chemische Prüfung / *Chemical Test*
Verordnung (EG) 1935/2004

Eingang der Proben /
Samples Received: 10.10.2008 + 28.10.2008

Untersuchungszeitraum /
Testing Period: 10.10. bis / *until* 10.11.2008

Anzahl der Anlagen /
total page count of the
attachments: -

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5682003.doc / Seite 1 von 5

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Tel (09 11) 6 55-5153 • Fax (09 11) 6 55-5739
E-Mail: uta.nerlich@lga.de • www.lga.de

Sitz und Registergericht Nürnberg HRB 20544
Geschäftsführer:
Hans-Hermann Ueffing, Michael F. Jungnitsch
Steuer-Nr. 241/115/90768 Ust-IdNr. DE813835603

Test reports & certificates



Chemical and Stain Resistance Testing

General Chemical Resistance

Products	Dilute Acids (less than 30%)	Concentrated Acids (30% or more)	Weak Alkalis	Strong Alkalis	Chlorinated Solvents Aldehydes & Ketones Esters
Glasbord Products	G to E	G to E	G	E	G to E
Sequentia Products					
Key E=excellent, G=good, F=fair (test before using), P=poor, not recommended					

Resistance to Specific Chemicals

GENERAL NOTES

- Ratings are based on a combination of visual observations, and mechanical strength test results.
- All testing was done at 77°F +/- 10°F. Performance ratings are not necessarily valid outside of that temperature range.
- Test ratings are based on white material; non-white panels could show additional visual changes.
- Test was run per Crane Composites product development procedure #8125: surface chemical resistance. In this procedure the chemicals are exposed to the surface of the panel for 7 days.

RATING KEY

- E (Excellent): Suitable for use in most exposure conditions.
- G (Good): Probably suitable for use; testing under specific exposure conditions is suggested.
- F (Fair): Possibly unsuitable for use; testing under specific exposure conditions is recommended.
- P (Poor): Unsuitable for use in most exposure conditions.
- C: Color change
- NT: Not tested

Chemical	Glasbord Panels	Sequentia Panels	Sanigrid Ceiling Grid System	General Comments
Acetic Acid, concentrated	E	P	E	Caused Sequentia panels to turn yellow and erode
Acetic Acid, 5%	E	E	E	
Ammonium Hydroxide, concentrated	E	C	C	Caused Sequentia and Sanigrid to turn yellow
Ammonium Hydroxide, 10%	C	C	C	Caused all to turn yellow
Aniline	P ¹	P	C	Caused all to turn yellow
Bleach Solution	C	C	E	Caused panels to turn yellow
Citric Acid, 10%	E	E	C	Caused Sanigrid to turn yellow
Detergent Solution	C	E	E	Caused panels to turn yellow
Distilled Water	E	E	E	
Ethyl Acetate	P ¹	P	E	
Ethyl Alcohol, 95%	C	G	NT	Caused panels to turn yellow
Ethyl Alcohol, 50%	G ¹	E	NT	Caused Sequentia panels slight reduction in strength
Formaldehyde	E	E	E	
Heptane	F	G	E	Caused Sequentia panels slight reduction in strength
Hydrochloric Acid, 10%	E	E	E	
Hydrogen Peroxide, 3%	C	E	E	Caused panels to turn yellow
Isoctane	G ¹	G	E	Caused Sequentia panels slight reduction in strength
Lactic Acid, 10%	E	E	E	
Mineral Oil	E	E	G	Sanigrid absorbed some oil
Nitric Acid, 40%	E	G	C	Sanigrid turned slight yellow/blue
Nitric Acid, 10%	C	E	C	Sanigrid turned slight yellow/blue Caused Sequentia panels slight reduction in strength

Test reports & certificates



Chemical	Glasbord Panels	Sequentia Panels	Sanigrig Ceiling Grid System	General Comments
Oleic Acid	G ¹	E	G	Sanigrig absorbed some oil
Olive Oil	E	E		Sanigrig absorbed some oil
Potassium Iodide Solution, 10%	E	C	G	Sanigrig II turned red Sequentia turned yellow
Soap Solution	E	E	C	
Sodium Chloride Solution, 10%	P ¹	E	E	Caused panels to turn yellow
Sodium Chloride Solution, 60%	P	G	E	Caused Sequentia panels slight reduction in strength
Sodium Hydroxide Solution, 10%	P	NT	E	Caused panels to turn yellow
Sodium Hydroxide Solution, 1%	P	NT	E	Caused panels to turn yellow
Sodium Hydroxide Solution, 4-6%	E	NT	E	
Sulfuric Acid, 30%	G ¹	G	NT	Caused Sequentia panels slight reduction in strength
Sulfuric Acid, 3%	G ¹	E	E	
Toluene	G ¹	P	E	Caused panels to turn yellow
Transformer Oil	G ¹	NT	NT	Sanigrig absorbed some oil
Turpentine	G ¹	E	G	

Stain Resistance to Food and Miscellaneous Products

KEY

- Unaffected = wipes off easily with damp cloth and mild soap; no color or surface change
- Superficial = stain removes easily with water and/or mild abrasive
- Considerable = stain not completely removed

TESTING INFORMATION

1. ASTM D2299 | test stain resistance of applied coating
2. ASTM D1308 | test stain resistance of a product's natural surface

Stain	ASTM D2299 (Test #1)	ASTM D2299 (Test #2)	
	Glasbord Panels	Glasbord Panels	Sequentia Panels
Blood (beef)	Superficial	Superficial	Superficial
Brown Show Polish	Considerable	Considerable	Considerable
Butter	Unaffected	Unaffected	Unaffected
Crayon	Superficial	Superficial	Superficial
Mustard	Unaffected	Superficial	Superficial
Oil (crankcase)	Superficial	Superficial	Superficial
Potatoes (white)	Unaffected	Unaffected	Unaffected
Red Cabbage	Unaffected	Unaffected	Unaffected
Tea	Unaffected	Unaffected	Unaffected
Tomato Acid	Unaffected	Unaffected	Unaffected

hydewa GmbH - Hydewaplatz 1 - D-95466 Weidenberg



Bauaufsichtlich anerkannte Prüf-, Überwachungs- und Zertifizierungsstelle
Prüfstelle für Feuerlöschmittel und -geräte
DIN EN ISO/IEC 17025: D-PL-17819-01-00
DIN EN ISO/IEC 17065: D-ZE-17819-01-00
DIN EN ISO/IEC 17020: D-IS-17819-01-00
ZLS-GS-0066
Notified Body no. 0767



Klassifizierungsbericht

CLASSIFICATION REPORT

Nr./ no. 20150715

1. Ausfertigung/ 1st execution

ersetzt Klassifizierungsbericht Nr./ *replace classification report no. 2008-B-1345/01*
Grund: Erweiterung des Anwendungsgebietes/ *Reason: extension of the end use application*

Auftraggeber: Hydewa GmbH
Client: Hydewaplatz 1
95466 Weidenberg
DEUTSCHLAND

Hersteller: Hydewa GmbH
Manufacturer: Hydewaplatz 1
95466 Weidenberg
DEUTSCHLAND

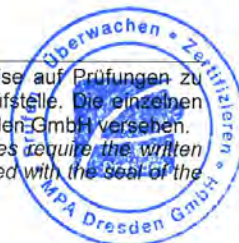
Betreff: **Klassifizierung des Brandverhaltens nach DIN EN 13501-1:2010-01**
Reference: **fire classification according to DIN EN 13501-1:2010-01**

Prüfmateri: Glasbord® FX 2,3 mm
Test object:

Berichtsumfang: 5 Seiten und 0 Anlagen
This report comprises: 5 pages and 0 annexes

Hinweis: Der Klassifizierungsbericht wurde zweisprachig (deutsch/englisch) erstellt. In Zweifelsfällen ist der deutsche Wortlaut maßgeblich.
Information: *The classification report is issued bilingual (German and English). In case of doubt, the German wording is valid.*

Veröffentlichungen von Klassifizierungsberichten, auch auszugsweise und Hinweise auf Prüfungen zu Werbezwecken bedürfen in jedem Einzelfalle der schriftlichen Einwilligung der Prüfstelle. Die einzelnen Blätter dieses Klassifizierungsberichtes sind mit dem Firmenstempel der MPA Dresden GmbH versehen.
Publications of classification reports and information on tests for publicity purposes require the written approval of the institution in every isolated case. Every page of this report is stamped with the seal of the test institution.



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USt-IdNr. DE291271296

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Test reports & certificates

MPA Dresden GmbH
Seite (page) 4 zum Klassifizierungsbericht Nr. (to classification report no.) 20150715

4.1 Klassifizierung Classification

Das Produkt „Glasbord® FX 2,3 mm“ wird nach seinem Brandverhalten wie folgt klassifiziert:

The product "Glasbord® FX 2,3 mm" in relation with the fire behaviour is classified:

B

Die zusätzliche Klassifizierung zur Rauchentwicklung ist:

The additional classification in relation with smoke production is:

s2

Die zusätzliche Klassifizierung zum brennenden Abtropfen/Abfallen ist:

The additional classification in relation with burning droplets/particles is:

d0

Brandverhalten <i>fire behaviour</i>		Rauchentwicklung <i>smoke production</i>		Brennendes Abtropfen <i>burning droplets</i>
B	-	s2	,	d0

Klassifizierung des Brandverhaltens: B – s2, d0
classification of fire behaviour: B – s2, d0

4.2 Anwendungsbereich Field of application

Die Klassifizierung in Abschnitt 3.1 gilt nur für das im Abschnitt 1 beschriebene Bauprodukt.

The Classification in clause 3.1 is valid solely for the material as described in clause 1.

Die Klassifizierung in Abschnitt 3.1 gilt nur für die direkte Hinterlegung mit Gipsplatten oder Untergründen der Euroklassen A1 oder A2-s1, d0 mit einer Mindestrohddichte von 600 kg/m³, für die geprüfte Produktdicke von ca. 2,3 mm, die maximale Klebermenge von 2,0 kg/m² sowie die Eckausbildung entweder verschlossen mit einem Aluminiumeckprofil oder mit Ramsauer Dichtstoffe Hitzefest B1 340 (J. Ramsauer KG).

The classification in clause 3.1 applies only to the direct deposit to plasterboards or substrates of euro classes A1 or A2-s1, d0 with a minimum gross density of 600 kg/m³, the tested product thickness of approx. 2.3 mm, the maximum application quantity of the adhesive of 2.0 kg/m² and the edge design closed either with aluminium edge profile or with Ramsauer Dichtstoffe Hitzefest B1 340 (J. Ramsauer KG).





Fraunhofer Institute for Manufacturing Engineering
and Automation

Institute Directors
Prof. Dr.-Ing. Prof. e.h. Dr.-Ing. e.h.
Dr. h.c. mult. Engelbert Westkämper
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Tel + 49 (0) 711 / 9 70-00
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Test Report

Examination of the cleanability of surfaces manufactured by Hydewa GmbH

Customer: Hydewa GmbH
Hydewaplatz 1
95466 Weidenberg
Germany

Project Manager: Dipl.-Biol. (t.o.) Markus Keller
Project Processor: LTA Gabriela Baum

Report No. **HY 1107-564**

Stuttgart, Germany, August 11, 2011

Forschungsinstitut für Wärmeschutz e.V. München



Bestimmung der Wasserdampfdurchlässigkeit nach EN ISO 12086

Prüfbericht Nr.: R- 65/05

Antragsteller: Hydewa GmbH, D 95466 Weidenberg

Materialbezeichnung: GFK- Paneel

Materialkennzeichnung: Glasbord - PWI

Materialbeschreibung: GFK-Paneel mit einer strukturierten, glänzenden Vorderseite und einer glatten, matten Rückseite. Farbe weiß. Nenndicke 2,3 mm.

Probennahme: Vom Antragsteller im Juni 2005 an das FIW übersandt. Wareneingang Nr.: E 6356.

Prüfmethode: Bestimmung der Wasserdampfdurchlässigkeit nach EN ISO 12086. Prüfbedingungen nach Abschnitt 7.1 Satz A: 23-0/50 (Trockenbereichsverfahren) Probekörper: zylindrisch, Durchmesser 140 mm

Probenvorbehandlung: ---

Prüfzeitraum: Juni bis September 2005

Ergebnisse: An den 5 Probekörpern mit einem mittleren Flächengewicht von 3,2 kg/m² wurden folgende Werte der Diffusionswiderstandszahl μ und des entsprechenden Diffusionswiderstandes $s_d = \mu \cdot d$ ermittelt:

Probe-Körper Nr.	mittlere Dicke d an den Hochpunkten gemessen mm	Flächengewicht kg/m ²	Wasserdampfdiffusionswiderstandszahl μ	Wasserdampfdiffusionsäquivalente Luftschichtdicke s_d m
1	2,30	3,27	59200	136
2	2,30	3,20	58200	134
3	2,30	3,16	56100	129
4	2,30	3,23	59300	136
5	2,30	3,24	59400	137
Mittel	2,3	3,2	58000	130

Erläuterung: Die ermittelten Werte gelten ausschließlich für die geprüften Proben mit der mittleren Dicke d für das gewählte „Trockenbereichsverfahren“.

Gräfelfing, den 14.09.2005

Sachgebietsleiter


Dipl.-Phys. Johannes Cammerer



Prüfer


Gerhard Treiber

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Forschungsinstitut für Wärmeschutz e.V. München



Bestimmung der Wasserdampfdurchlässigkeit nach DIN EN ISO 12572

Prüfbericht Nr.: R- 25/14

Antragsteller: Hydewa GmbH, D 95466 Weidenberg
Materialbezeichnung: GFK- Paneel
Materialkennzeichnung: Glasbord FXE 2,3 mm
Materialbeschreibung: GFK-Paneel mit einer strukturierten, glänzenden Vorderseite und einer glatten, matten Rückseite. Farbe weiß.
Probennahme: Durch den Antragsteller am 21.02.2014 an das FIW München übersandt. Wareneingang Nr.: E8940
Prüfmethode: Bestimmung der Wasserdampfdurchlässigkeit nach DIN EN ISO 12572. Prüfbedingungen nach Abschnitt 7.1 Satz A: 23-0/50 (Trockenbereichsverfahren) Probekörper: zylindrisch, Durchmesser 140 mm
Probenvorbehandlung: ---
Prüfzeitraum: Februar bis Juni 2014
Ergebnisse: An den 5 Probekörpern mit einer mittleren flächenbezogenen Masse von 3,4 kg/m² wurden folgende Werte der Diffusionswiderstandszahl μ und des entsprechenden Diffusionswiderstandes $s_d = \mu \cdot d$ ermittelt:

Probe-Körper Nr.	mittlere Dicke an den Hochpunkten d mm	Flächenbezogene Masse kg/m ²	Wasserdampf- diffusionswider- standszahl μ	Wasserdampf- diffusionsäquivalente Luftschichtdicke s_d m
1	2,05	3,22	83350	171
2	2,10	3,43	86330	181
3	2,07	3,41	81010	168
4	2,15	3,28	79530	171
5	2,25	3,40	87750	197
Mittel	2,1	3,4	83600	178

Erläuterung: Die ermittelten Werte gelten ausschließlich für die geprüften Proben mit der mittleren Dicke d für das gewählte „Trockenbereichsverfahren“.

Gräfelfing, den 30.06.2014

Sachgebietsleiter

Dipl.-Ing.(FH) Stefan Kutschera



Prüfer

Michael Zimmermann

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Due to the size we have printed only a small selection of test certificates here. We will gladly send you further test certificates upon request.

A close-up photograph of water splashing onto a blue, textured surface, possibly a wall or ceiling. The water is captured in mid-air, creating a dynamic, energetic scene. The background is a uniform blue with a fine, pebbled texture.

1.) Variants (Sandwichpanels)

2.) Technical specifications

3.) Mounting & Details

4.) Solutions & Gallery

5.) Test reports & certificates (overview)

hydewa[®]

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Hydewaplatz 1-3
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Sandwichpanels



Production- Hydewaplatz3

Sales/Logistics - Hydewaplatz 1

Quality „made by hydewa“

- Own Production since 2013
- Production and innovation from one company
- Speedy delivery
- Flexibility
- Special construction

Sandwichpanels



Description

- Sandwich panels as stand alone system with front and rear side covering and EPS or PU core.
- continuous core material and thermal saving jointing
- non corroding FRP / Glasbord-surfaces are used which are resistant to aggressive chemicals.
- easy to clean
- certified for food contact
- designed for interior walls and ceilings for food producing companies.

Purpose

New buildings or restoration

- Sandwich-System with hidden fixing and robust sealing are designed for new buildings or restoration. (e.g. for cool rooms, maturing rooms, slaughterhouses, production rooms, packing rooms etc.).

Mounting on walls:

- Mounting as wall decoration is possible
- Sandwichpanels can be built as self standing walls with covering on both sides

Mounting on ceilings:

- Var I: directly to ceilings
- Var II: construction as suspended ceiling (even to walk on)



Characteristics

Hydewa sandwich panels are characterised by high quality, robust surfaces, good insulation and durability. We manufacture in a standard size of 1.20 m width and lengths up to 12m. Due to the fact that the layers can be selected and combined individually, we are able to respond to individual customer requirements. The properties of the panels can thus be adapted to the specific application.

A production according to high standards and continuous quality control ensures extremely low dimensional deviations.



Combinations

Cover 1	Thick-ness	Core	Cover 2	Thick-ness
LX-E 2,0 /LX-P 2,0*	2,0mm	<div style="border: 1px solid black; padding: 10px; text-align: center;"> EPS 035 / EPS 040 20-240mm or PU 022 60-160mm </div>	LX-E 2,0 /LX-P 2,0*	2,0mm
LX-SE 2,0 /LX-SP 2,0*	2,0mm		LX-SE 2,0 /LX-SP 2,0*	2,0mm
LX-P 1,5	1,5mm		LX-P 1,5	1,5mm
FXE	2,3mm		FXE	2,3mm
PWI /PSI *	2,3mm		PWI /PSI *	2,3mm
	/ 2,0mm		Alufolie	0,08mm
	/1,5mm		Stahl	0,6mm

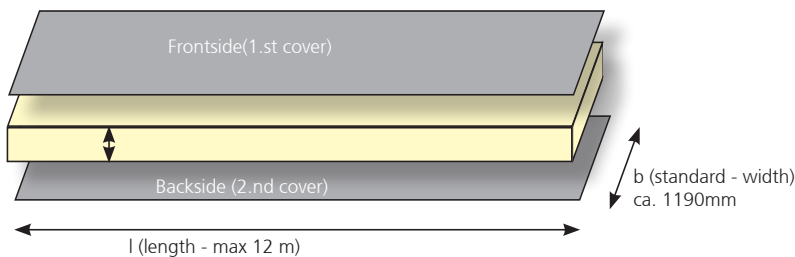
- standard is fire class E according to DIN EN 13501-1 or. B2 according to DIN 4102-1

- special cutting is possible

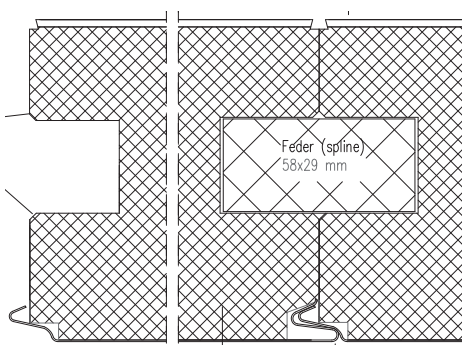
* PWI, FXE, LX-E and LX-SE = structured material

* PSI, LX-P und LX-SP = flat material

Please note the data sheets for each material.



Groove and spline

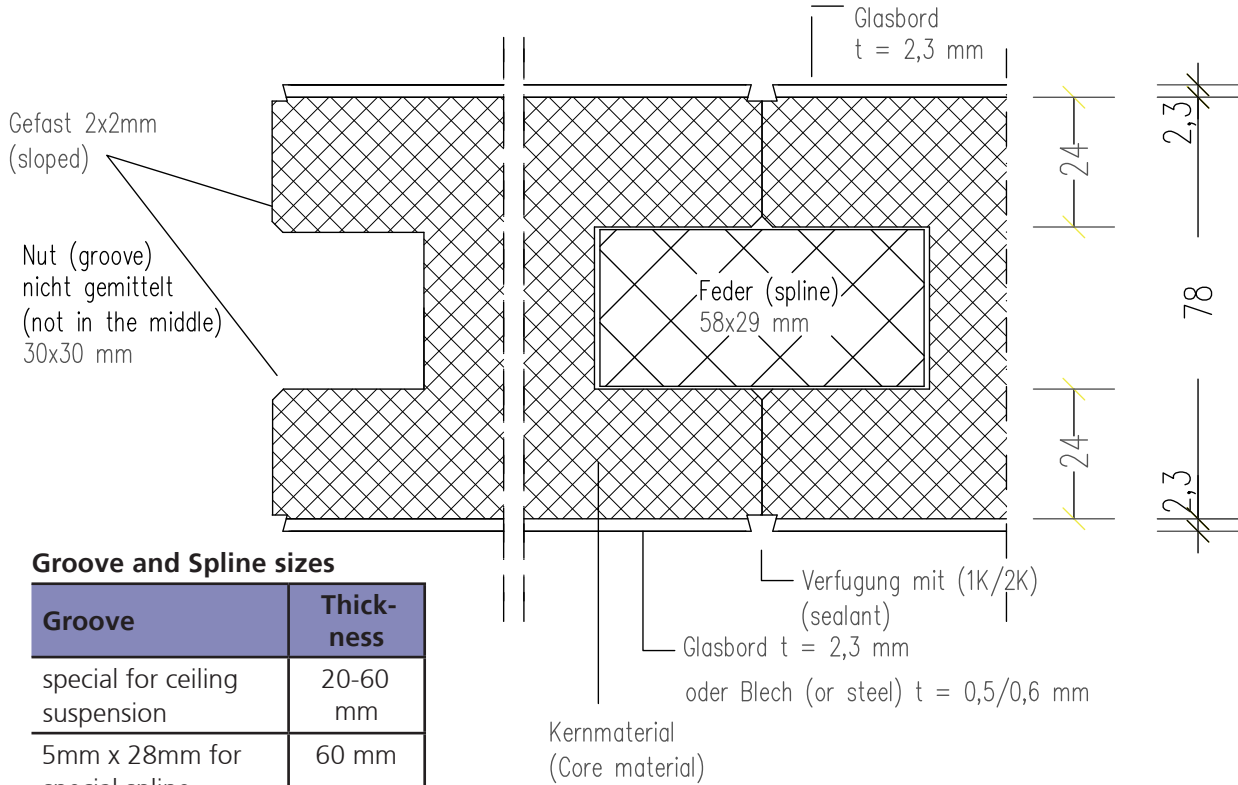


INFO: Polyester coated sheet metal panels - are not suitable for use in bathrooms, laundries, slaughterhouses, leather and furs, salt and curing trades, dairies, fish processing plants, because of increased demands in the properties of the panels (aggressive environment, very intensive cleaning or permanent condensation risk).

Sandwich panel – Construction

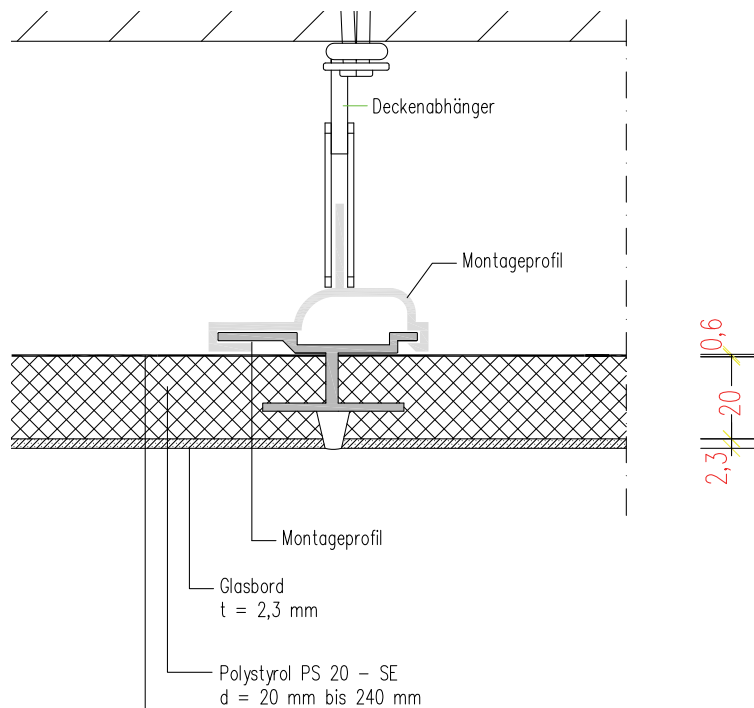
Example 80er panels / 20er ceiling panels

■ For ceilings and wall coverings



Groove and Spline sizes

Groove	Thick-ness
special for ceiling suspension	20-60 mm
5mm x 28mm for special spline	60 mm
30*30 (each side)	80 - 140 mm
50*30 (each side)	160 - 240 mm



Sandwichpanels - variations




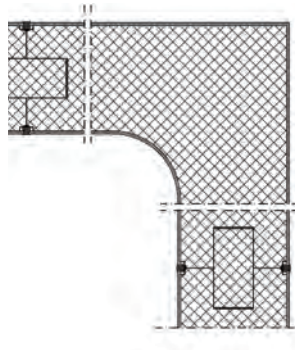

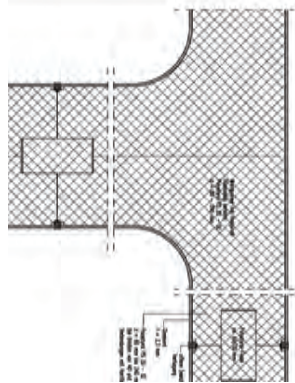
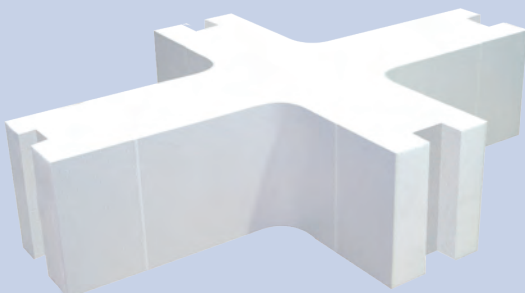
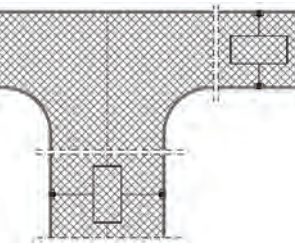
Description

In some areas like a measuring room you need special parts or solutions. Room edges can be equipped with rounded sandwichpanels. These parts are manufactured in a

special press. Glasbord®-surface is combined with the core material in press. Because of that the parts are 4,0 m long at max. For higher rooms you need to combine a couple of elements.

Sizes

The Radius is 50 mm; the length of the sides is 250 x 250 mm (scaled on the inside). The total length on the outside can be calculated when the core thickness is known.

Type	drawing	Description
		<p>90°-Edge</p> <p>The Backside is available in Alu-foil, steel, Standard-FRP or Glasbord®.</p>
		<p>T-Piece for section walls</p> <p>The Backside is available in Alu-foil, steel, Standard-FRP or Glasbord®.</p>
		<p>X-Piece</p> <p>Glasbord® on every side.</p>

Sandwich panels



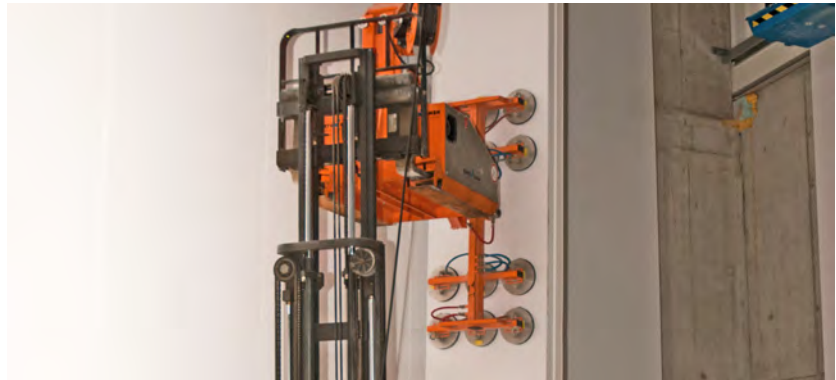
Insulation

■ Thickness of insulation

The thickness of insulation depends on different factors :

- Is it an inner wall or the interior insulation of inner side of an exterior wall?
- Temperature of adjacent premises?
- Required room temperature?
- Temperature of the cooling material in storage?
- Contribution amount refrigerated foods?
- Vapor pressure and risk of condensation

For your pre-planning, you can start with 120 mm insulation thickness for cold rooms and freezer rooms for 240 mm in EPS. These element strengths have been proven in practice. A final assessment must be calculated by a specialist for air conditioning.



U-Scale

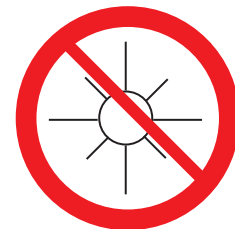
Core thickness in mm	PU									EPS		
	WLG 022	WLG 024	WLG 025	WLG 026	WLG 027	WLG 028	WLG 029	WLG 030	WLG 032	WLG 035	WLG 040	
20	0,927	0,997	1,031	1,065	1,098	1,131	1,163	1,195	1,258	1,349	1,493	
40	0,503	0,544	0,565	0,585	0,606	0,626	0,645	0,665	0,704	0,762	0,855	
60	0,345	0,375	0,389	0,404	0,418	0,432	0,447	0,461	0,489	0,531	0,599	
80	0,263	0,285	0,297	0,308	0,319	0,33	0,341	0,353	0,375	0,407	0,461	
100	0,212	0,23	0,24	0,249	0,258	0,267	0,276	0,285	0,303	0,33	0,375	
120	0,178	0,193	0,201	0,209	0,217	0,224	0,232	0,24	0,255	0,278	0,315	
140	0,153	0,167	0,173	0,18	0,187	0,193	0,2	0,207	0,22	0,24	0,272	
160	0,134	0,146	0,152	0,158	0,164	0,17	0,176	0,182	0,193	0,211	0,24	
180	0,12	0,13	0,136	0,141	0,146	0,152	0,157	0,162	0,173	0,188	0,214	
200	0,108	0,118	0,122	0,127	0,132	0,137	0,142	0,146	0,156	0,17	0,193	
220	0,098	0,107	0,111	0,116	0,12	0,125	0,129	0,133	0,142	0,155	0,176	
240	0,09	0,098	0,102	0,106	0,11	0,114	0,118	0,122	0,13	0,142	0,162	

WLG = Wärmeleitgruppe (quality of insulation)

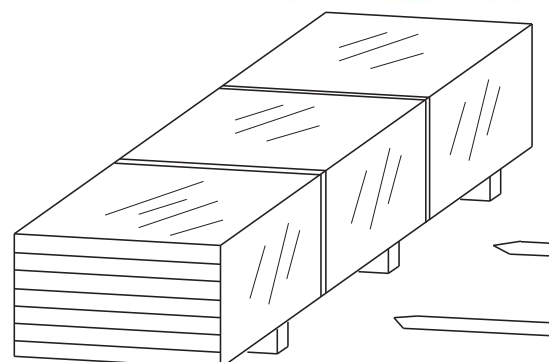
Mounting hints

Storage / Notes

- Always store the panels flat and on special blocks.
- The space between these blocks should be about 1,2m.
- Don't put more than one pallet above the other.
- Protect panels against sun (UV-Radiation)
(use protection foil).
- Protect panels against humidity (rain).
- Do not store panels above 50°C or below -40°C.



- Open package on site only.
- Don't transport the pallet without safety strap
(without the panels will drift).
- Don't cut protection foil upon the panel surface.
(Danger of scratches).
- **When using forklifts**, always lift the pallets from the
bottom with the forks in wide position.
- Don't lift the panels within the spline but on the
bottom.
- Don't lift the panels alone when lifting by hand.



Installation instructions

- Mounting should be done by skilled personal.
- Wear protective clothes while working with the panels.
- Don't use angle grinders
(The sparks may damage the panel surface).
- Clean the panels properly before use.
- Please note the cleaning instructions for the different surfaces.



Mounting 2-C-Sealant



Properties

Hydewa sealants in hard or soft design ensure a self-developed and food-acceptable element. They are an ideal sealing material for sealing sandwich elements.

Our 2-C-joint can be described as a maintenance-free and has similar properties to the glasbord-surface. It is not prone to yellowing and the sealed surface rejects mould



Application

The material is tailored specifically to the sheet surface and provides a pleasing overall result.

The 2-C-joint material fully meets the expectations of the installer, as well as of the end user, with regard to processing, colour stability and resilience.

The routed edges allow both the use of a cover profile (T-bar) as well as a visible jointing.

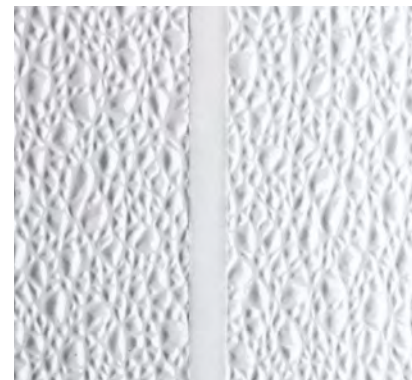


Best results are obtained when the panel edging is covered with tape prior to jointing.

This ensures that the porous cutting edges of the panels are covered.

No trowelling compounds are needed as the joint is removed best with a rubber spatula.

Don't use water or leveling agents.



Sealant	Feature	Applications	Properties	Benefits
hps-2c sealant	hard / elastic	Connection and expansion joints with low to medium motion recording for indoor and outdoor use.	2-component PU system	Flexibility, fast setting, wide variety of substrates

For details see „Hints for mounting“.

Direct mounting with a 1C sealant



Properties

We have many years' experience with our 1-component sealant

In 2011 the recipe was further improved and is now more resistant to mildew

Due to its high elasticity and good adhesion edge it can absorb movement and is the ideal sealant in environments with large temperature fluctuations.

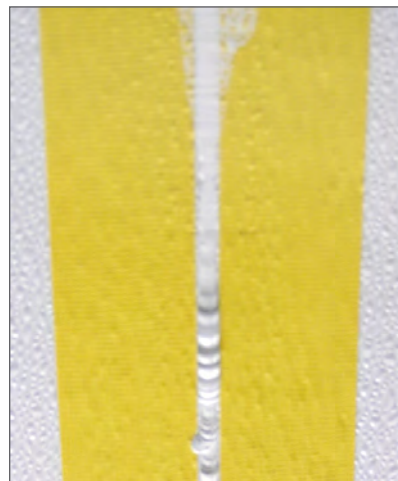


In this way the sealant of the panel is obvious and controllable. The cut borders of our sandwich panels allow either the use of a cover (T bar) or a visible jointing

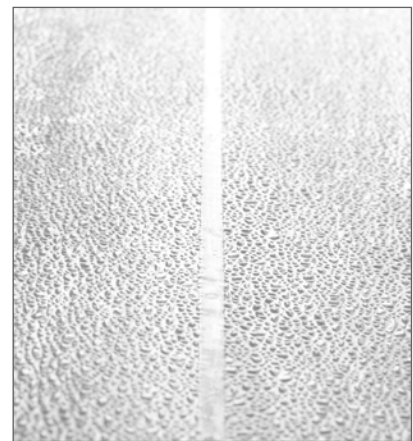
This procedure ensures that the joints can be covered perfectly.

Application

Historically the vertical joints of the panels were covered with strips, however today the „open“ grouting is favoured



Best results are obtained when the joints are covered with tape before grouting.

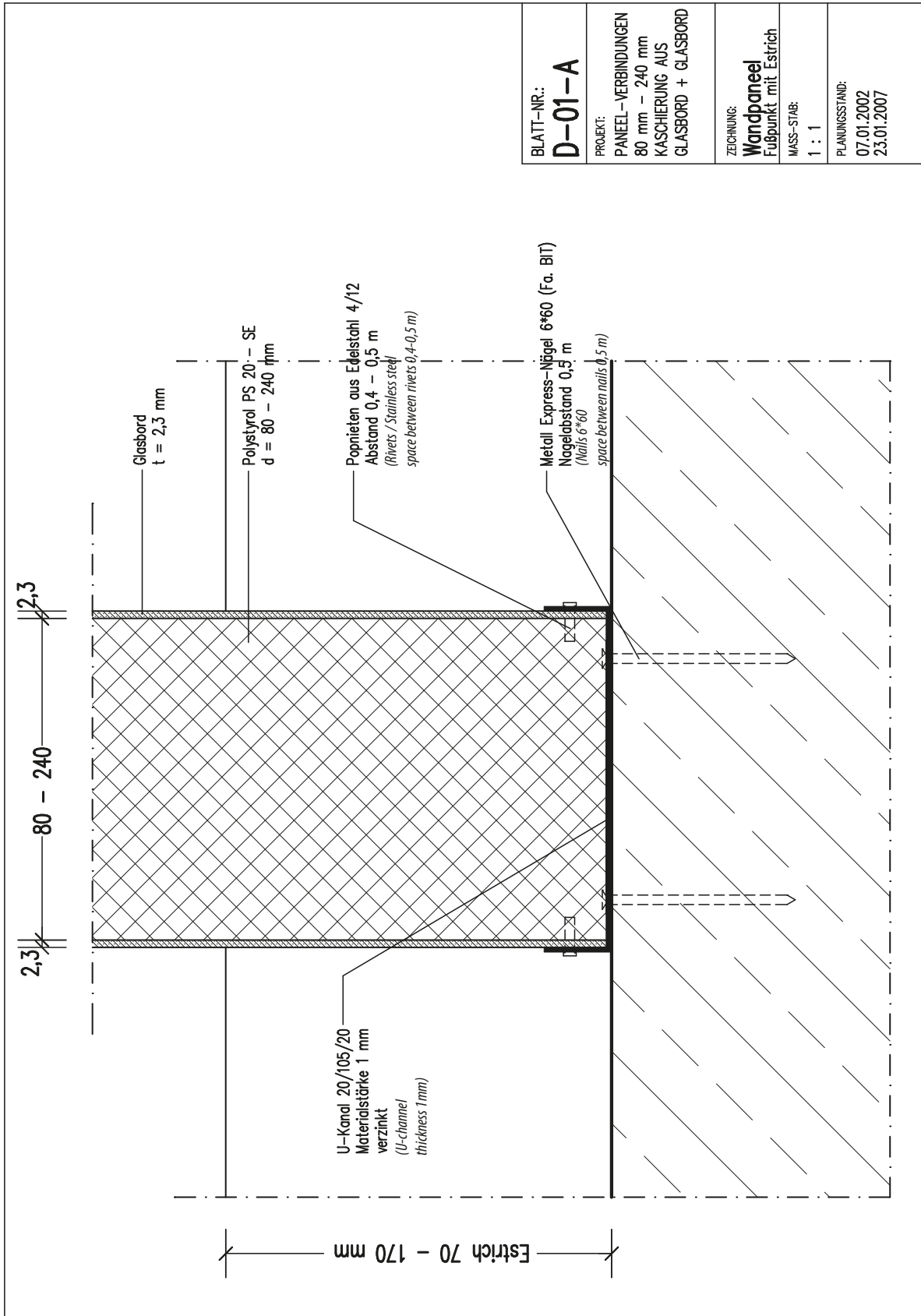


Be careful when using chemicals to smooth the sealant and ensure that they are completely removed when the sealant is dried.

Sealant	Feature	Applications	Properties	Benefits
1-C-Hybrid-sealant	elastic	Connection and expansion joints with low to medium motion recording for indoor and outdoor use.	1-C-sealant	Solvent-free, odourless, no blistering, very low shrinkage, wide adhesion spectrum, silicone and isocyanates, good UV resistance

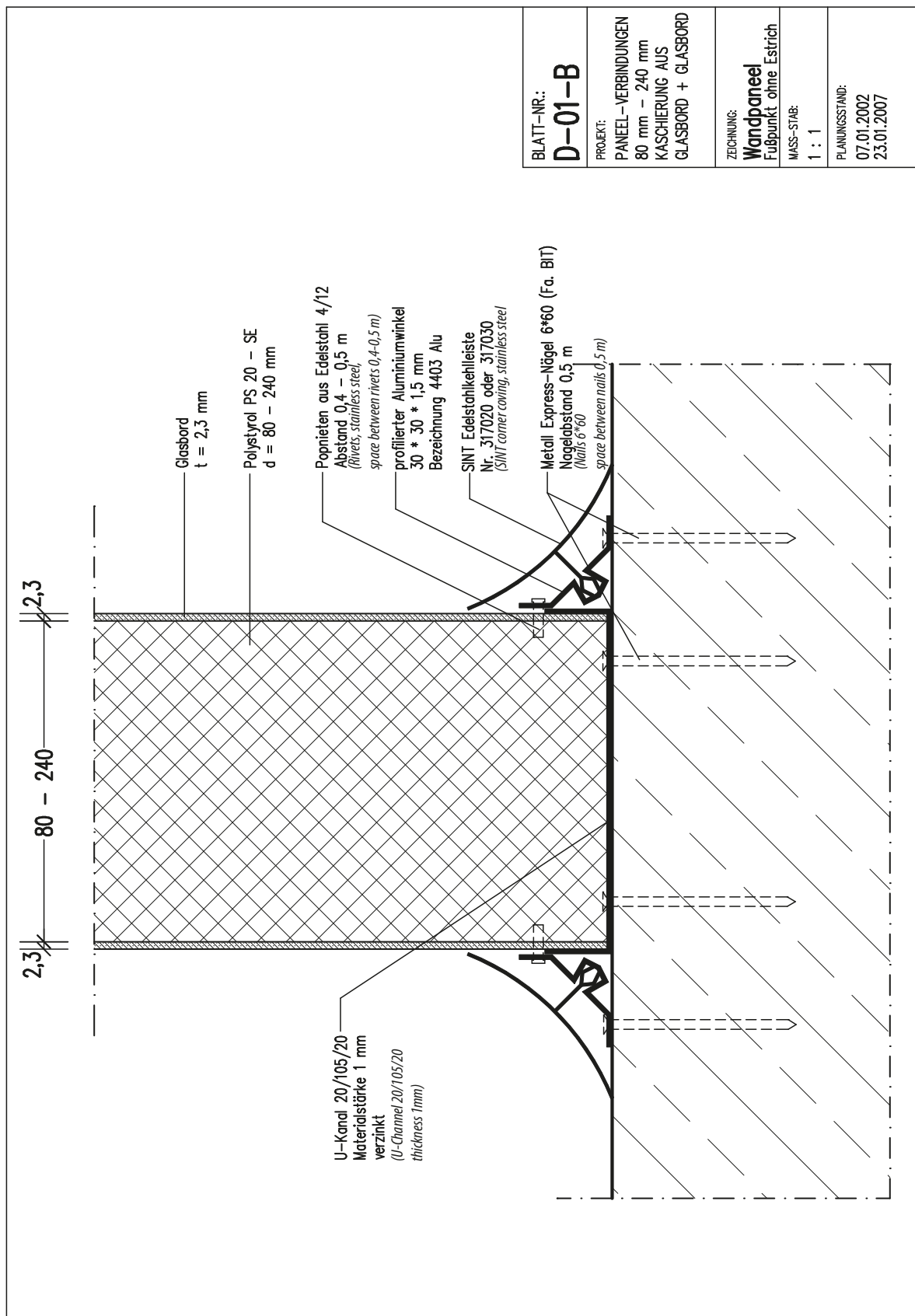
Complete instructions for mounting can be found under „technical data“

Sandwichpanel – parts

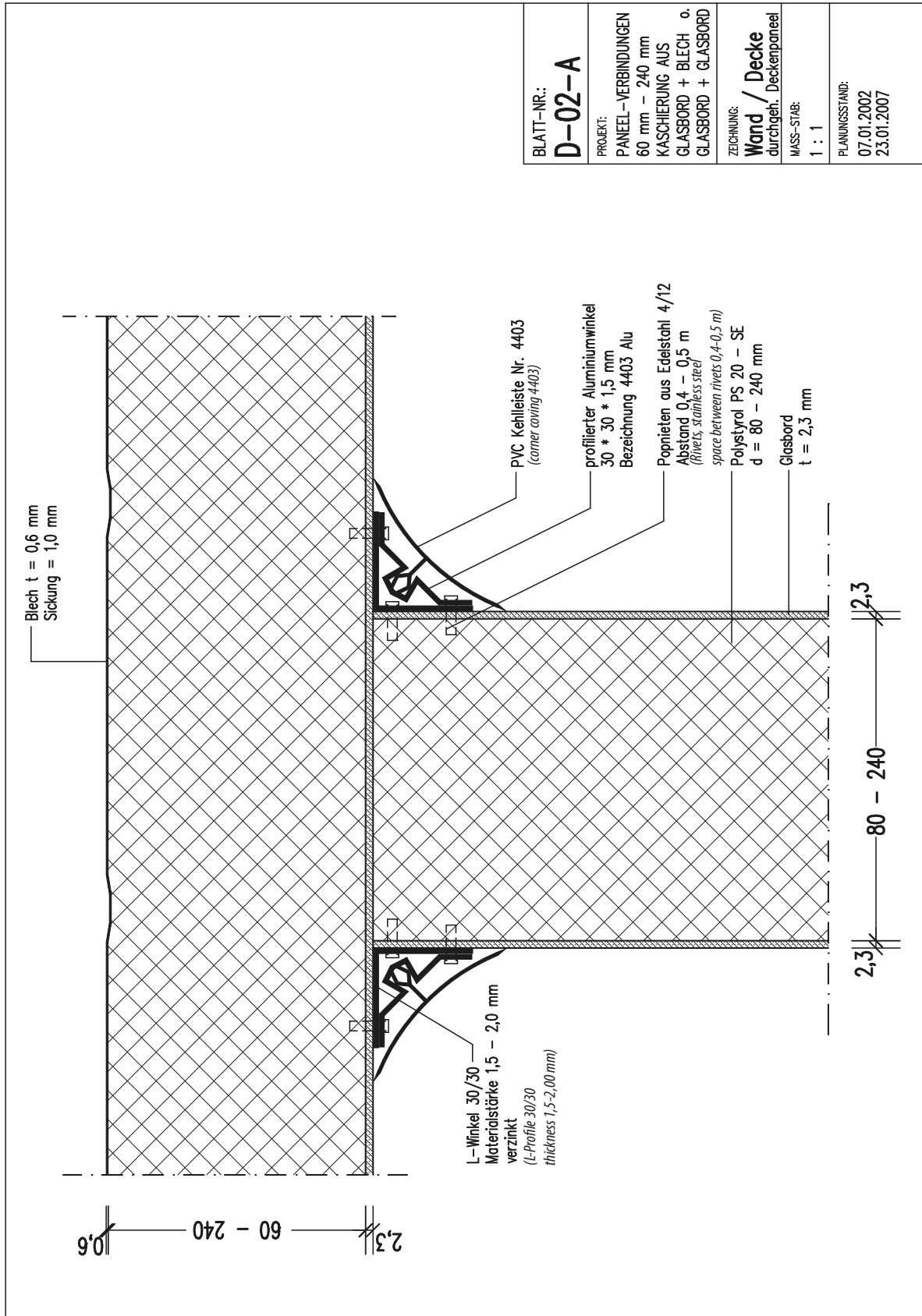


BLATT-NR.: D-01-A
PROJEKT: PANEEL-VERBINDUNGEN 80 mm – 240 mm KASCHIERUNG AUS GLASBORD + GLASBORD
ZEICHNUNG: Wandpaneel Fußpunkt mit Estrich
MASS-STAB: 1 : 1
PLANUNGSSTAND: 07.01.2002 23.01.2007

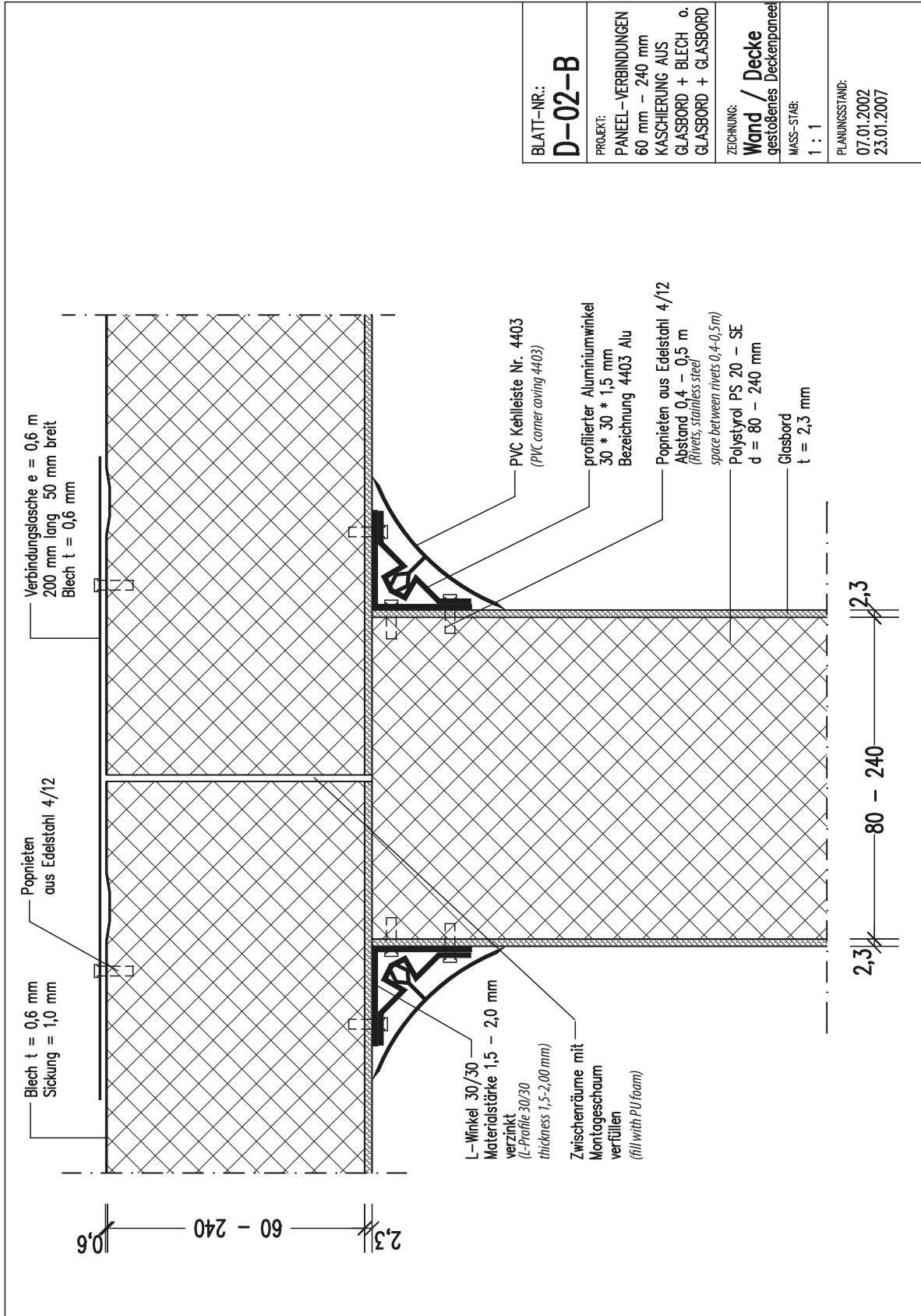
Sandwich panel – connections



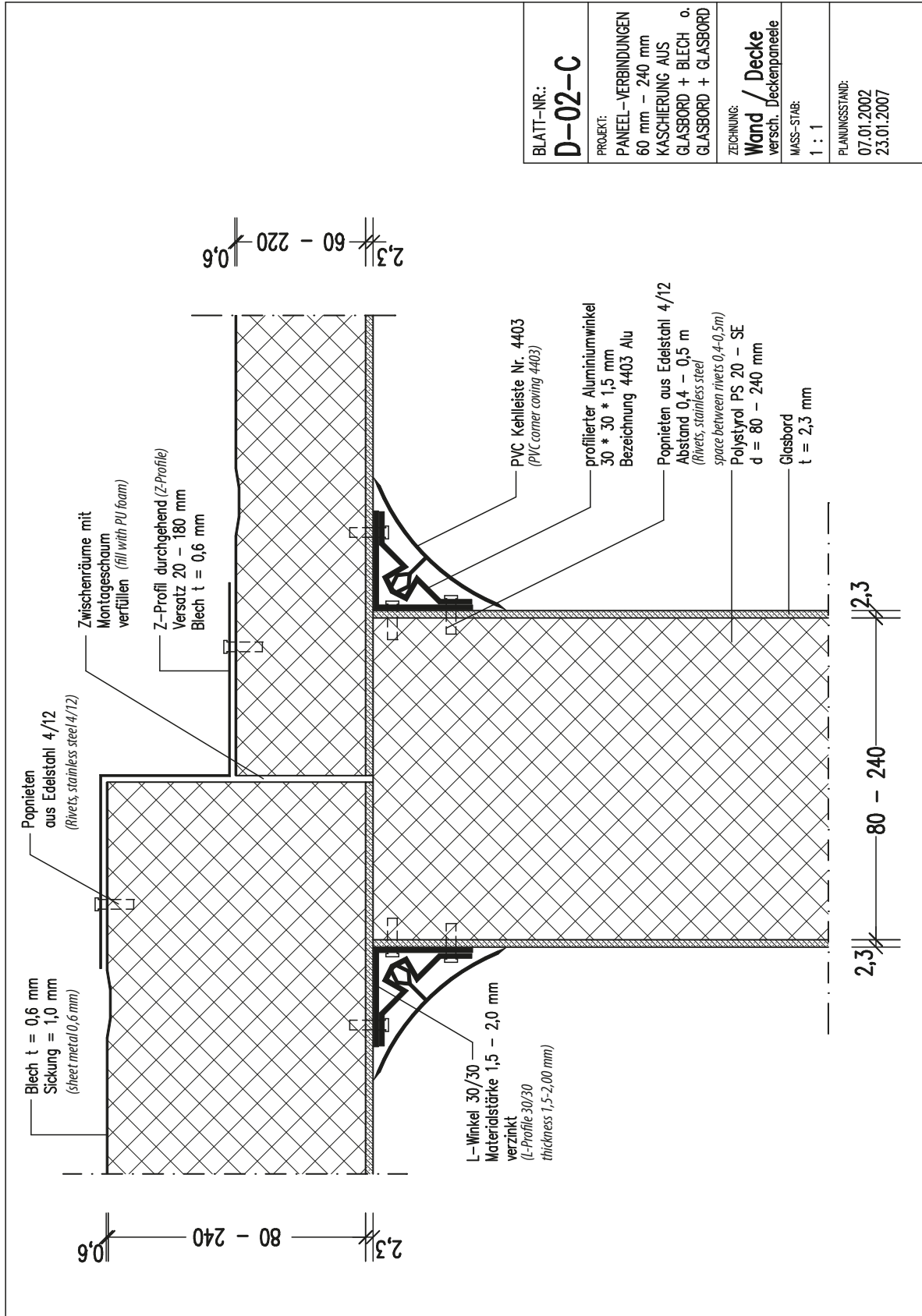
Sandwich panel – connections



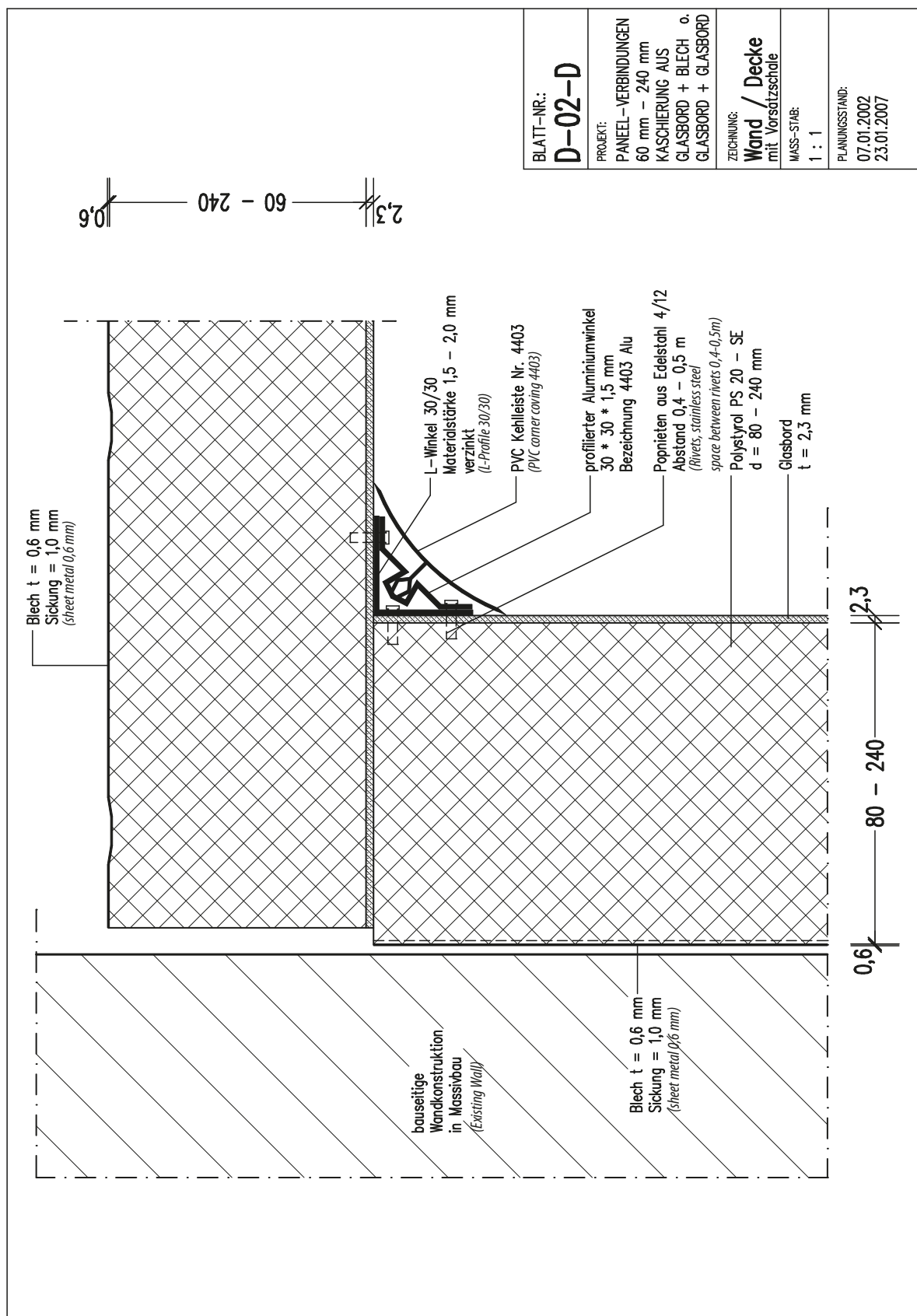
Sandwich panel – connections



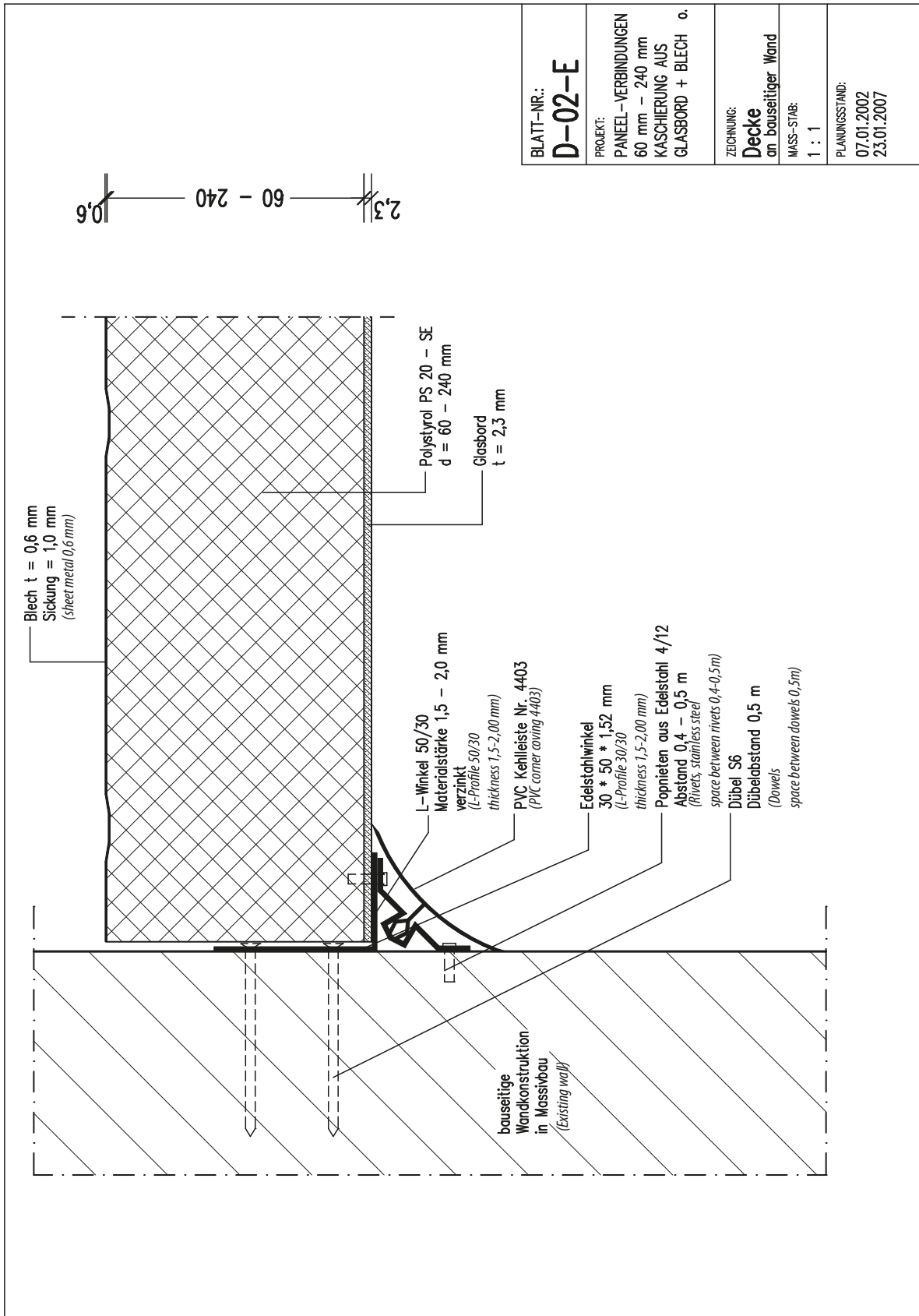
Sandwich panel - connections



Sandwich panel – connections

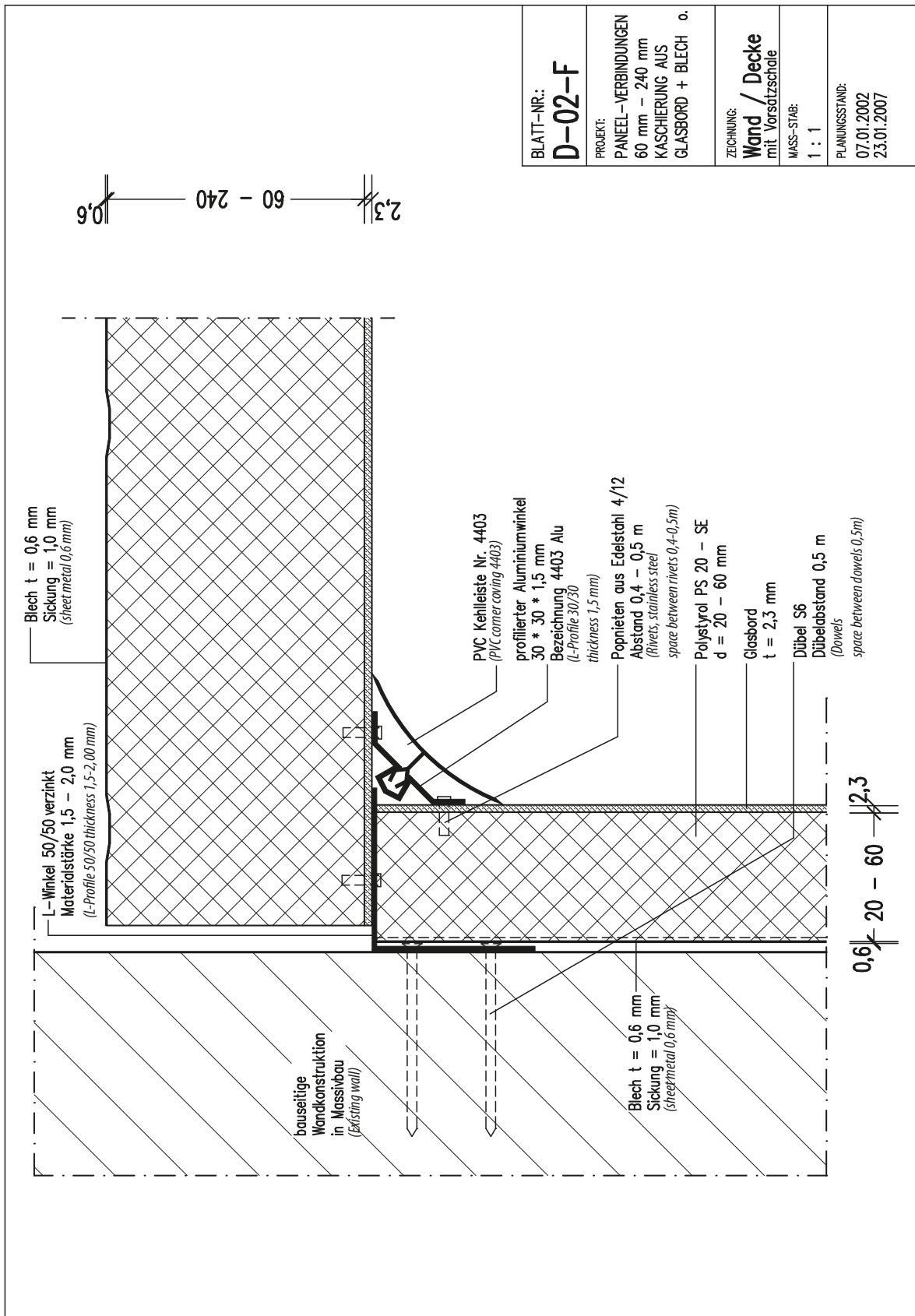


Sandwich panel – connections

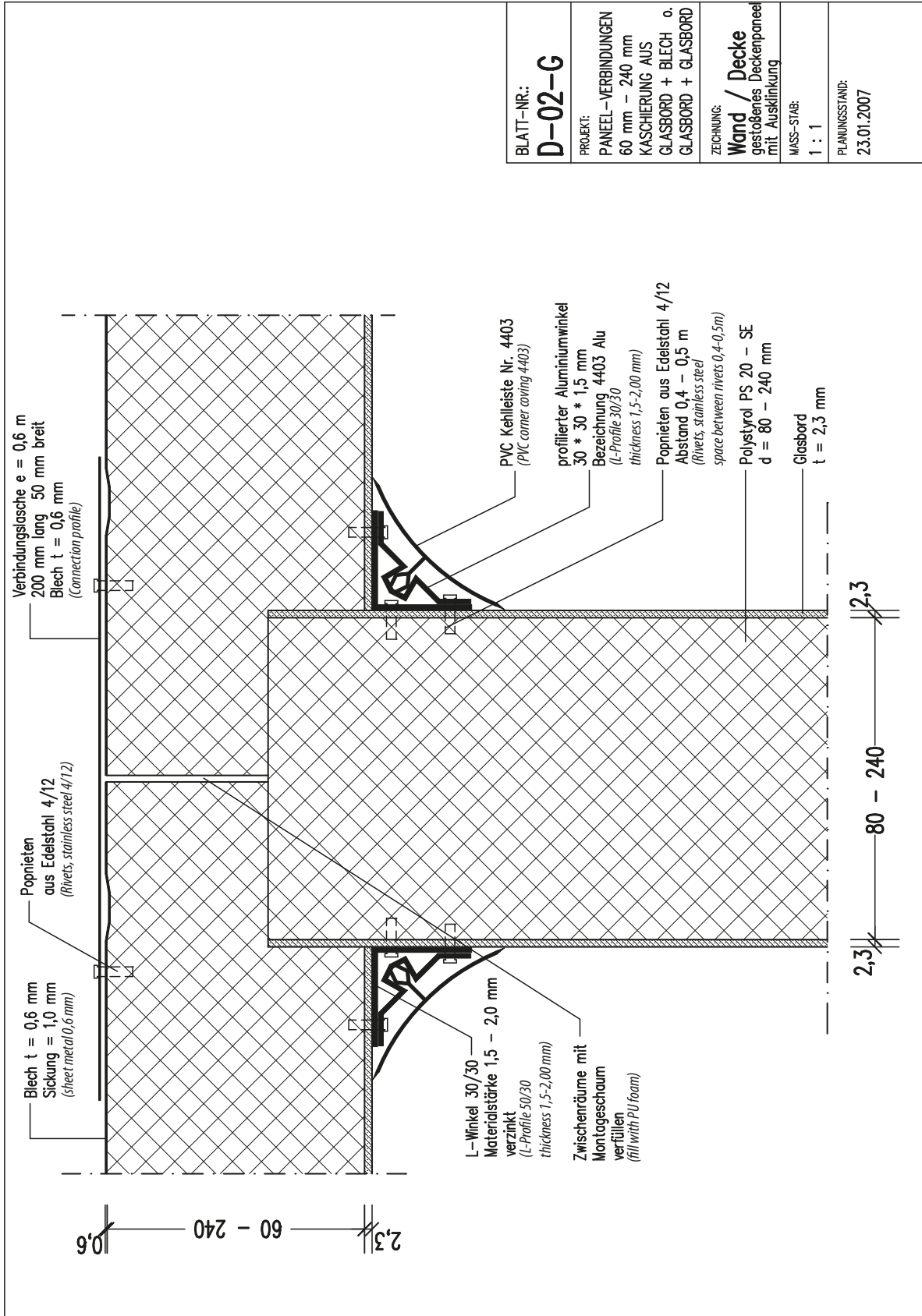


BLATT-NR.:	D-02-E
PROJEKT:	PANEELE-VERBINDUNGEN 60 mm - 240 mm KASCHIERUNG AUS GLASBORD + BLECH α
ZEICHNUNG:	Decke an bauseitiger Wand
MASS-STAB:	1 : 1
PLANUNGSSTAND:	07.01.2002 23.01.2007

Sandwich panel – connections

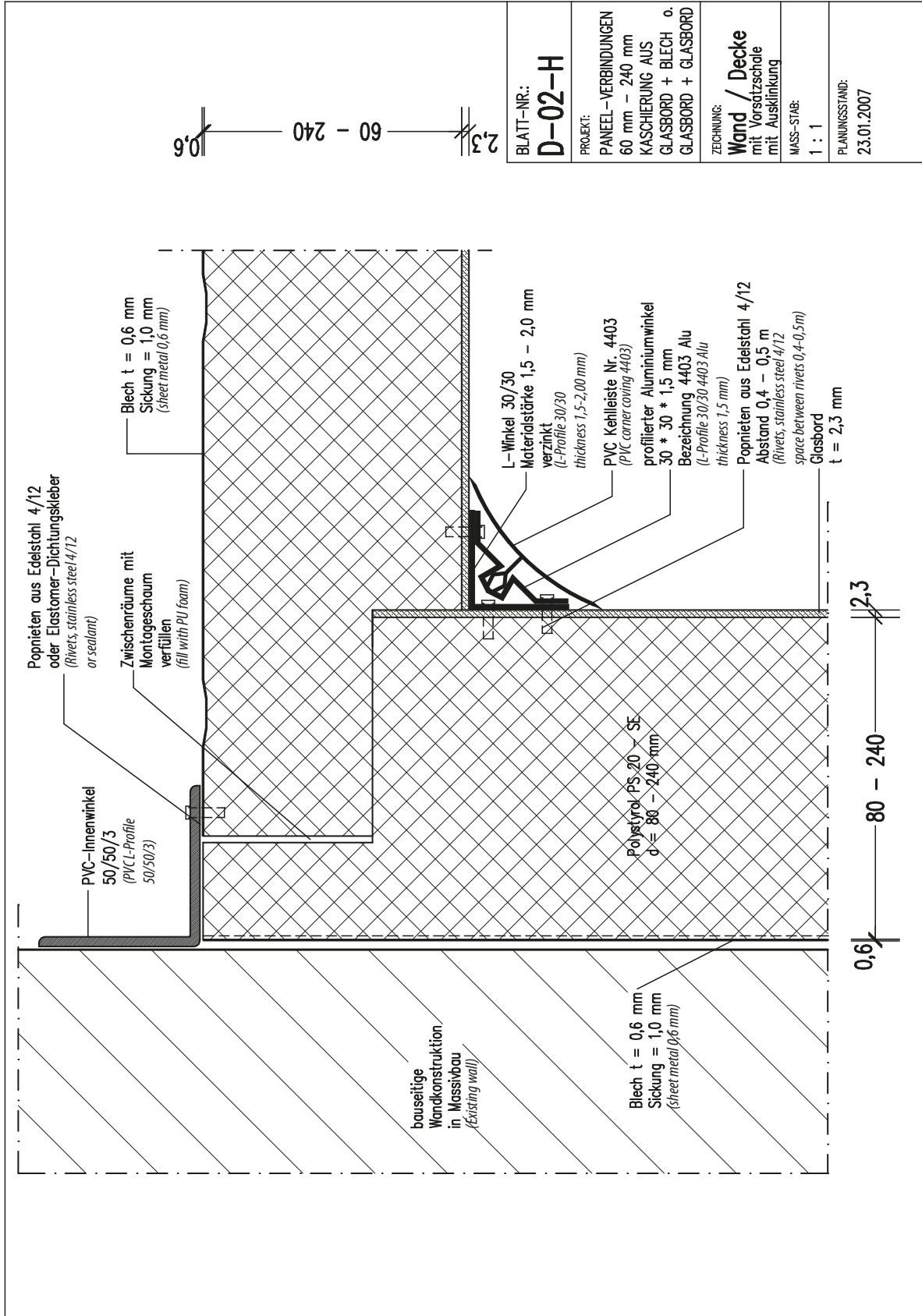


Sandwich panel – connections

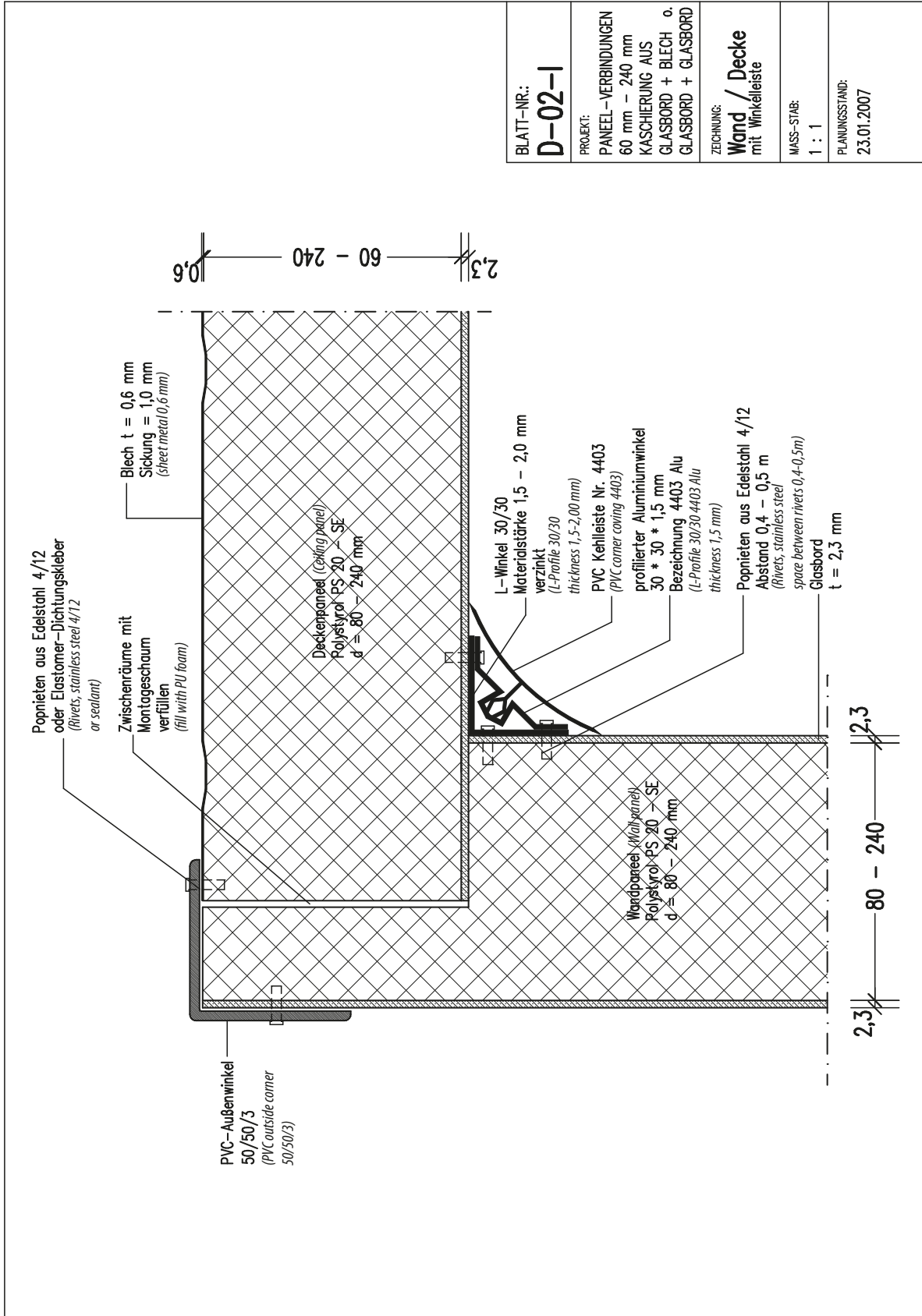


BLATT-NR.:	D-02-G
PROJEKT:	PANEEL-VERBINDUNGEN 60 mm – 240 mm KASCHIERUNG AUS GLASBORD + BLECH o. GLASBORD + GLASBORD
ZEICHNUNG:	Wand / Decke gestoßenes Deckenpaneel mit Auskantung
MASS-STAB:	1 : 1
PLANUNGSSTAND:	23.01.2007

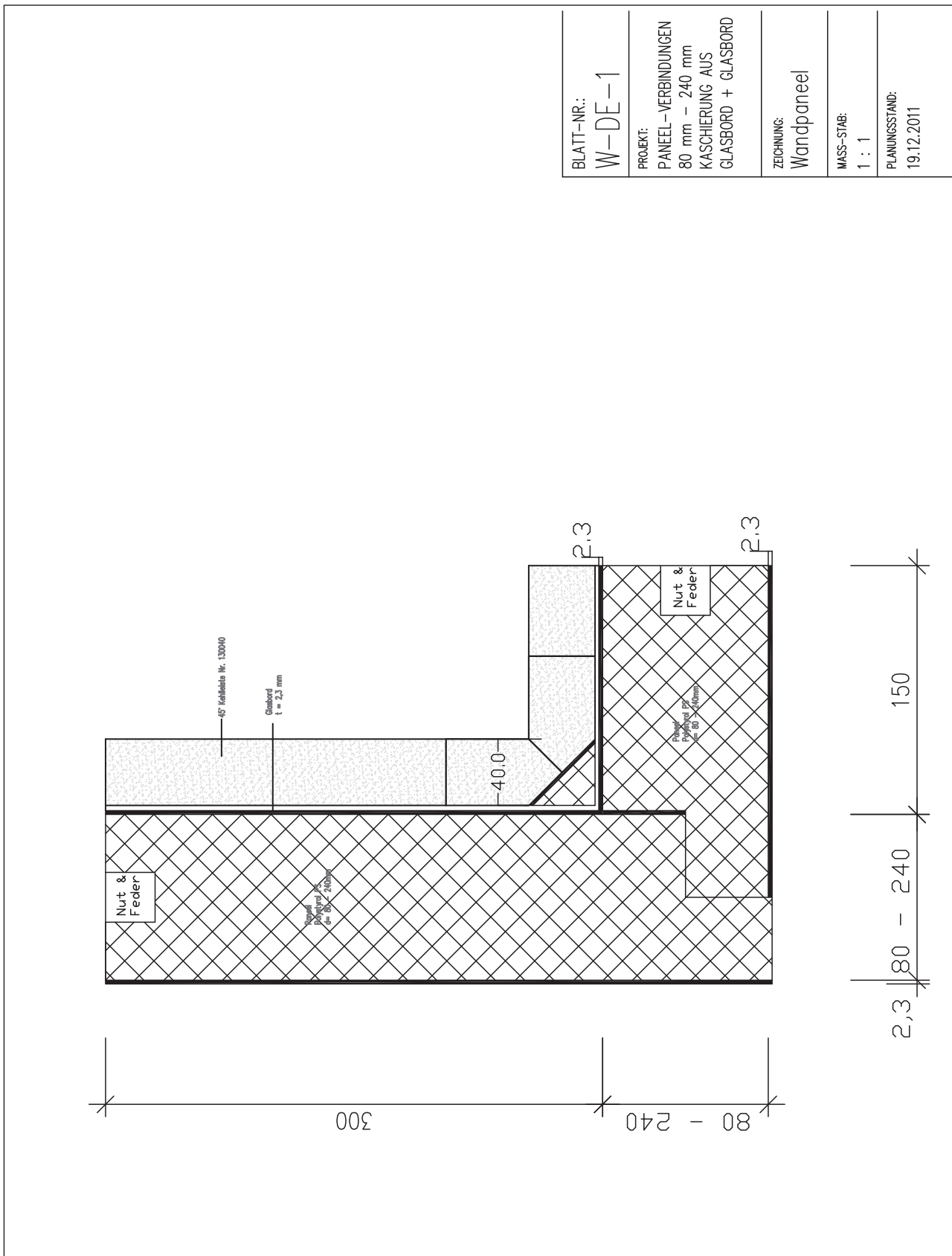
Sandwich panel – connections



Sandwich panel – connections

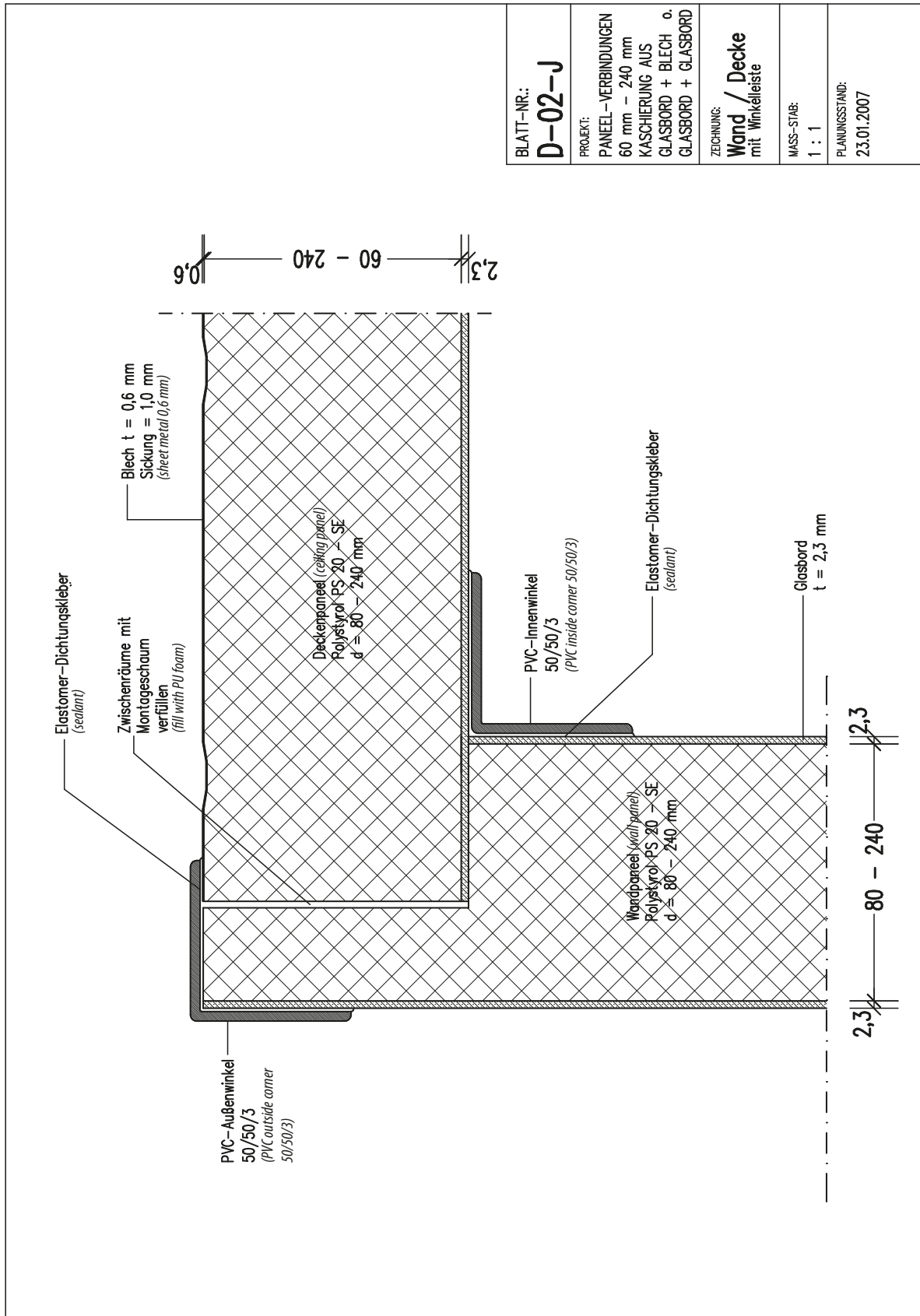


Sandwich panel – connections



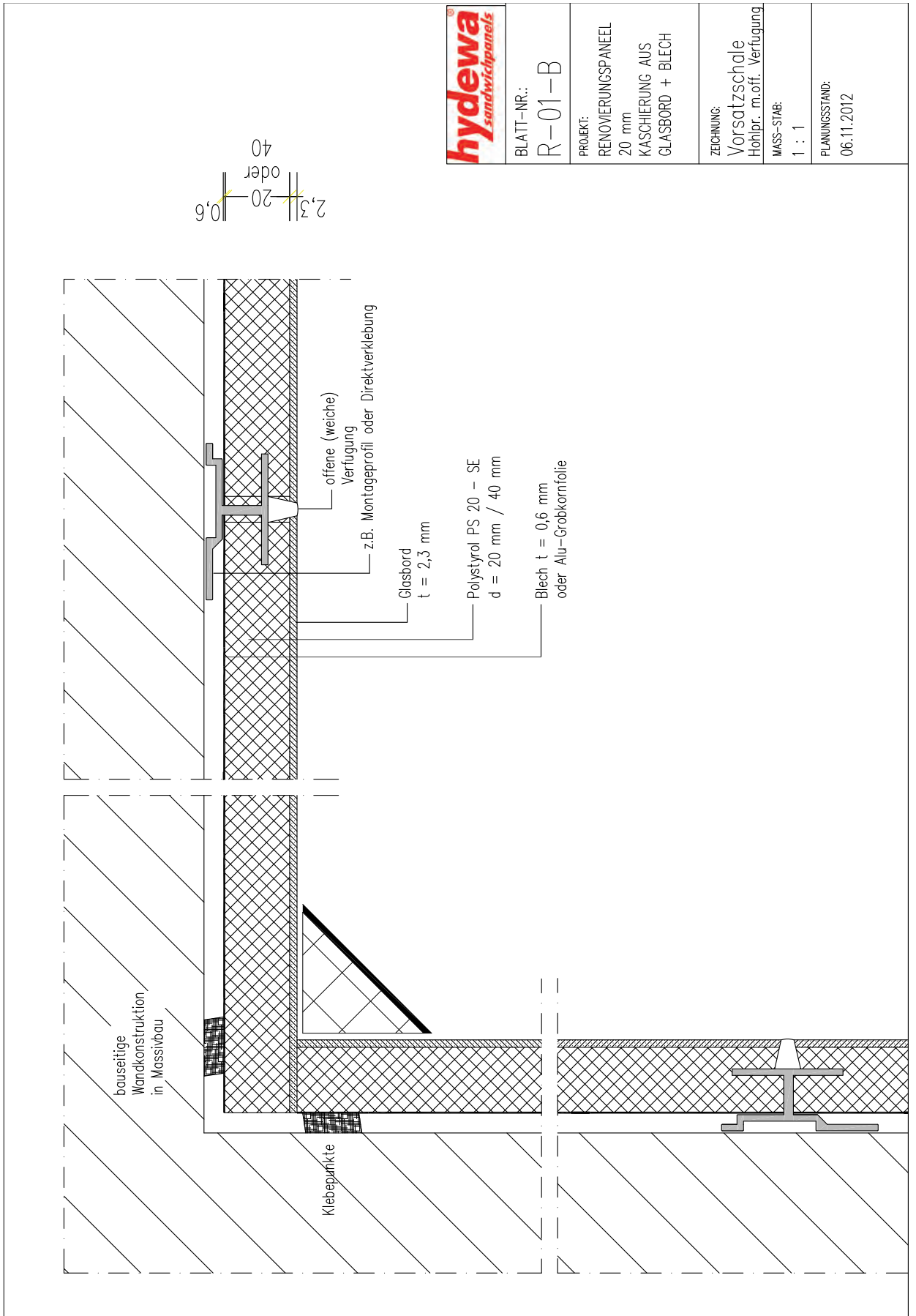
BLATT-NR.:	W-DE-1
PROJEKT:	PANEEL-VERBINDUNGEN 80 mm – 240 mm KASCHIERUNG AUS GLASBORD + GLASBORD
ZEICHNUNG:	Wandpaneel
MASS-STAB:	1 : 1
PLANUNGSSTAND:	19.12.2011

Sandwich panel – connections



Sandwich - panels

Sandwich panel – connections



BLATT-NR.:

R-01-B

PROJEKT:

RENOVERUNGSPANEEL

20 mm

KASCHIERUNG AUS

GLASBORD + BLECH

ZEICHNUNG:

Vorsatzschale

Hohlpr. m.off. Verfugung

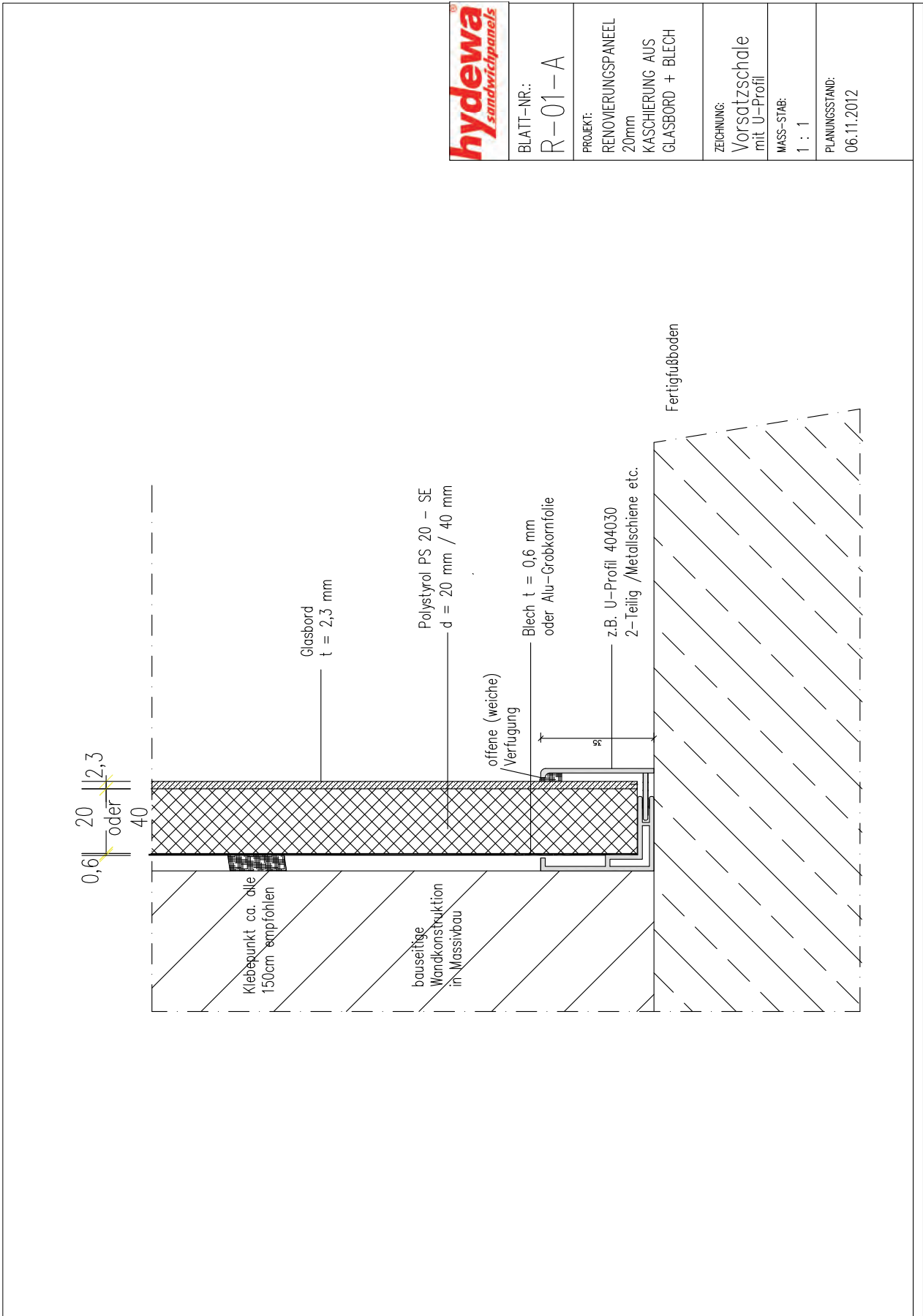
MASS-STAB:

1 : 1

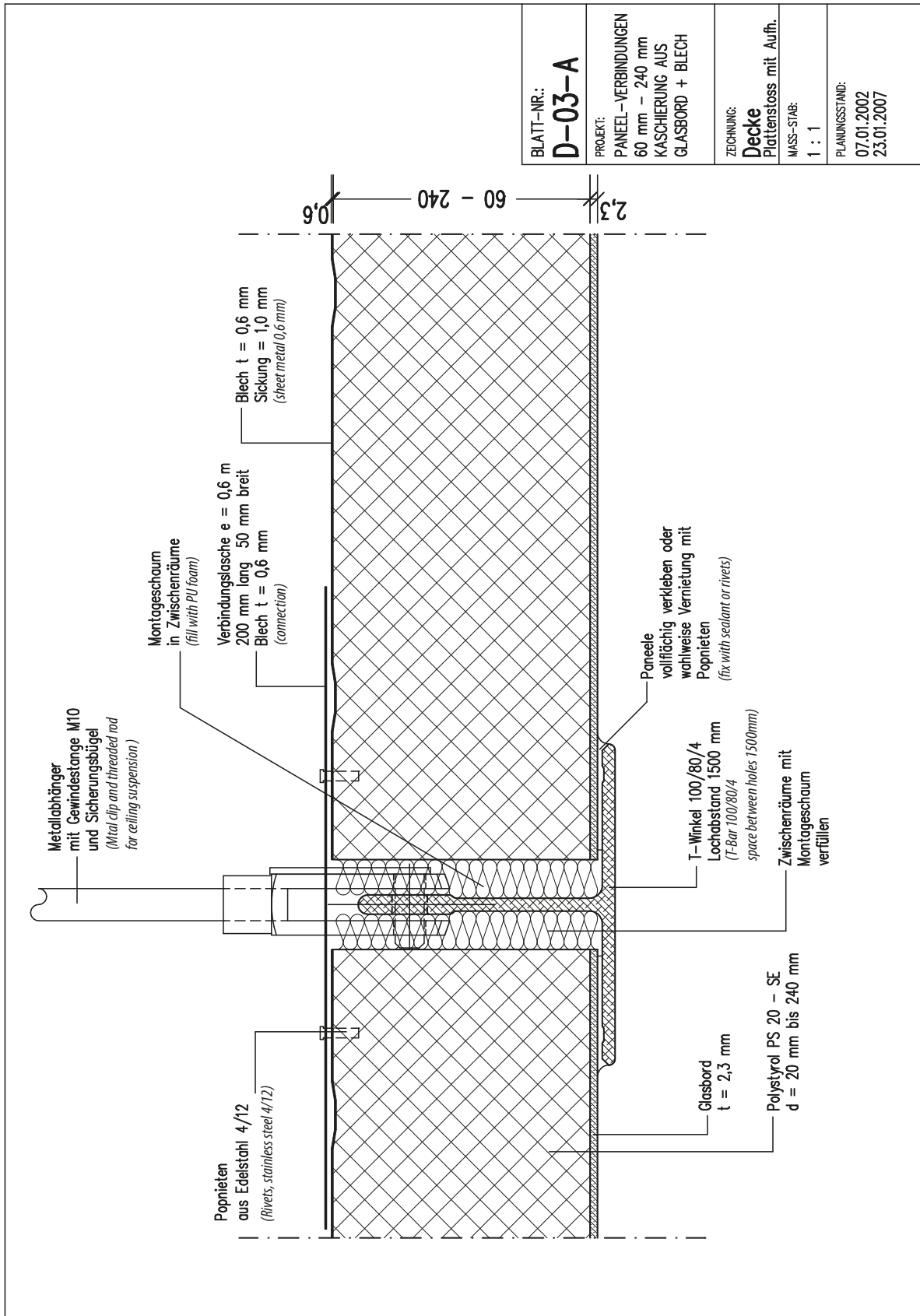
PLANUNGSSTAND:

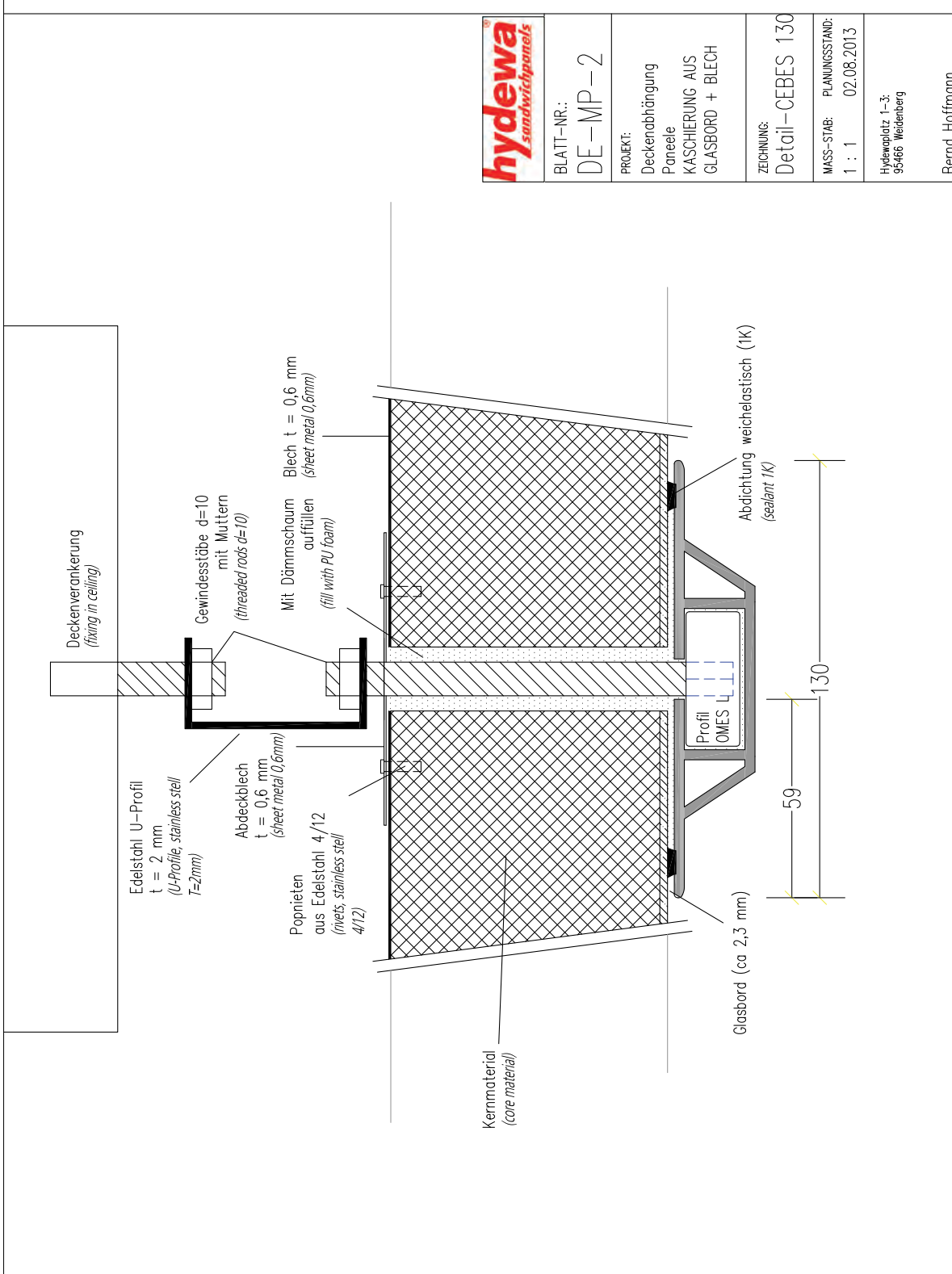
06.11.2012

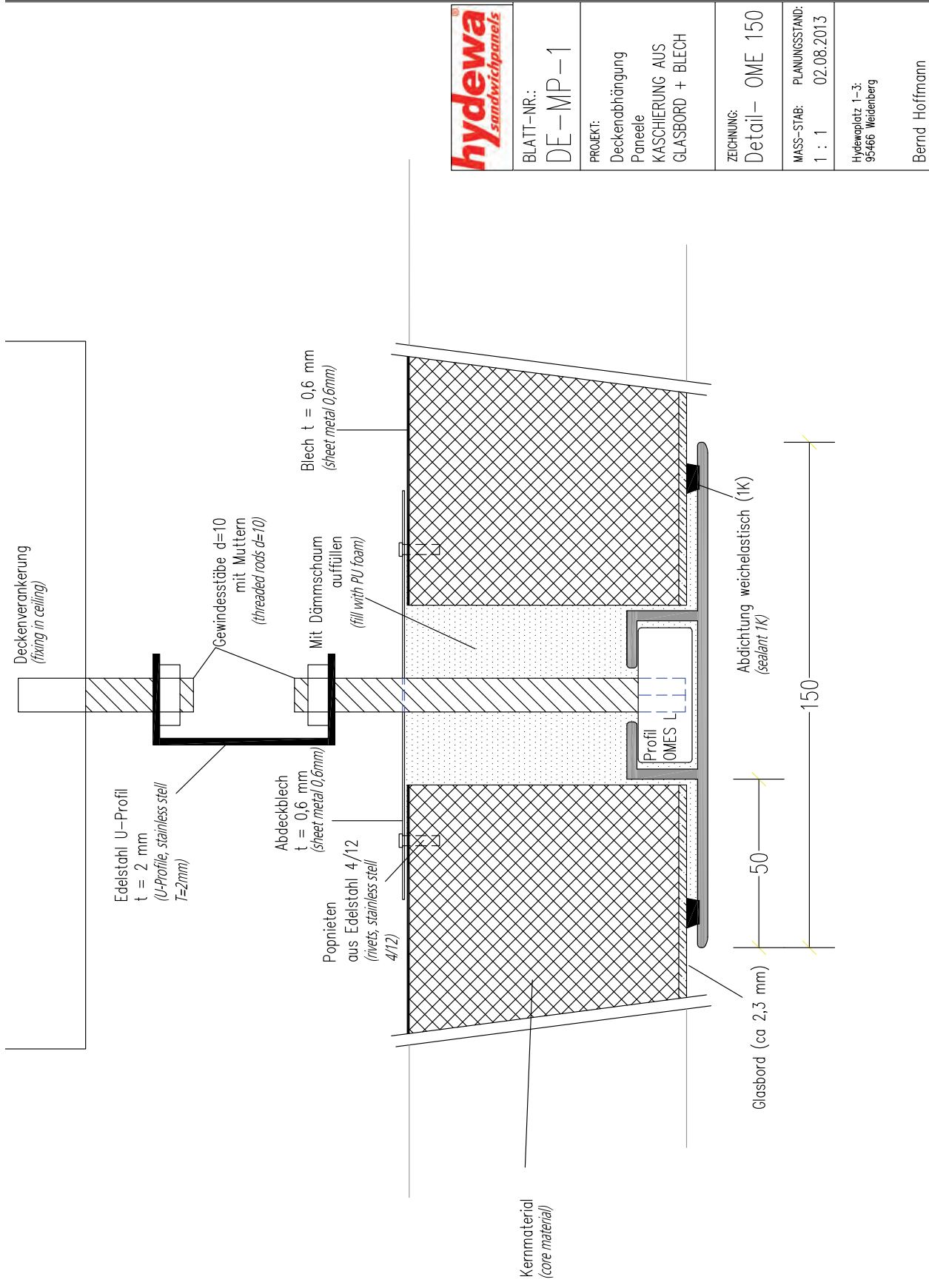
Sandwich panel – connections



Sandwich panel – connections







hydewa
sandwichpanels

BLATT-NR.:
DE-MP-1

PROJEKT:
Deckenabhängung
Paneele
KASCHIERUNG AUS
GLASBORD + BLECH

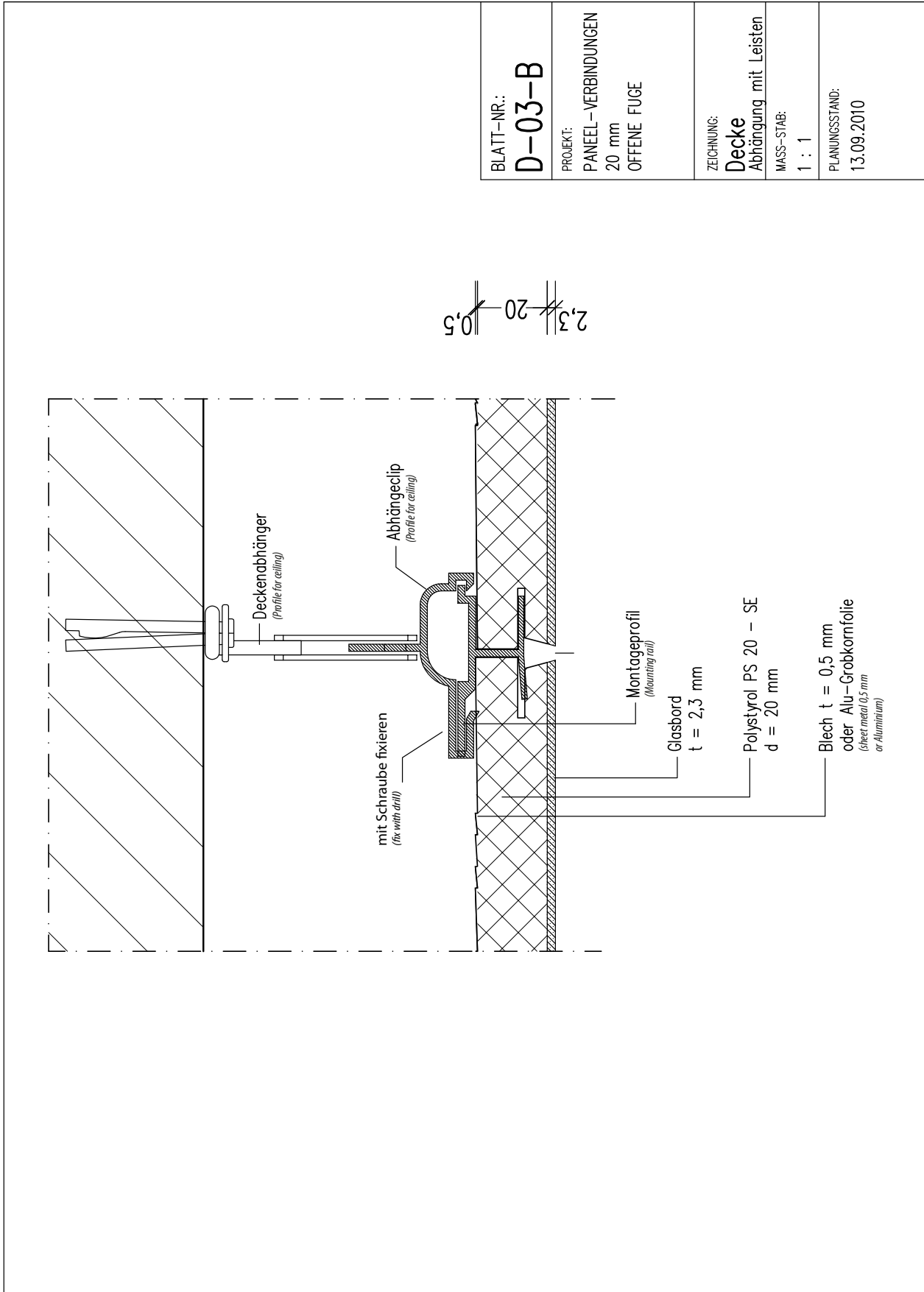
ZEICHNUNG:
Detail - OME 150

MASS-STAB: PLANUNGSSTAND:
1 : 1 02.08.2013

Hydewaplatz 1-3:
95466 Weidenberg

Bernd Hoffmann

Sandwich panel – connections



Gallery



Sandwich - panels



Wall- & ceiling system



Ceiling

Gallery



Sandwich - panels



Cold storage for cheese



Cold storage for cheese

Gallery



Sandwich - panels



Cheese maturing room



Cold storage for meat & sausages

Gallery



Sandwich - panels



Sausage production



Wine distillery

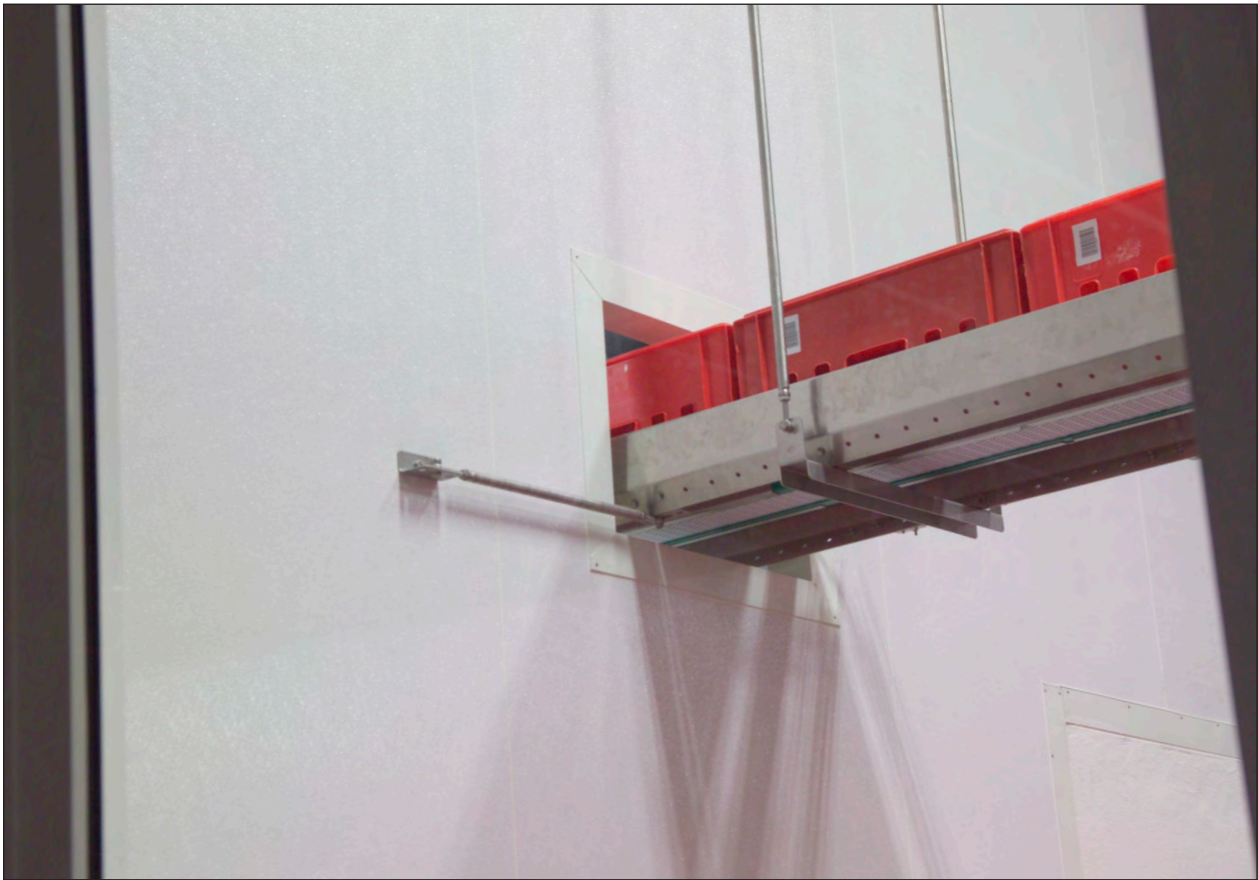
Gallery



Sandwich - panels



Entrance cold room



Detail - Wall

Sandwich - panels

Sandwich panel – test reports



Bauaufsichtlich anerkannte Prüf-, Überwachungs- und Zertifizierungsstelle
Amtlich anerkannte Prüfstelle für Feuerlöschmittel und -geräte
DIN EN ISO/IEC 17025: DAP-PL-1137.00; DIN EN 45011: DAP-ZE-4348.00;
DIN EN 17020: DAP-IS-4347.00
ZLS-P-860/09; ZLS-ZE-707/09
Notified Body no. 0787
Mitglied des VMVA e.V.



Klassifizierungsbericht CLASSIFICATION REPORT

Klassifizierung des Brandverhaltens nach DIN EN 13501-1:2010-01
fire classification acc. to DIN EN 13501-1:2010-01

Nr./ no. 2012-B-4792/01

1. Ausfertigung
1st execution

Auftraggeber:
Client: Hydewa GmbH
Hydewaplatz 1
95466 Weidenberg
DEUTSCHLAND

Hersteller:
Manufacturer: Hydewa GmbH
Hydewaplatz 1
95466 Weidenberg
DEUTSCHLAND

Betreff:
Reference: **Klassifizierung des Brandverhaltens nach DIN EN 13501-1:2010-01**
fire classification according to DIN EN 13501-1:2010-01

Prüfmateriale:
Test object: Glasbord® PWI 2,3 mm

Berichtsumfang:
This report comprises: 5 Seiten und 0 Anlagen
5 pages and 0 annexes

Hinweis:
Information: Der Klassifizierungsbericht wurde zweisprachig (deutsch/englisch) erstellt. In Zweifelsfällen ist der deutsche Wortlaut maßgeblich.
The classification report is produced bilingual (German and English). In case of doubt the German wording is valid.



Veröffentlichungen von Klassifizierungsberichten, auch auszugsweise und Hinweise auf Prüfungen zu Werbezwecken bedürfen in jedem Einzelfalle der schriftlichen Einwilligung der Prüfstelle. Die einzelnen Blätter dieses Klassifizierungsberichtes sind mit dem Firmenstempel der MPA Dresden GmbH versehen.
Publications of classification reports and information on tests for publicity purposes require the written approval of the institution in every isolated case. Every page of this report is stamped with the seal of the test institution.

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BIC WELADED1FGX





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Einsteinufer 25 10587 Berlin

Telefon: 030 / 314-224 28 Fax: 030 / 314-251 35



Amtlich anerkannte
Prüfstelle für Schall-
schutz im Hochbau

PRÜFBERICHT NR. 12033

Im Auftrag der Firma

Hydewa GmbH
Hydewaplatz 1
95466 Weidenberg

wurde die

Luftschalldämmung

von 2 Proben „Glasbord®“ im Prüfstand bestimmt.

Der Bericht besteht aus 4 Seiten Text und 3 Anlagen.
Er sollte nur in seiner Gesamtheit gezeigt und veröffentlicht werden.

28.6.2012

Der Sachbearbeiter

Dipl.-Ing. R. Tschakert





5 Bewertung nach DIN EN ISO 717-1

Die im Prüfstand ermittelten, bewerteten Schalldämm-Maße betragen:

- a) Glasbord, Polystyrol, Glasbord, Dicke 80mm: **$R_w = 22,3$ dB**
- b) Glasbord, Polystyrol, Glasbord, Dicke 160mm: **$R_w = 22,3$ dB**

6 Interpolation der bewerteten Schalldämm-Maße für weitere Dicken

Die Wandelemente werden in verschiedenen Dicken hergestellt. Die bewerteten Schalldämm-Maße für die Dicken 100mm, 120mm und 140mm können aus den vorliegenden Prüfergebnissen näherungsweise interpoliert werden.

Wanddicke	80mm	100mm	120mm	140mm	160mm
m ²	8,35kg/m ²	~8,7kg/m ²	~9,1kg/m ²	~9,4kg/m ²	9,77kg/m ²
R _w	22dB	~22dB	~22dB	~22dB	22dB
Werte	geprüft	interpoliert	interpoliert	interpoliert	geprüft

7 Ergänzende Anmerkungen durch den Gutachter

Der Frequenzverlauf der Schalldämmung entspricht dem Verlauf einer zweischaligen Wand, wie sie z.B. auch eine Gipskartonständerwand darstellt. Bei der Terz 1250Hz/1600Hz (80mm Dicke) bzw. 1000Hz (160mm Dicke) ist deutlich der Resonanzeinbruch zu sehen. Der Einbruch beträgt in dem jeweiligen Frequenzband etwa 10dB. Die Resonanz ergibt sich aus dem Aufbau, der einem Masse (Glasbord) – Feder (Polystyrol) – Masse (Glasbord) System entspricht. Unterhalb der Resonanz ist die Schalldämmung von der Masse der Wand bestimmt (Anstieg der Schalldämmung mit ca. 6dB pro Oktave). Oberhalb der Resonanz steigt die Schalldämmung, unter Vernachlässigung weiterer Effekte wie z.B. Koinzidenz, theoretisch mit ca. 18dB pro Oktave bis zu einer bestimmten Grenzschalldämmung, die sich aus den Hohlraumresonanzen bzw. Dickenresonanzen der Zwischenschicht und den Koinzidenzfrequenzen der Schalen ergibt.



Description

For our sandwich panels, as well as for direct mounting, a comprehensive system in universal PVC strips is available: wall, floor and ceiling connections, flexible or rigid interior and outside bars, baseboards and moldings and underground channels.

All are characterised by ease of use. Also available are models for improved tightness and high protection.

Standard colour is white (RAL 9010 or equivalent),

Special colours, stainless steel and aluminum rails are also available

Properties

- Hidden fixing
- Aesthetic
- Easy cleaning of the throat
- Easy to handle especially the clamp
- Connectors for optimal mounting and all required end parts available
- Pieces with a smooth connection available. This is useful for optimum adhesion to structured surfaces
- PVC (recycleable)



Lots of bars are available as CAD - drawing for better planning.

Keep up to date:

Visit our Homepage - www.hydewa.com.

Bar Systems - Overview



Product	Illustration	Application	Page
Division Bars		Coverage of joints in Glasbord elements	3
U-Profiles		Integration of Glasbord sandwich elements to other components	4
Wall trims		Cover joints between Glasbord walls and ceiling or floor	5-6
Skirtings		skirting completion profile	7-10
Wall-Protection Systems		Wall-Protection System	11-17
Ceiling suspension		Profiles for suspended ceilings	18-20
Interior panels for ceiling and walls		Bumper guards, corner panels etc.	21-22
Accessories for interior panels		Coverings made of rigid PVC	23-24
Mounting Accessories		General mounting accessories	25-26

Division Bars

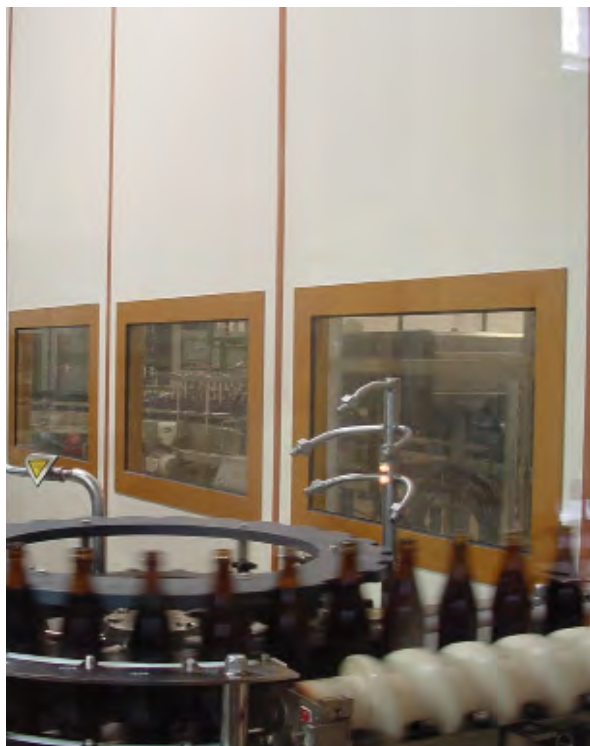
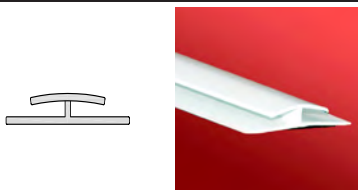
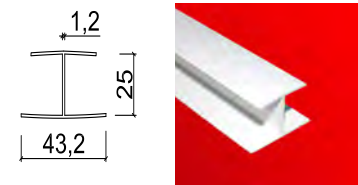
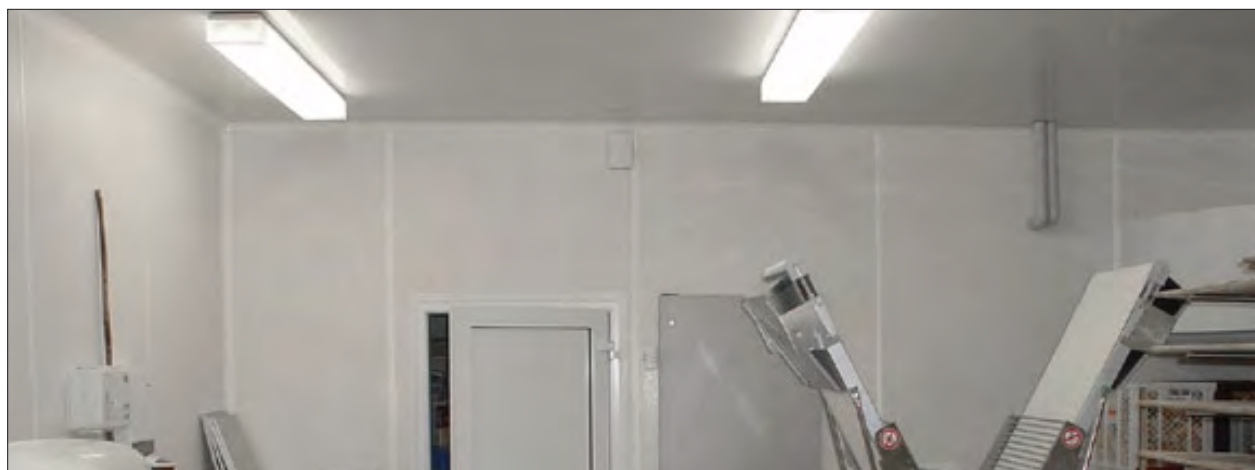
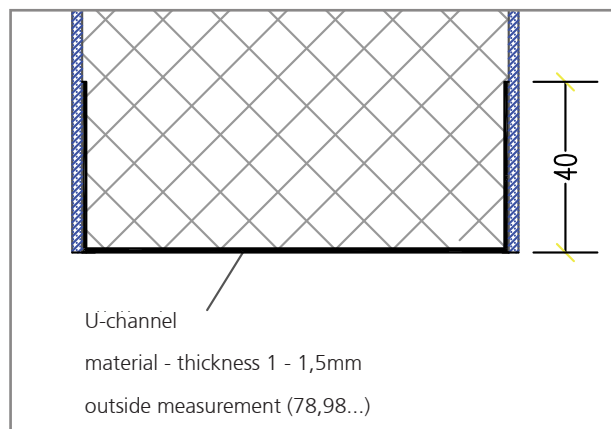
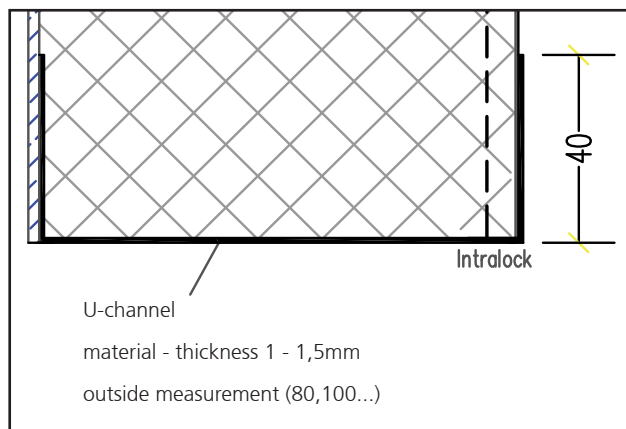


Illustrazione	Denominazione	Maße	N. art.	Campo d'impiego
	Profilo a H	3050 x 19/28 x 5 mm 3050 x 19/28 x 6 mm	120018 120016	per 1,9 - 2,3 mm per 3,0 - 3,3 mm PRFV 3,7 - 4,5 mm
	Profilo a H	20 pz. 5000 x 43mm h = 25 mm	999120	Profilo a H



PVC U - profiles



Examples for sandwichpanels in combination with U-channels

illustration	name	size	order-Nr.	purpose
	capping strip	25 (pcs) 3000 x 5 x 13/20 mm 3000 x 7 x 20/30 mm	120010 168062	Upper / lateral completion for Glasbord Plates
	2-piece u-channel	30 (pcs) à 4000 x 23 x 35 mm	404030	floorside rail to hold sandwich panels
	U-channel 40 mm	5000 x 45 x 20 mm	999140	see description above
	U-channel 60 / 80 mm	20 (pcs) à 4000 x 61 x 25 mm 4000 x 81 x 25 mm	404000 404010	see description above
	2-piece u-channel 90-120 mm	10 (pcs) à 4000 x 91-121 x 25 mm	404020	see description above

Wall trims



illustration	name	size	order-Nr.	purpose
	corner coving 4403 (male profile)	30 (pcs) à 4000 x 35 x 55 mm	404403	seal towards wall and ceiling
	corner coving 4915 (male profile)	30 (pcs) à 4000 x 45 x 65 mm	404915	seal towards wall and ceiling
	corner coving 4915/GR (male profile)	20 (pcs) à 3000 x 70 x 105 mm	444142	seal towards wall and ceiling
	female profile 4404 ALU	30 (pcs) à 4000 mm	444041 444042	guide rail for No. 4403, 4915, 4915GR
	female profile 4404 FOAM	15 (pcs) 4000 mm	444043	guide rail for 4403, 4915, 4915GR
	inside corner 2 dimensions	20 (pcs)	404916	completion for corners
	inside corner 3 dimensions	20 (pcs)	404917	completion for corners
	outside corner 2 dimensions	20 (pcs)	404918	completion for corners
	end cap 4915/4403	20 (pcs)	404919	part to cover 4915 and 4403 at both ends

Wall trims



illustration	name	size	order-Nr.	purpose
	corner coving CO 65 (male profile)	25 (pcs) à 4000 mm RAL 9010 RAL 9002 RAL 9001	60CS65 61CS65 62CS65	seal towards wall and ceiling
	female profile CSP6065 4402 Alu	25 (pcs) à 4000 mm CSP6065 4402 Alu	CSP6065 444042	guide rail for 60CS65, 61CS65 and 62CS65
	CO3V inside corner 2+3 dimensions	25 (pcs) RAL 9010 RAL 9002	603V65 623V65	completion for corners
	CO2VE outside corner 2 dimensions	25 (pcs) RAL 9010 RAL 9002	602V65 622V65	completion for corners

Wall trims

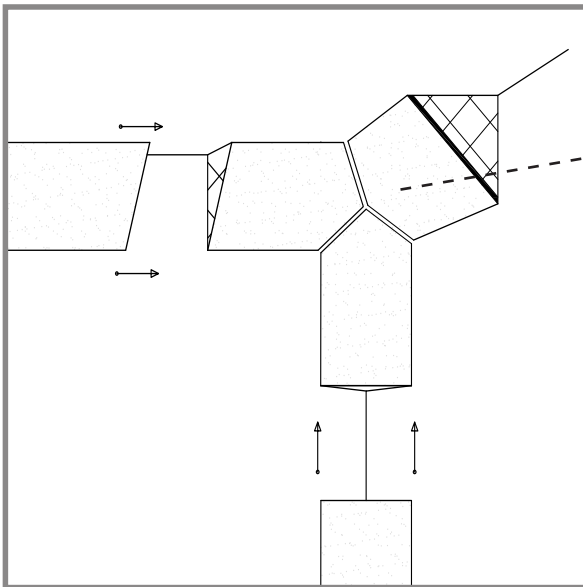


illustration	name	size	order-Nr.	purpose
	<i>inside corner</i>	40 x 40 x 200mm <i>three parts</i>	130140	Solution for wall suspension
	<i>inside corner</i>	40 x 40 x 200mm <i>diagonal cut (45° / -45°)</i> <i>two parts</i>	130130	Solution for inside corners
	<i>outside corner</i>	40 x 40 x 200mm <i>diagonal cut (45° / -45°)</i> <i>two parts</i>	130150	Solution for inside corners
	<i>bar</i>	40 x 40 x 3000 mm	130040	Bars for 130140

This system is also available in 100 x 100 on request

PVC corner strips



illustration	name	size	order-Nr.	purpose
	outside corner	25 (pcs) 3000 x 16 x 20 mm	120040	Ledge for Glasbord Plates (1.9 to 2.3 mm)
	inside corner	25 (pcs) 3000 x 16 x 14 mm	120050	Ledge for Glasbord Plates (1.9 to 2.3 mm)
	outside corner	20 (pcs) 4000 x 50/50 x 3 mm	120090	rigid ledge for edges
	PVC inside corner	20 (pcs) 4000 x 50/50 x 3 mm	120092	Inside ledge for edges
	flexible bar	20 (pcs) 4000 x 50/50 x 3 mm	600MC50	bar for inside and outside edges



Skirtings



illustration	name	size	order-Nr.	purpose
	skirting 44182	15 (pcs). à 4000 x 22 x 77 mm	444182	bottom comple- tion
	inside corner PIR2D	20 (pcs)	444183	double top for skirting 44182
	inside corner PIR3D	20 (pcs)	444184	triple top for skir- ting 44182
	outside corner PIS2D	20 (pcs)	444185	top for edges
	end piece 44182 left	20 (pcs)	444186	head for 44182 left
	end piece 44182 right	20 (pcs)	444187	head for 44182 right

Skirtings

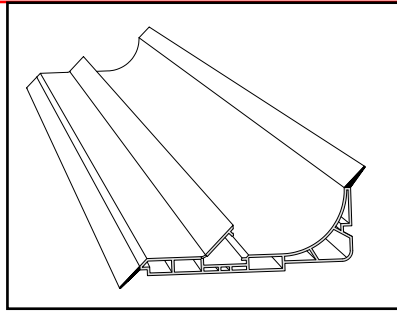


illustration	name	size	order-Nr.	purpose
	skirting 44068	8 (pcs) à 4000 x 38 x 100 mm	444068	bottom comple- tion
	end piece 44068 left	20 (pcs)	444169	head for 44068 left
	end piece 44068 right	20 (pcs)	444269	head for 44068 right
	inner corner AR2D	20 (pcs)	444028	double top for skirting 44025/44068
	inner corner AR3D	20 (pcs)	444027	triple top for skir- ting 44025/44068
	outer corner	20 (pcs)	444029	top for edges (44025/44068)
	PVC Skirting	6 (pcs) 3000 x 30 x 80 mm	447708	bottom comple- tion

Wall-Protection Systems



illustration	name	size	order-Nr.	purpose
	protective ledge 4815	15 (pcs) à 4000 x 2,5 x 100 mm	404815	protection against scratching
	protective ledge 4276 / bumper rail	5 (pcs) à 4000 x 12 x 100 mm	442761	protection against ramming
	end cap 4276	50 (pcs)	442763	completion for 4276 left/right
	bumper rail 44115	6 (pcs) à 4000 x 30 x 70 mm	444115	protection against ramming
	sealing profile 44116	12 (pcs) à 4000 x 14 x 25 mm	444116	sealing profile for 44115
	end cap left	20 (pcs)	444117	head for 44115 left
	end cap right	20 (pcs)	444118	head for 44115 right



Wall-Protection Systems

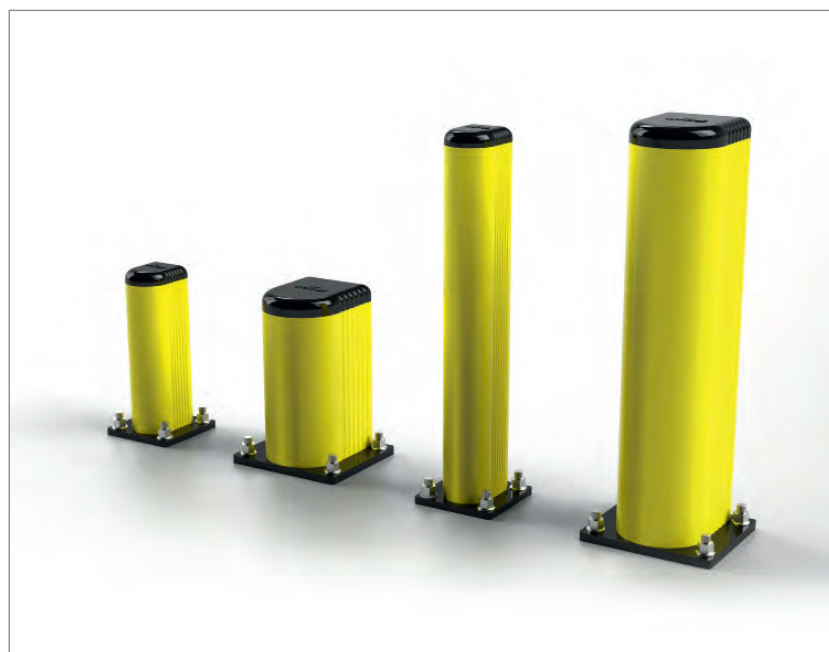


illustration	name	size	order-Nr.	purpose
	bumper rail 44264	5 (pcs) à 4000 x 20 x 150 mm	444264	Impact protection
	sealing profile 44116	12 (pcs) à 4000 x 14 x 25 mm	444116	Sealing profile for 44115
	end cap 44265	20 (pcs)	444265	End cap for 44264 li/re
	outside corner 44266	20 (pcs)	444266	Corner cap for 44264 li/re
	bumper rail WP 150	4 (pcs) 4000 mm	600WP 150	impact protection
	sealing profile WP 150	16 (pcs) 4000 mm	600WPC	seals the middle section of WP150
	end cap WP 150	20 (pcs)	600WPT 150	head for WP 150 left/right
	outside corner WP 150	20 (pcs)	600WPA 150	outside-corner for WP 150

Guard Rail System



illustration		name	size	order-Nr.	purpose
		GRD 90 250	$h=250\text{mm}$ $\text{Ø}=90\text{mm}$	GRD90250	<i>Impact protection with fixing to the floor (drill)</i>
		GRD 90 500	$h=500\text{mm}$ $\text{Ø}=90\text{mm}$	GRD90500	<i>Impact protection with fixing to the floor (glue)</i>
		GRD 150 250	$h=250\text{mm}$ $\text{Ø}=150\text{mm}$	GRD150250	<i>Impact protection with fixing to the floor (drill)</i>
		GRD 150 500	$h=500\text{mm}$ $\text{Ø}=150\text{mm}$	GRD90250	<i>Impact protection with fixing to the floor (drill)</i>



On request Guard rail is available in the following colours :




-  Orange Fluo
-  Green Fluo
-  Silver



illustration	name	size	order-Nr.	purpose
	GR 90 500 GR 150 500	length 500mm body= 90mm body= 150mm	GR90500 GR150500	Impact protection with fixing to the floor
	GR 90 1000 GR 150 1000	length 1000mm body= 90mm body= 150mm	GR901000 GR1501000	Impact protection with fixing to the floor
	GR 90 2000 GR 150 2000	length 2000mm body= 90mm body= 150mm	GR902000 GR1502000	Impact protection with fixing to the floor
	GR 90 3000 GR 150 3000	length 3000mm body= 90mm body= 150mm	GR903000 GR1503000	Impact protection with fixing to the floor
	GR 90 4000 GR 150 4000	length 500mm body= 90mm body= 150mm	GR904000 GR1504000	Impact protection with fixing to the floor
	GR 90 P500- 4000 GR 150 P500- 4000	length 500- 4000mm body= 90mm body= 150mm	GRP90X GRP150X	Impact protection with fixing to the floor





illustration		name	size	order-Nr.	purpose
		GRT 90 GRT 150	70 x 90mm 120 x 150mm	GRT90 GRT150	End cap for the Guard Rail System
		GRS 90 GRS 150	Ø=50mm Ø=100mm h=50mm	GRS90 GRS150	Feet for the Guard Rail System
		AF 16 SF 20	M 16 M 20	AF16 SF20	Drill for connection
		GRC 90 GRC 150	Ø=38mm Ø=50mm	GRC90 GRC150	End cap in red or black
		FE 1100x350	1100x350mm	FE 1100x350	Impact protection with fixing to the floor
		FE 2400x350	2400x350mm	FE 2400x350	Impact protection with fixing to the floor
		GRA 90	h=90mm	GRA 90	Edge- connector FE 1100350 und FE 2400350
		FIX P90	120 x 120 x 200mm	FIX P90	Socket FE 1100350 or FE 2400350



illustration		name	size	order-Nr.	purpose
		Copro 500 x 500	500 x 500	Copro 500x500	Column protec- tion with fixing to the floor
		Copro 600 x 600	600 x 600	Copro 600x600	Column protec- tion with fixing to the floor
		Copro 700 x 700	700 x 700	Copro 700x700	Column protec- tion with fixing to the floor

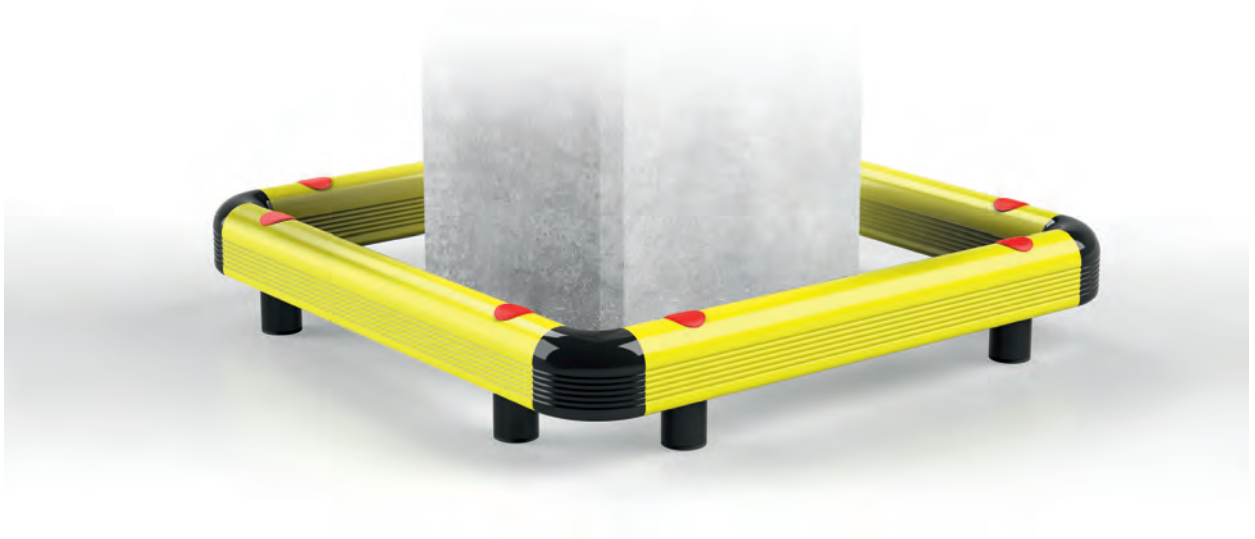




illustration		name	size	order-Nr.	purpose
		GR90HV GR150HV	$h = 1100\text{mm}$ $\varnothing = 90\text{mm}$ $\varnothing = 150\text{mm}$	GR90HV GR150HV	Framework
		SQ 40 x 40 HO	1500x40mm	SQ 40 x 40 HO	Rods for the Grid system GR90HV
		GR90 HO	1500x90mm	GR90HO	Rods for the Grid system GR150HV
		FIX P90	120 x 120 x 200mm	FIXP90	Socket for FE 1100350 or FE 2400350
		Con 90 Con 150	$\varnothing = 10\text{mm}$	Con90 Con150	Connection rod
		GRT 90 GRT 150	70x90mm 120x150mm	GRT90 GRT150	End cap for the Guard Rail System
		PEC 90 PEC 150	40x40mm $h = 90\text{mm}$	PEC90 PEC150	End cap for the Guard Rail System



Ceiling suspension



Applications

■ Ceiling

The Hydewa ceiling suspension system provides the ideal combination with Glasbord® sandwich panels for wall and ceiling mounting.

Benefits

The entire range of Glasbord is suitable for the ceiling and offers:

- Quick and easy assembly
- Beautiful aesthetics eg installation of pipes
- Walk-ceiling possible
- Aesthetic, bright rooms for pleasant working conditions



illustration	name	size	order-Nr.	purpose
	Mounting rail for 20 mm sandwich panels	4000 mm	444324	Mounting rail for 20 mm sandwich panels
	Profile for ceiling	1 (pcs) 54 x 34 x 50mm	444000	Profile for mounting rail 444324



Profiles for Ceiling suspension



illustration	name	size	order-Nr.	purpose
	frp T- Profile	10 (pcs) 4 x holes D 11 mm 5000 x 100 x 80 mm	191022	profile to suspend ceiling elements fire class B1
	metal clip for T-Profile	30 (pcs) 70 x 20/20 mm	191050	Clip to fix the threaded rod
	M10 threaded rod	10 (pcs) á 1000 x 10 mm	191051	1 m threaded rod
	M10 threaded rod	10 (pcs) 2000 x 10 mm	191052	2 m threaded rod
	M 10 socket joint	20 (pcs)	191053	accessory to connect threaded rods

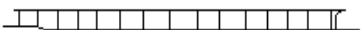
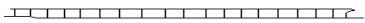

Profiles for Ceiling suspension



illustration	name	size	order-Nr.	purpose
	T-Profile T85	1 (pcs) à 4000 x 85 x 68 mm	600T85	profile to suspend ceiling elements
	T-Profile T130	1 (pcs) à 4000 x 130 x 79 mm	600T130	profile to suspend ceiling elements
	OME 110	1 (pcs) à 4000 x 110 x 23 mm	600O110	profile to suspend ceiling elements
	OME 150	1 (pcs) à 4000 x 150 x 24 mm	600O150	profile to suspend ceiling elements
	CEBES100	1 (pcs) à 4000 x 100 x 22 mm	600C100	profile to suspend ceiling elements
	CEBES130	1 (pcs) à 4000 x 130 x 24 mm	600C130	profile to suspend ceiling elements
	OMES - L	1 (pcs) à 40 x 60 mm	600BEFL	(element for) OME150 und CEBES130
	OMES - S	1 (pcs) à 20 x 60 mm	600BEFS	(element for) OME110 und CEBES100
	CLIP SJ8, SJ10 & SJ12	1 (pcs) à 20 x 40 mm	600MET8 600MET10 600MET12	Clip for threaded rods size 8, 10 or 12

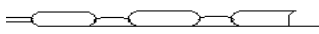
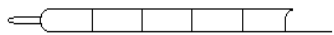
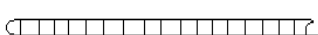
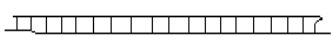

Interior panels for ceiling and walls



illustration	name	order-Nr.	purpose
	3016 closed	230110	width 167 mm, height 8 mm, 6 profiles in 1 m
	3020 cz closed	200000	PVC-material (unleaded) Calcium-Aluminium-Zinc(cz) only in colour white
	3020 H closed	200700	width 200 mm, height 7 mm, 5 profiles 1 m thick material, upper side (cz)

Interior panels for ceiling and walls

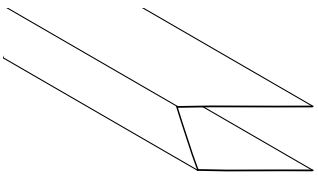
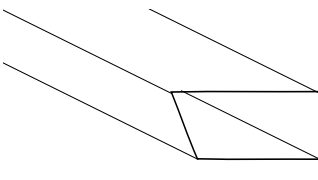
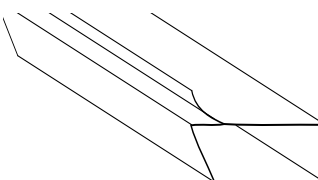


illustration	name	order-Nr.	purpose
	1012 profiled	212000	width 125 mm, height 8 mm
	2012 smooth	201200	width 125 mm, height 8 mm, 8 profiles in 1 m
	201201 wavy	201201	width 125 mm, height 8 mm, 8 Profile in 1 m. On request drilled mounting strip.
	1025	220000	width 250 mm, height 10 mm, 4 profiles in 1 m. On request drilled mounting strip.
	102501 impact pro- tection only in white colour	220300	see description above

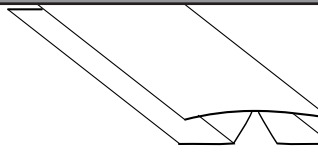
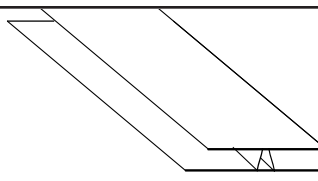
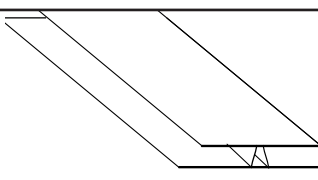
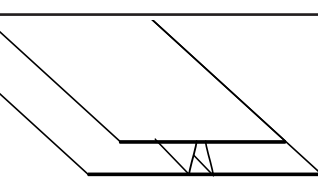
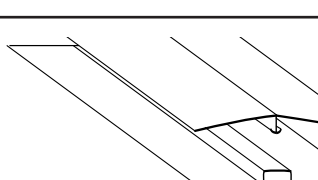
Plastic profiles made of rigid PVC



U-Profiles

illustration	name	order-Nr.	purpose
	U 8 3000 mm	210510	for size 8 mm
	U 10 5000 mm	210530	for size 10 mm
	RU 8 - 10 3000 mm	210110	for size 8 and 10 mm

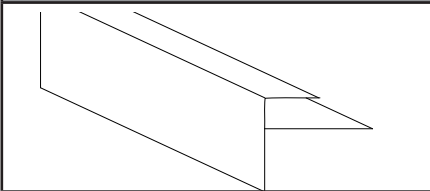
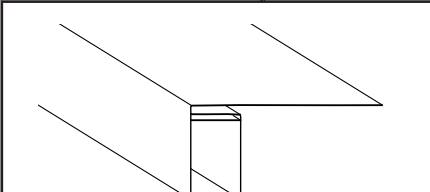
Connectors

illustration	name	order-Nr.	purpose
	Uni 8 3000 mm	210513	for size 8 mm, width 60 mm flexible up to 90°
	St 8 3000 mm	210410	for size 8 mm
	St 8 B 5000 mm	210420	for size 8 mm coloured
	St 10 5000 mm	210430	for size 10 mm
	St 10 two-piece 5000 mm	210431	for size 10 mm

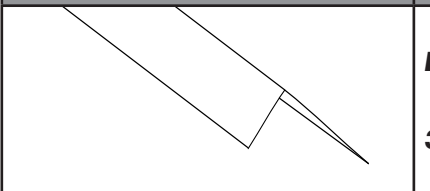
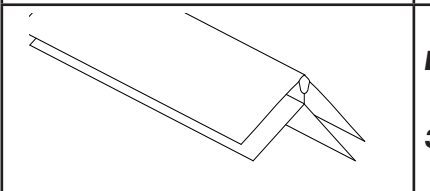
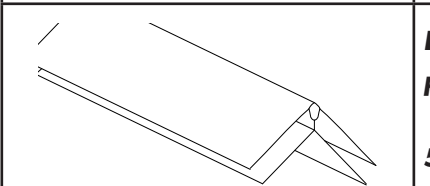
Plastic profiles made of rigid PVC



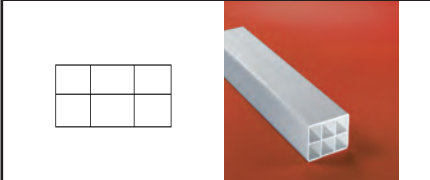
Corners

illustration	name	order-Nr.	purpose
	LE 8 3000 mm	210312	for height 10 mm
	LE 10 – 18 two parts 5000 mm	210320	for height 10 und 18 mm

Profiles for inside and outside corners

illustration	name	order-Nr.	purpose
	EE Simple corners 3 m per piece	210540	24 x 32 mm
	E 8 two parts 3 m per piece	210210	for height 8 mm
	E 10 – 18 two parts 5 m per piece	210220	for height 10 und 18 mm

Underconstruction

illustration	name	order-Nr.	purpose
	PVC-UK 3 m per piece	210010	Underconstruction 48 x 24 mm impact resistant

Colors for all profiles:

white, gray white, cream, light gray, black wood grain: natural, light, medium, dark, alpine

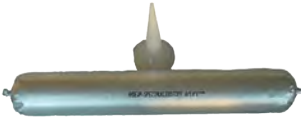
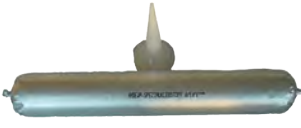


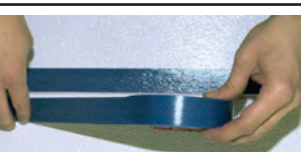

Accessories for mounting



illustration	name	order-Nr.	purpose
	pressure roll	510200	Pressure roll for optimal contact between Wall and FRP
	professional trowel	510210	Professional trowel with handle
	trowel	210220	trowel (standard)
	Pressfix	510102	Manual device for application of adhesive and hps-1C sealant (600ml)
	Pressure fix	510101	Pneumatic device for application of adhesive and hps-1C sealant (600ml)
	Twin fix	525000	Pneumatic device for application of „hps-2C or 2C sealant“ special tubes (400ml)
	Doppelfix manual	525001	Manual device for application of „2C sealant“ special tubes (400ml)
	Applicator 1800 System	510111	Device for application of adhesive in 1800 ml tubes. Runs with battery
	Applicator 5400 System	510113	Pneumatic device for application of adhesive in 1800 ml tubes. (special glue head)
	Applicator Servicekit for Applicator 5400 systems	510113	Pliers, Inbus 3 &. 6 mm, 2 screwdrivers, allen keys 8 mm 3 rings, 6 sealant rings f. nozzle, 3 pistons

Sealant and adhesive



illustration	name	order-Nr.	purpose
	h-MS (1K MS adhesive)	510009	Hydewa adhesive based on MS (600ml for about 0,8m²)
	h-MS (1K MS adhesive)	510019	Hydewa adhesive based on MS (1800ml for about 2,4m²)
	hps-1C-Hydewa sealant	510004B	Hydewa sealant „hps-1C“ (580ml for about 8-12 lfm smooth jointing)
	Hydewa sealant „hps-2C“	510006A	Hydewa „high performance sealant“ (400ml for about 6-9 lfm hard jointing)
	Hydewa special tape	510012	Hydewa special tape for 1C and 2C joints (50 lfm)
	Hydewa Cleaner	510011	Hydewa Cleaner 1000ml for purpose of cleaning dirty FRP surfaces



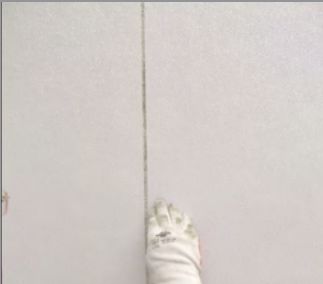
Soft sealing (hps-1c Sealant)

1. Tools



- Tube- Device
- Abrasive paper (~120 grit size)
- Joint scraper (smooth)

2. Material



- 1-C-sealant
- Cleaner
- Hydewa tape
- No leveling agents required
- Protectional wear (gloves, glasses, clothes)

3. Preparation



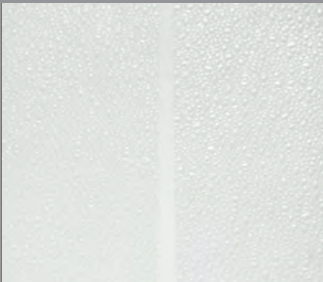
- Note data sheets!
- Prepare ledges with abrasive paper.
- Use Tape beside jointing
- Wipe edges with the special cleaner to ensure perfect contact with the Surfaseal®

4. Jointing



- Recommended Temperature +5°C to + 40°C
- Insert peak into the joint and fill up the joint completely

5. Flatten the sealant



- Use a smooth joint scraper to flatten the sealant. To ensure a perfect sealing be sure that the scraper stays level on both sides of tape.
- Clean your scraper from time to time with a paper and water (do not use chemicals).

6. Erase the tape

Instructions



Sealant *hps-2c*

1. Tools



- Tube - device
- Abrasive paper (~120 grit size)
- Joint scraper (smooth)

2. Material



- hps-2c sealant
- Cleaner / Primer
- Hydewa tape
- Protectional wear (gloves, glasses, clothes)
- No leveling agents required

3. Preperation



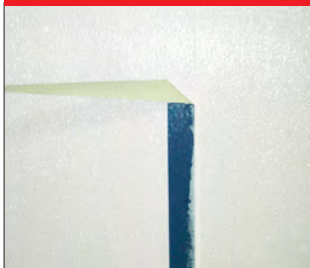
- Note data sheets!
- Prepare ledges with abrasive paper.
- Use Tape beside jointing
- Wipe edges with the special cleaner and primer to ensure perfect contact with a sealed surface like the Surfaseal®

4. Jointing



- Recommended Temperature +5°C to + 35°C
- Do not use the first 5-8cm sealant to ensure that the components mix up perfectly
- Insert peak into the joint and fill up the joint completely.

5. Flaten the sealant



- Use a smooth joint scraper to flatten the sealant. To ensure a perfect sealing be sure that the scraper stays level on both sides of tape.
- Clean your trowel from time to time and throw away surplus sealant.
- Don't use water or leveling agents.

6. Erase the tape



45° Ecke



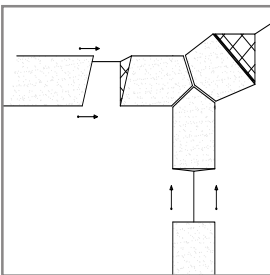
The 45° corner is constructed of two main parts:

- fitting pieces (cut parts 20cm)
- corner-bars



Both are made of the same material like the sandwichpanels (e.g. XPS, PU etc.) and have the same thermal conduction.

Mounting



■ Preparation

All surfaces have to be cleaned

■ Join them

The fitting pieces are glued with the hydewa 1C adhesive.



■ Cut corner bars

The corner bars are cut to the right length on site pushed to the fitting pieces and also glued.

■ Joints

All existing joints can be covered with hydewa tape and filled with Hydewa

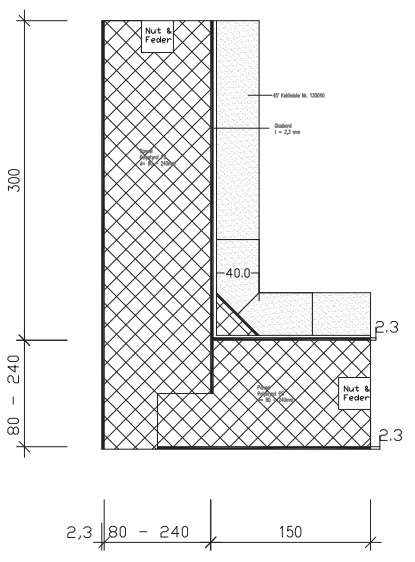
1C/2C. To improve the connection between 1C/2C and the surface the use of a special primer (provided by Hydewa) is suggested.

Ensure the joint is big enough (1-2mm).
(also see „Working with 2C - Joints“)

■ Get plain joints

Use a plain scraper (as smooth as possible, e.g. made of rubber) to get plain joints. Be sure the scraper lies equal to both sides of the surfaces. Occasionally clean the scraper and rinse with pure Water. Don't use a cleaner or other chemicals.

■ Remove tape.





Maintenance joint

Technical datasheet

The definition of "maintenance joint" for sealing joints with elastic joint sealants such as at floor-wall joints in sanitary areas, expansion joints in swimming pools and for elastic joints in construction and related industries in general, is described in DIN 52 460:

"The maintenance joint is exposed to strong chemical and/or physical influences and the sealant must therefore be periodically checked, and replaced if necessary, to prevent further damage."



Joint Maintenance requires thorough regular monitoring at reasonable intervals, especially when sealed against moisture, chemicals or water movement joints.



Maintenance joint

With joints include the joints floor wall covering, for example, in domestic bathrooms, etc. Due to the known waving of (especially cement) screeds, the joints are often overwhelmed with elastic sealants and they tear.

Therefore, the principle screed on his "Readiness" (Humidity: cement screed <2 CM -%, anhydrite <0.5 CM - to examine% with heated floor) -% and <0.3 CM.

Maintenance joints are not part of the warranty (meaning> maintenance)! Therefore, before the start of work it is useful for the parties (client, architect and craftsman) to determine which joints are maintenance joints and which are not.

The total allowable deformation for material for maintenance joints is the sum of expansion and compression. This maximum elongation is with most material for maintenance indicated 20%. This means that a gap of a width of 10 mm can accommodate a maximum elongation of 2.0 mm.

Movements that exceed the total possible deformation of the sealant, whether they are caused by deformation (e.g. waves of screed, etc.) building setting, planning and execution fields that form changes, contributes to premature laying of tiles, due to thermal expansion (eg underfloor heating) or caused by other factors lead inevitably to joints breaks! > No warranty!

Instructions



Mildew on mouldings

Mildew on moldings appears again and again. This is not only disgusting but can also be harmful.

You can easily detect mildew when you see dark points or blurs upon the the sealant surface. The blurs often are black („Aspergillus Niger“) spots also can be coloured (brown, yellow, red or pink). Mildew is a big part of the micro-organisms. There are over 250.000 different kinds of fungals and about 50.000 of them are thought to be mildew.

Reasons for mildew:

1.) high humidity in combination with bad air conditioning (e.g. in Kitchen, baths, showers etc.)

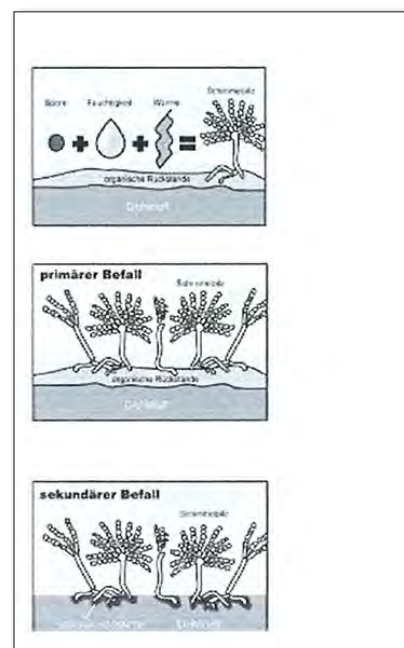
2.) organic remains (e.g. soap, shower liquid etc.)

3.) Warmth: The sealant has a lower thermal conductivity than the surface material. Because of that it is warmer than the surface and offers better conditions for mildew.

Mildew is spread by spores. Spores are primarily small bubbles with a size of one millimetre or lower and the weight of a microgramm. They are carried by wind, are extremely resistant and have a long life.

Once in contact with a sealant and if there are good conditions for growth the spores begin to absorb water and enlarge their volume. After that a kind of root is established and grows around the core. Myzel is built. Under good conditions mildew can grow very fast.

At first the mildew only grows in the organic layer upon the sealant but this is only the primary stage. Mildew generates some kind of juice that is able to convert non-organic material into usable products. If this happens the mildew grows into the sealant.. Now it is called the secondary stage, which can be seen by the blurs on the surface





Mildew on mouldings

Countermeasures:

In light infestations, the joint should be sterilised as soon as possible. This is best done with a method of germ killer means (infestation, alcohol, etc.) In a heavy infestation the sealant has to be removed, a mould decontamination has to be carried out and the joint must be sealed again. Any remnants of the mildew in the joint will spread again and cause a re-infestation.

Prevention:

It is usual that spores are carried within the air.

The best prevention against mildew is a good air conditioning and regular cleaning of the joints. Be aware to avoid waterlogging. Additional to cleaning the joints must be cleaned with a disinfectant. Use neutral or alkaline cleaners only because mildew prefers an acid environment.

Instructions



DR. RALPH DERRA

Öffentlich bestellter und vereidigter
Sachverständiger für Verpackungsmaterialien, Boden- und Luftanalysen

**ISEGA - Forschungs-
und Untersuchungs-
Gesellschaft mbH
Aschaffenburg**



ISEGA

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Telefax +49 (0) 60 21 / 49 89-30
E-Mail: info@isega.de
<http://www.isega.de>

20 January 2014
Dr. Dr/bk-lo

UNBEDENKLICHKEITSERKLÄRUNG CERTIFICATE OF COMPLIANCE CERTIFICAT DE CONFORMITE

eingetragen
registered no.
registré

37160 U 14

für Firma
for Messrs
pour MM

Hydewa GmbH
Hydewaplatz 1
95466 Weidenberg
Germany

Produkt
Product
Produit

1K Hydewa Sealant

The product distributed by the company mentioned above is a 1-K-hybrid-sealant which is used, among others, for connection and expansion joints in the construction sector, and especially in companies preparing and processing foodstuffs.

It was examined by us according to the

Methoden zur Untersuchung von Kunststoffen, soweit sie als Bedarfsgegenstände im Sinne des Lebensmittel- und Bedarfsgegenständegesetzes verwendet werden, einschließlich der 62. Mitteilung des BfR zur Untersuchung von Hochpolymeren, Bundesgesundheitsblatt 50, 524 (2007), Stand vom April 2007,

- 2 -

DAkkS

Deutsche
Akkreditierungsstelle
D-PL-14160-01-01
D-PL-14160-01-02
D-ZE-14160-01-00

Geschäftsführer: Dr. Ralph Derra - Handelsregister HRB 3329
Die Veröffentlichung von Ergebnissen unserer Arbeiten und Gutachten sowie die Verwendung für Werbezwecke bedürfen - auch auszugsweise - unserer schriftlichen Genehmigung
Erfüllungsort und Gerichtsstand Aschaffenburg



Certificate



Product:

Sealing mass hps - 2c

For:

**Hydewa GmbH
Hydewaplatz 1
95466 Wiedenberg**

The cured sealing mass of the above mentioned product was tested for its migration behaviour by direct contact in terms of organoleptic test, overall migration and specific migration (metals and primary aromatic amines according to annex of Regulation (EU) No 10/2011, tin for the content of Dimethylbis[(1-oxoneodecyl)oxy]stannane, 4,5-Dichloro-2-n-octyl-4-isothiazolin-3-one), as well as for its residual content of isocyanates and propylene oxide (Wessling test report CAL14-087213-2).

With regard to manner and extent of the performed examinations the tested present sample is in compliance with the following regulations, each in their current version:

- Law concerning the rearrangement of the legislation on foodstuffs and animal feed ("Lebensmittel-, Bedarfsgegenstände- und Futtermittelgesetzbuch" – LFGB) in revised version of publication from 26th April 2006
- Regulation (EC) No 1935/2004 of the European Parliament and of the Council of 27th October 2004 on materials and articles intended to come into contact with food and repealing of Directives 80/590/EEC and 89/109/EEC
- Commission Regulation (EU) No 10/2011 of 14 January 2011 on plastic materials and articles intended to come into contact with food

With regard to manner and extent of the performed examinations, the above mentioned product is fit for the application as joint sealer in cold storage and ripening rooms, which may come into contact with foodstuffs. The traceability according to Regulation (EC) No. 1935/2004 as well as good manufacturing practice in terms of Regulation (EC) No. 2023/2006 will be guaranteed by the company mentioned above.

Johannes Wächter
Food chemist / scientific expert

Pia Höselner
Food chemist / scientific expert



CAL14-087213-2 30th October 2014

The certificate is valid for two years.

WESSLING GmbH, product safety, Oststraße 7, 48341 Altenberge



01.08.2012

ZERTIFIKAT

Für: Hydewa GmbH, Hydewaplatz 1, 95466 Weidenberg, Deutschland


Produkt: 2 component sealant, *white*


Ausgehärtete Plattenmuster des oben genannten Produktes wurden auf deren Migrationsverhalten bei direktem Kontakt bezüglich Gesamtmigration und Spezifischer Migration (Bisphenol A, Benzylalkohol, 3-(2,3-Epoxypropoxy)propyl)trimethoxysilan), sowie auf Restgehalte an Epichlorhydrin untersucht (WESSLING Prüfbericht PAL11-36258-2b).

Nach Art und Umfang der durchgeführten Untersuchungen entspricht die untersuchte Probe den im Folgenden aufgelisteten Bestimmungen und Normen in ihren jeweils aktuell geltenden Fassungen:

- Gesetz zur Neuordnung des Lebensmittel- und Futtermittelrechts (Lebensmittel-, Bedarfsgegenstände- und Futtermittelgesetzbuch - LFGB) in der Neufassung der Bekanntmachung vom 26. April 2006
- Verordnung (EG) Nr. 1935/2004 des Europäischen Parlamentes und des Rates vom 27. Oktober 2004 über Materialien und Gegenstände, die dazu bestimmt sind, mit Lebensmitteln in Berührung zu kommen und zur Aufhebung der Richtlinien 80/590/EWG und 89/109/EWG

Hinsichtlich der durchgeführten Untersuchungen ist das o. g. Produkt als Fugenmasse für Fliesen, welche unter haushaltsüblichen Bedingungen bei Raumtemperatur mit Lebensmitteln in Berührung kommen können (z. B. Fliesen in Kühlhäusern etc.), geeignet. Die Rückverfolgbarkeit des Produktes gemäß Verordnung (EG) Nr. 1935/2004 sowie die Herstellung nach Guter Herstellungspraxis im Sinne der Verordnung (EG) Nr. 2023/2006 wird vom o. g. Auftraggeber sichergestellt.


Dr. Christophe Goldbeck
(Lebensmittelchemiker / Leiter Geschäftsfeld Produktsicherheit)


Johannes Wächter
(Staatl. gepr. Lebensmittelchemiker)



hydewa[®]

1.) Bar systems

2.) Ceiling suspension

3.) Mounting accessories

4.) Sealant & adhesive

5.) Mounting hints & data sheets

Accessories



hydewa[®]

LED

LED Lighting

...especially for
food processing industries



- no delay till the light turns on
- maximum brightness for cooling areas
- no exchange needed for the coming years, (life span up to 50.000 h)
- no harmful UV/ IR radiation
- no flickering or growling luminaire
- no heavy metal - 100% recycleble
- doesn't shatter into pieces when breaking
- Efficiency A
- low production of warmth wich reduces costs for climatisation



Picture	Name	Power	Lumen	Description
	hydewa LED	52 W*	6000 lm* (5000K)	LED luminaire for IP67 IP67. (-10 up to +40°C) for integration to sandwichpanels. 2x 1500mm T8 LED Tubes. * Standard - the power of the luminaire depends on the LEDs used Size: 1660 x 264 x 58 mm
	Deluxe Integrated 1200mm 1500mm	24 W 32 W	2200 lm 3200 lm	LED luminaire for IP67 (-25 up to +50°C) Available in 4000K and 5000K Size: 1290 x 43 x 53 mm 1590 x 43 x 53 mm
	Deluxe Integrated Duo	60 W	6000 lm	LED luminaire for IP67 (-25 up to +50°C) Available in 4000K and 5000K Size: 1590 x 43 x 80 mm
	LED lumi- naire for humid rooms	67 W	5500 lm	LED luminaire for IP65 (-20 up to +40°C) Available in 4000K and 6000K Size: 1563 x 128 x 80 mm
	Highlux Faro X1	67 W	5500 lm	LED luminaire for IP65 (-25 up to +50°C) Available in 5000K Size: 1528 x 78 x 63 mm

