

**PanelTECH<sup>®</sup>**

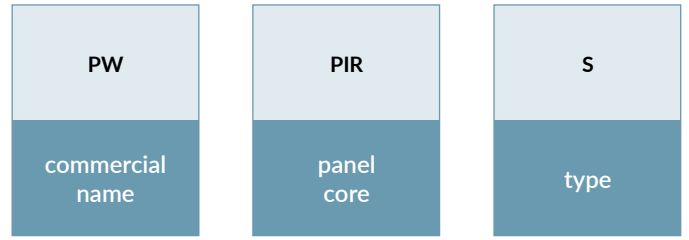


**SANDWICH  
PANELS**

# NOMENCLATURE AND TYPES



## PANELTECH SANDWICH PANEL NAMING CONVENTION



## SANDWICH PANEL CORES:



**PWPIR** - POLYURETHANE CORE PIR



**PWS** - EPS CORE



**PWW** - MINERAL WOOL CORE

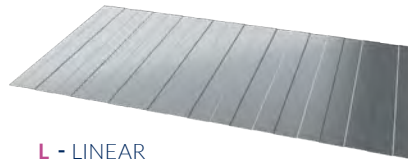
## TYPES OF SANDWICH PANELS:

<b>S</b>	wall sandwich panels with visible joints
<b>SU</b>	wall sandwich panels with hidden joints
<b>CH</b>	coldroom sandwich panels
<b>D</b>	roof sandwich panels

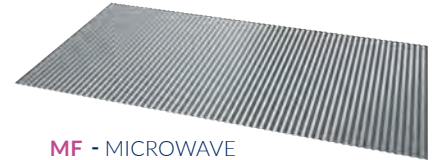
## AVAILABLE PROFILATION TYPES

### AVAILABLE EXTERNAL PROFILATION:

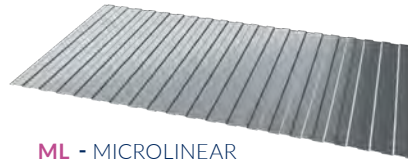
<b>L</b>	linear
<b>MF</b>	microwave
<b>ML</b>	microlinear
<b>MR</b>	microgroove <sup>2)</sup>
<b>G</b>	smooth <sup>1)</sup>
<b>C</b>	carbon <sup>3)</sup>
<b>T</b>	trapezoidal (only for roof panels)



**L** - LINEAR



**MF** - MICROWAVE



**ML** - MICROLINEAR



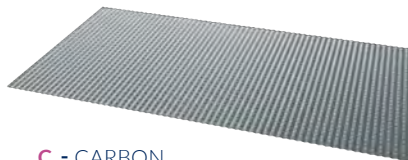
**R** - GROOVE



**MR** - MICROGROOVE



**G** - SMOOTH



**C** - CARBON



**T** - TRAPEZOIDAL

### AVAILABLE INTERNAL PROFILATION:

<b>L</b>	linear
<b>R</b>	groove <sup>1)</sup>
<b>G</b>	smooth <sup>1)</sup>

<sup>1)</sup> facings with the G-smooth or R-groove profiles can include microwaves, which affect the appearance of the product classified as compliant with the requirements of EN 14509, annex D

<sup>2)</sup> applies to Paneltech sandwich panels with PIR cores. For more information concerning MR - microgroove profilation, see the technical product cards

<sup>3)</sup> applies to Paneltech sandwich panels with PIR cores.

## PROTECTIVE COATING OF STEEL FACING

### SP 25

Universal polyester coating for indoor and outdoor applications in low and standard aggressiveness environments.

Application: outdoor - up to corrosivity category C3; indoor - up to C1, A1<sup>2)</sup>.

### PU

Polyurethane coating for standard, aggressive and demanding environments. It is characterized by high resistance to corrosion and UV radiation. Recommended in facilities where color fastness and aesthetics are important.

Application: exterior - for C5<sup>1)</sup>; interior - for C5<sup>1)</sup> and A4<sup>1)</sup>.

### FARM

The coating is designed for the interiors of agricultural and livestock facilities, such as piggeries, poultry houses and grain stores. Adapted to work in aggressive environments.

Application: interior - up to C3, A1<sup>2)</sup>.

### FOOD SAFE

Interior coating, approved for food contact. Easy to clean, resistant to cleaning agents.

Application: indoor - up to A5<sup>1)</sup>.

### SPECIAL

Coatings for extreme environmental conditions, including high corrosivity and intensive use.

Application: outdoor - up to C5<sup>1)</sup>; indoor - up to C5<sup>1)</sup> and A5<sup>1)</sup>.

### TABLE OF COATING PROPERTIES

Name	Type	Thk. [µm]	Corrosion Resistance	Application	Surface finishing <sup>2)</sup>
SP25	polyester	25	C3 / C1, A1 <sup>3)</sup>	common	smooth
PU	polyurethane	35-60	conditionally C5 <sup>1)</sup> , A4 <sup>1)</sup>	environment with increased corrosion class	smooth with shine
FARM	polyester	35	conditionally C3, A1	from inside of buildings (no UV-resistance), agricultural buildings, high resistance to ammonia	smooth
FOOD SAFE	PVC laminate	120	conditionally C5 <sup>1)</sup> , A5 <sup>1)</sup>	from inside of buildings (no UV-resistance), premises with controlled environmental parameters: cold stores, clean rooms, e.g. meat processing plants	matt / grainy
special	polyvinyl chloride	200	conditionally C5 <sup>1)</sup> , A5 <sup>1)</sup>	environment with high corrosion resistance class	scintilla finishing
	pvdf/polyurethane	40-65	conditionally C5 <sup>1)</sup> , A5 <sup>1)</sup>	environment with high corrosion resistance class, high colour fastness	smooth

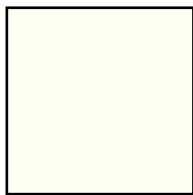
<sup>1)</sup> Organic coating is selected on the basis of its durability and application conditions. Coating selection is carried out through environmental assessment based on an environmental questionnaire completed by the Client, approved by the steel manufacturer and Paneltech.

<sup>2)</sup> Applies to the standard warranty. It is possible to extend the warranty according to reference 1).

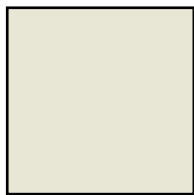
<sup>3)</sup> C3 applies to the standard warranty for exterior cladding; C1, A1 applies to the standard warranty for interior cladding. It is possible to extend the warranty according to reference 1).

# AVAILABLE COLORS FOR EXTERNAL FACINGS

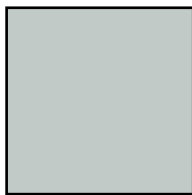
## STANDARD COLORS



9010<sup>1)</sup>



9002<sup>1)</sup>



7035



9006

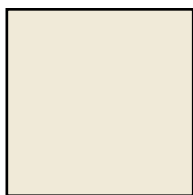


9007

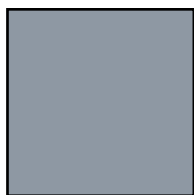


7016

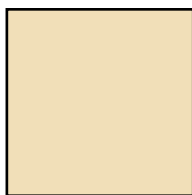
## TYPICAL COLORS<sup>2)</sup>



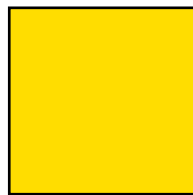
9001



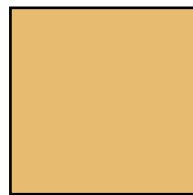
7040



1015



1021



1002



3000



3011



8017



5012



5010



6029



7024

<sup>1)</sup> Internal sandwich panel facings are available in two basic colors: RAL 9002 and 9010. Other colors available on request.

<sup>2)</sup> Availability of these colors depends on current stock and has to be confirmed by sales before order. Untypical colors – for individual request.

The colors presented in this brochure are for reference only. Steel sheet tones may differ, depending on the material batch and the manufacturer. Pan-  
eltech Sp. z o.o. therefore admits the possibility of occurrence of color differences between the samples presented and the colors of materials supplied.



## FIRE RESISTANCE:

R	fire load capacity
E	fire integrity
I	fire insulation
NPD	no performance declared

## REACTION TO FIRE:

A2-s1, d0	non-combustible, hardly no smoke, no flaming droplets
B-s1, d0	combustible, difficult to ignite, nearly no smoke, without flaming droplets
E	combustible, easily ignited, unlimited smoking, self-extinguishing
B <sub>roof</sub> (t <sub>f</sub> )	resistance to external fire

## RESISTANCE OF WALLS TO EXTERNAL FIRE:

NRO	Non-spread of flame
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## OUTSIDE CORROSION CATEGORIES:

C2	Rural areas with low corrosion classes.
C3	Urban and industrial areas with low SO <sub>2</sub> levels, with medium corrosion classes.
C4	Industrial areas with moderate SO <sub>2</sub> levels, with high corrosion classes.
C5-I	Industrial areas with high SO <sub>2</sub> levels, with very high corrosion classes.

## INSIDE CORROSION CATEGORIES:

C1	Heated buildings with a clean atmosphere, such as offices, stores, schools, hotels.
C2	Unheated buildings where condensation can occur, such as warehouses, apartments, sports halls.
C3	Production rooms with high humidity and some air pollution, such as food plants, laundries, breweries, dairies.
C4	Rooms with a high frequency of condensation and pollution from industrial processes, such as industrial plants, chemical plants, swimming pools, shipyards.
C5	Rooms with almost continuous condensation and high pollution.

## INTERNAL ENVIRONMENT CATEGORIES:

A1	Non-aggressive environment, occasional condensation, e.g. dry storage buildings.
A2	Hardly aggressive environment, occasional condensation, e.g. coldrooms, supermarkets.
A3	Moderately aggressive environment, occasional condensation, e.g. food processing and industrial buildings with dry processes carried out.
A4	Very aggressive environment, occasional condensation, e.g. industrial buildings with wet processes carried out, swimming pools.
A5	Strongly aggressive environment, occasional condensation, e.g. wet food processing (fish processing).



## PWPIR-S



### APPLICATION

Wall sandwich panel with visible joint PWPIR-S is used to construct external walls and internal partitions in the single- or multiple-span shell structure. The panel is characterized by very good thermal insulation properties and strength, as well as very high fire resistance properties.

In particular PWPIR-S panels can be applied in:

- Industrial buildings,
- Store houses and logistic centres,
- Commercial buildings and offices,
- Food industry facilities,
- Agricultural objects,
- Sport halls.

TABLE OF TECHNICAL PARAMETERS OF THE PWPIR-S PANELS

Parameter	Value				
thickness [mm]	40	60	80	100	120
modular width [mm]	1130, 1000 (optionally 1050 <sup>1)</sup> )				
length <sup>2)</sup> [mm]	2000 ÷ 15800				
weight [kg/m <sup>2</sup> ]	9,9	10,7	11,5	12,3	13,1
heat transfer coefficient U <sub>c</sub> [W/m <sup>2</sup> K]	0,58	0,37	0,27	0,22	0,18
acoustic insulation Rw [dB]	26				
reaction to fire	B-s1,d0				
resistance to external fire	NRO				
wall fire rating <sup>2)</sup>	NPD	EI 15 (o ↔ i) <sup>2)</sup>	EI 15 / EI 30 (o ↔ i) <sup>2)</sup>	EI 30 (o ↔ i) <sup>2)</sup>	
anti-corrosive protection	according to the coating used				
organic coatings	SP 25, PU, AGRO, FOOD SAFE and other				
external facing	galvanized steel 0,5 ÷ 0,6 mm				
internal facing	galvanized steel 0,4 ÷ 0,6 mm				
available profilation types	external facing L, ML, MF, MR, G, C; internal facing L, R, G				
insulating core	rigid foam of 40 kg/m <sup>3</sup> in total density and with enclosed PIR (polyisocyanurate) cells				
application	non-continuous application on external walls and as wall cladding, on the structural parts of walls and ceilings				
wall application layout	vertical or horizontal				

<sup>1)</sup> In order to verify production possibilities of specific order please contact our Customer Service or Sales Representative.

<sup>2)</sup> Detailed information (including panel layout and support spans) can be found in the General Terms and Conditions of Sale available at paneltech.pl.

## PWPIR-S LITE



### APPLICATION

Wall sandwich panel with visible joint PWPIR-S LITE is used to construct external walls and internal partitions in the single- or multiple-span shell structure. Despite the lower density of PIR foam in its core, the panel is characterized by good thermal insulation properties and strength, however, the possibility of micro-irregularities appearing on its surface exists. Therefore, the use of panels in facilities where high aesthetic qualities are required is not recommended.

In particular, PWPIR-S LITE panels can be applied in the construction of, among others:

- Warehouses,
- Containers,
- Chicken coops,
- Piggens,
- Cowsheds.

TABLE OF TECHNICAL PARAMETERS OF THE PWPIR-S LITE PANELS

Parameter	Value		
thickness [mm]	80	100	120
modular width [mm]	1130 (optionally 1000 <sup>1)</sup> )		
length <sup>2)</sup> [mm]	2000 ÷ 15800		
weight [kg/m <sup>2</sup> ]	11,3	12,1	12,9
heat transfer coefficient U <sub>c</sub> [W/m <sup>2</sup> K]	0,28	0,22	0,19
acoustic insulation Rw [dB]	NPD		
reaction to fire	B-s1,d0		
resistance to external fire	NRO		
wall fire rating <sup>2)</sup>	NPD	EI 15 (o ↔ i) <sup>2)</sup>	
anti-corrosive protection	according to the coating used		
organic coatings	SP 25		
external facing	galvanized steel 0,5 mm		
internal facing	galvanized steel 0,4 ÷ 0,5 mm		
available profilation types	external facing L, MF; internal facing L		
insulating core	rigid foam of 35 kg/m <sup>3</sup> in total density and with enclosed PIR (polyisocyanurate) cells		
application	non-continuous application on external walls and as wall cladding, on the structural parts of walls and ceilings		
wall application layout	vertical or horizontal		

<sup>1)</sup> Minimum Production Quantity (MPQ) is 1000 m<sup>2</sup> and depends on thickness of the panel. In order to verify production possibilities of specific order please contact our Customer Service or Sales Representative.

<sup>2)</sup> Detailed information (including panel layout and support spans) can be found in the General Terms and Conditions of Sale available at paneltech.pl.

## TABLE OF TECHNICAL PARAMETERS OF THE PWPIR-SU PANELS

Parameter	Value			
thickness [mm]	60	80	100	120
modular width [mm]	1050 (optionally 1000 <sup>1)</sup> )			
length <sup>2)</sup> [mm]	2000 ÷ 15800			
weight [kg/m <sup>2</sup> ]	11,1	11,80	12,60	13,40
heat transfer coefficient U <sub>c</sub> [W/m <sup>2</sup> K]	0,42	0,29	0,23	0,19
acoustic insulation Rw [dB]	26			
reaction to fire	B-s1,d0			
resistance to external fire	NRO			
wall fire rating <sup>2)</sup>	NPD		EI 15 (o ↔ i) <sup>2)</sup>	
anti-corrosive protection	according to the coating used			
organic coatings	SP 25, PU, AGRO, FOOD SAFE and other			
external facing	galvanized steel 0,5 ÷ 0,6 mm			
internal facing	galvanized steel 0,4 ÷ 0,6 mm			
available profilation types	external facing L, ML, MF, MR, G, C; internal facing L, R, G			
insulating core	rigid foam of 40 kg/m <sup>3</sup> in total density and with enclosed PIR (polyisocyanurate) cells			
application	non-continuous application on external walls and as wall cladding, on the structural parts of walls and ceilings			
wall application layout	vertical or horizontal			

<sup>1)</sup> Minimum production for a modular width of 1000 mm depending on panel thickness is 1000 m<sup>2</sup>.

<sup>2)</sup> Detailed information (including panel layout and support spans) can be found in the General Terms and Conditions of Sale available at paneltech.pl.



### APPLICATION

Wall sandwich panel with hidden joint PWPIR-SU is used to construct external walls and internal partitions in the single- or multiple-span shell structure. The panel is characterized by very good thermal insulation properties and strength, as well as very high fire resistance properties.

In particular PWPIR-SU panels can be applied in:

- Industrial buildings,
- Store houses and logistic centres,
- Commercial buildings and offices,
- Food industry facilities,
- Agricultural objects,
- Sport halls.

## TABLE OF TECHNICAL PARAMETERS OF THE PWPIR-CH PANELS

Parameter	Value			
thickness [mm]	120	160	180	200
modular width [mm]	1130, 1000 (optionally 1050 <sup>1)</sup> )			
length <sup>2)</sup> [mm]	2000 ÷ 15800			
weight [kg/m <sup>2</sup> ]	13,1	14,7	15,5	16,3
heat transfer coefficient U <sub>c</sub> [W/m <sup>2</sup> K]	0,18	0,14	0,12	0,11
acoustic insulation Rw [dB]	26			
reaction to fire	B-s1,d0			
resistance to external fire	NRO			
wall fire rating <sup>2)</sup>	EI 30 (o ↔ i) <sup>2)</sup>			
anti-corrosive protection	according to the coating used			
organic coatings	SP 25, PU, AGRO, FOOD SAFE and other			
external facing	galvanized steel 0,5 ÷ 0,6 mm			
internal facing	galvanized steel 0,4 ÷ 0,6 mm			
available profilation types	external facing L, ML, MF, MR, G, C; internal facing L, R, G			
insulating core	rigid foam of 40 kg/m <sup>3</sup> in total density and with enclosed PIR (polyisocyanurate) cells			
application	non-continuous application on external walls and as wall cladding, on the structural parts of walls and ceilings			
wall application layout	vertical or horizontal			

<sup>1)</sup> In order to verify production possibilities of specific order please contact our Customer Service or Sales Representative.

<sup>2)</sup> Detailed information (including panel layout and support spans) can be found in the General Terms and Conditions of Sale available at paneltech.pl.



### APPLICATION

Coldroom PWPIR-CH sandwich panel is intended for warehouse structures where internal temperatures reach minus 25°C. The panel is characterized by very good thermal insulation properties and strength, as well as very high fire resistance properties.

In particular PWPIR-CH panels can be applied in:

- Industrial buildings,
- Coldrooms and freezers,
- Store houses,
- Food industry facilities,
- Agricultural objects.

# PWW-S



## APPLICATION

PWW-S wall sandwich panel with a visible joint and a mineral wool core is designed for the installation of external and internal partition walls, as well as suspended ceilings. This panel stands out due to its excellent fire resistance, good thermal insulation properties, and high durability.

In particular, PWW-S panels can be applied in:

- Buildings requiring high fire resistance and noise insulation,
- Industrial buildings,
- Store houses and logistic centres,
- Commercial buildings and offices,
- Food industry facilities,
- Agricultural objects,
- Sport halls.

TABLE OF TECHNICAL PARAMETERS OF THE PWW-S PANELS

Parameter	Value								
thickness [mm]	60	80	100	120	140	150	160	180	200
modular width [mm]	1130, 1000 (optionally 1050 <sup>1)</sup> )								
length <sup>2)</sup> [mm]	2000 ÷ 10000								
weight [kg/m <sup>2</sup> ]	14,1	16,1	18,1	20,1	22,1	23,1	24,1	26,1	28,1
heat transfer coefficient U <sub>c</sub> [W/m <sup>2</sup> K]	0,66	0,49	0,39	0,33	0,28	0,27	0,25	0,22	0,20
acoustic insulation Rw [dB]	31		33		31			34	
reaction to fire	A2-s1,d0								
resistance to external fire	NRO								
wall fire rating <sup>2)</sup>	NPD	EI 30 (o ↔ i)	EI 60 (o ↔ i)	EI 120 / EI 180 (o ↔ i) <sup>2)</sup>				EI 180 / EI 240 (o ↔ i) <sup>2)</sup>	
anti-corrosive protection	according to the coating used								
organic coatings	SP 25, PU, AGRO, FOOD SAFE and other								
external facing	galvanized steel 0,5 ÷ 0,6 mm								
internal facing	galvanized steel 0,5 ÷ 0,6 mm								
available profilation types	external facing L, ML, MF, G; internal facing L, R, G								
insulating core	rock, inflammable mineral wool with a lamella fiber structure 100 kg/m <sup>3</sup>								
application	non-continuous application on external walls and as wall cladding, on the structural parts of walls and ceilings								
wall application layout	vertical or horizontal								

<sup>1)</sup> In order to verify production possibilities of specific order please contact our Customer Service or Sales Representative.

<sup>2)</sup> Detailed information (including panel layout and support spans) can be found in the General Terms and Conditions of Sale available at [paneltech.pl](http://paneltech.pl).

# PWW-S LITE



## APPLICATION

PWW-S LITE wall sandwich panel with a mineral wool core and a visible joint has been designed for the construction of external and internal partition walls, as well as suspended ceilings. It is characterized by a competitive price, good fire resistance, and effective thermal insulation properties.

In particular, PWW-S LITE panels can be applied in:

- Buildings requiring high fire resistance and noise insulation,
- Industrial buildings,
- Store houses and logistic centres,
- Commercial buildings and offices,
- Food industry facilities,
- Agricultural objects,
- Sport halls.

TABLE OF TECHNICAL PARAMETERS OF THE PWW-S LITE PANELS

Parameter	Value							
thickness [mm]	100	120	140	150	160	180	200	
modular width [mm]	1130, 1000 (optionally 1050 <sup>1)</sup> )							
length <sup>2)</sup> [mm]	2000 ÷ 10000							
weight [kg/m <sup>2</sup> ]	16,6	18,3	20	20,9	21,7	23,4	25,1	
heat transfer coefficient U <sub>c</sub> [W/m <sup>2</sup> K]	0,38	0,32	0,27	0,25	0,24	0,21	0,19	
acoustic insulation Rw [dB]	33	31					34	
reaction to fire	A2-s1,d0							
resistance to external fire	NRO							
wall fire rating <sup>2)</sup>	EI 60 (o ↔ i) <sup>2)</sup>		EI 60 / EI 90 (o ↔ i) <sup>2)</sup>					
anti-corrosive protection	according to the coating used							
organic coatings	SP 25, PU, AGRO, FOOD SAFE and other							
external facing	galvanized steel 0,5 ÷ 0,6 mm							
internal facing	galvanized steel 0,5 ÷ 0,6 mm							
available profilation types	external facing L, ML, MF, G; internal facing L, R, G							
insulating core	rock, inflammable mineral wool with a lamella fiber structure 85 kg/m <sup>3</sup>							
application	non-continuous application on external walls and as wall cladding, on the structural parts of walls and ceilings							
wall application layout	vertical or horizontal							

<sup>1)</sup> In order to verify production possibilities of specific order please contact our Customer Service or Sales Representative.

<sup>2)</sup> Detailed information (including panel layout and support spans) can be found in the General Terms and Conditions of Sale available at [paneltech.pl](http://paneltech.pl).

TABLE OF TECHNICAL PARAMETERS OF THE PWW-SU PANELS

Parameter	Value						
thickness [mm]	80	100	120	150	160	180	200
modular width [mm]	1050 (optionally 1000 <sup>1)</sup> )						
length <sup>2)</sup> [mm]	2000 ÷ 10000						
weight [kg/m <sup>2</sup> ]	16,4	18,4	20,4	23,4	24,4	26,4	28,4
heat transfer coefficient U <sub>c</sub> [W/m <sup>2</sup> K]	0,51	0,41	0,34	0,27	0,25	0,23	0,20
acoustic insulation Rw [dB]	31						
reaction to fire	A2-s1,d0						
resistance to external fire	NRO						
wall fire rating <sup>2)</sup>	NPD	EI 30 (o ↔ i) <sup>2)</sup>	EI 60 (o ↔ i) <sup>2)</sup>				
anti-corrosive protection	according to the coating used						
organic coatings	SP 25, PU, AGRO, FOOD SAFE and other						
external facing	galvanized steel 0,5 ÷ 0,6 mm						
internal facing	galvanized steel 0,5 ÷ 0,6 mm						
available profilation types	external facing L, ML, MF, G; internal facing L, R, G						
insulating core	rock, inflammable mineral wool with a lamella fiber structure 100 kg/m <sup>3</sup>						
application	non-continuous application on external walls and as wall cladding, on the structural parts of walls and ceilings						
wall application layout	vertical or horizontal						

<sup>1)</sup> The minimum production quantity, depending on the thickness of the board, is 1000 m<sup>2</sup>.

<sup>2)</sup> Detailed information (including panel layout and support spans) can be found in the General Terms and Conditions of Sale available at paneltech.pl.



### APPLICATION

Wall sandwich panel with hidden joint PWW-SU is used to construct external walls and internal partitions in the single- or multiple-span shell structure. Thanks to their properties, i.e. high fire-resistance parameters, the panels can be used to construct buildings with high fire ratings.

In particular, PWW-SU panels can be applied in:

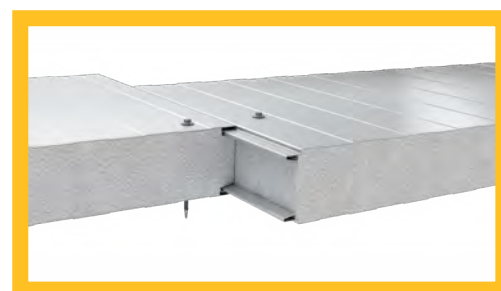
- Buildings requiring high fire resistance and noise insulation,
- Industrial buildings,
- Store houses and logistic centres,
- Commercial buildings and offices,
- Food industry facilities,
- Agricultural objects,
- Sport halls.

TABLE OF TECHNICAL PARAMETERS OF THE PWS-S PANELS

Parameter	Value						
thickness [mm]	50	80	100	120	150	200	
modular width [mm]	1130 (optionally 1000 <sup>1)</sup> )						
length <sup>1)</sup> [mm]	2000 ÷ 10000						
weight [kg/m <sup>2</sup> ]	8,8	9,1	9,4	9,6	10,0	10,6	
heat transfer coefficient U <sub>c</sub> [W/m <sup>2</sup> K]	0,77	0,48	0,39	0,32	0,26	0,20	
resistance to external fire	NRO						
anti-corrosive protection	according to the coating used						
organic coatings	SP 25, PU, AGRO, FOOD SAFE and other						
external facing	galvanized steel 0,5 ÷ 0,6 mm						
internal facing	galvanized steel 0,4 ÷ 0,5 mm						
available profilation types	external facing L, ML, MF, G; internal facing L, R, G						
insulating core	expanded polystyrene EPS of 12,5 kg/m <sup>3</sup>						
application	non-continuous application on external walls and as wall cladding, on the structural parts of walls and ceilings						
wall application layout	vertical or horizontal						

<sup>1)</sup> In order to verify production possibilities of specific order please contact our Customer Service or Sales Representative.

<sup>2)</sup> Detailed information can be found in the General Terms and Conditions of Sale available at paneltech.pl.



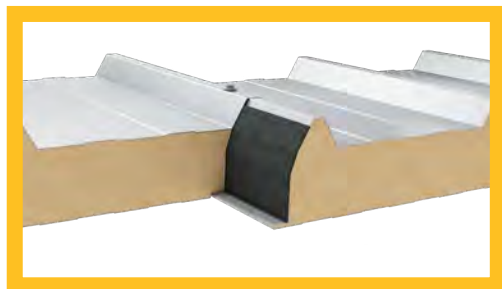
### APPLICATION

Wall sandwich panel with visible joint PWS-S is used to construct external walls and internal partitions in the single- or multiple-span shell structure. The panel is characterized by superb thermal insulation and low weight.

In particular, PWS-S panels can be applied in:

- Industrial buildings,
- Store houses and logistic centres,
- Coldrooms and freezers,
- Commercial buildings and offices,
- Food industry facilities,
- Agricultural objects,
- Sport halls.

## PWPIR-D



### APPLICATION

Roof sandwich panel PWPIR-D is applied as roofs and roof covers. The panel is characterized by very good thermal insulation properties and strength, as well as very high fire resistance properties.

In particular PWPIR-D panels can be applied in:

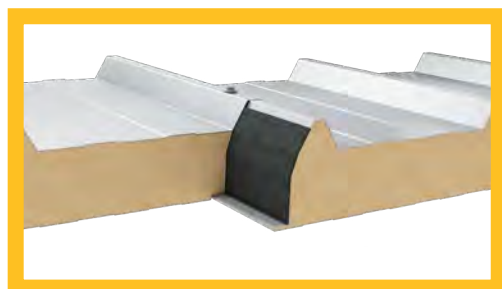
- Industrial buildings,
- Store houses and logistic centres,
- Commercial buildings and offices,
- Food industry facilities,
- Agricultural objects,
- Sport halls.

TABLE OF TECHNICAL PARAMETERS OF THE PWPIR-D PANELS

Parameter	Value						
thickness [mm]	40	60	80	100	120	145	160
modular width [mm]	1050						
length <sup>1)</sup> [mm]	2000 ÷ 16000						
weight [kg/m <sup>2</sup> ]	10,2	11,0	11,8	12,6	13,4	14,5	15,0
heat transfer coefficient U <sub>c</sub> [W/m <sup>2</sup> K]	0,49	0,34	0,26	0,21	0,18	0,15	0,14
acoustic insulation Rw [dB]	26						
reaction to fire	B-s1,d0						
resistance to external fire	B <sub>roof-1</sub> (t <sub>1</sub> ) and B <sub>roof-2</sub> (t <sub>2</sub> ) and B <sub>roof-3</sub> (t <sub>3</sub> )						
wall fire rating <sup>2)</sup>	NPD			REI 30 <sup>1)</sup>			
anti-corrosive protection	according to the coating used						
organic coatings	SP 25, PU, AGRO, FOOD SAFE and other						
external facing	galvanized steel 0,5 ÷ 0,6 mm						
internal facing	galvanized steel 0,4 ÷ 0,6 mm						
available profilation types	external facing T; internal facing L, R, G						
insulating core	rigid foam of 40 kg/m <sup>3</sup> in total density and with enclosed PIR (polyisocyanurate) cells						
application	non-continuous application on roofs and roof covers						

<sup>1)</sup> Detailed information can be found in the General Terms and Conditions of Sale available at paneltech.pl.

## PWPIR-D LITE



### APPLICATION

PWPIR-D LITE roof sandwich panel is designed for roofs and roof coverings. It is characterised by its favourable price, excellent thermal insulation and durability. Despite the lower density, the board has good thermal insulation properties and strength. However, there is a possibility of micro irregularities on its surface. Therefore PWPIR-D LITE is not recommended for applications where high aesthetics are required.

In particular PWPIR-D LITE panels can be applied in:

- Warehouses,
- Containers,
- Chickencoop,
- Pigsty,
- Cowshed.

TABLE OF TECHNICAL PARAMETERS OF THE PWPIR-D LITE PANELS

Parameter	Value				
thickness [mm]	80	100	120	145	160
modular width [mm]	1050				
length <sup>1)</sup> [mm]	2000 ÷ 16000				
weight [kg/m <sup>2</sup> ]	11,3	12,0	12,7	13,3	14,0
heat transfer coefficient U <sub>c</sub> [W/m <sup>2</sup> K]	0,27	0,22	0,18	0,16	0,14
acoustic insulation Rw [dB]	NPD				
reaction to fire	B-s1,d0				
resistance to external fire	B <sub>roof-1</sub> (t <sub>1</sub> ) and B <sub>roof-2</sub> (t <sub>2</sub> ) and B <sub>roof-3</sub> (t <sub>3</sub> )				
wall fire rating <sup>2)</sup>	NPD		REI 15 <sup>1)</sup>		
anti-corrosive protection	according to the coating used				
organic coatings	SP 25				
external facing	galvanized steel 0,5 mm				
internal facing	galvanized steel 0,4 ÷ 0,5 mm				
available profilation types	external facing T; internal facing L				
insulating core	rigid foam of 35 kg/m <sup>3</sup> in total density and with enclosed PIR (polyisocyanurate) cells				
application	non-continuous application on roofs and roof covers				

<sup>1)</sup> Detailed information can be found in the General Terms and Conditions of Sale available at paneltech.pl.

TABLE OF TECHNICAL PARAMETERS OF THE PWW-D PANELS

Parameter	Value						
thickness [mm]	80	100	120	150	160	180	200
modular width [mm]	1050						
length <sup>2)</sup> [mm]	2000 ÷ 10000						
weight [kg/m <sup>2</sup> ]	16,8	18,8	20,8	23,8	24,8	26,8	28,8
heat transfer coefficient U <sub>c</sub> [W/m <sup>2</sup> K]	0,46	0,38	0,32	0,26	0,24	0,22	0,20
acoustic insulation Rw [dB]	31						
reaction to fire	A2-s1,d0						
resistance to external fire	B <sub>roof</sub> ; B <sub>roof</sub> (t <sub>1</sub> ) and B <sub>roof</sub> (t <sub>2</sub> ) and B <sub>roof</sub> (t <sub>3</sub> )						
roof fire rating <sup>2)</sup>	NPD	REI 120 <sup>2)</sup>					
anti-corrosive protection	according to the coating used						
organic coatings	SP 25, PU, AGRO, FOOD SAFE and other						
external facing	galvanized steel 0,5 ÷ 0,6 mm						
internal facing	galvanized steel 0,5 ÷ 0,6 mm						
available profilation types	external facing T; internal facing L, R, G						
insulating core	rock, inflammable mineral wool with a lamella fiber structure 100 kg/m <sup>3</sup>						
application	non-continuous application on roofs and roof covers						

<sup>1)</sup> Minimum Production Quantity (MPQ) is from 300m<sup>2</sup> up to 500m<sup>2</sup> and depends on thickness of the panel. In order to verify production possibilities of specific order please contact our Customer Service or Sales Representative.

<sup>2)</sup> Detailed information can be found in the General Terms and Conditions of Sale available at paneltech.pl.



### APPLICATION

Roof sandwich panel PWW-D is applied as roofs and roof covers. Thanks to their properties, i.e. high fire-resistance parameters, the panels can be used to construct buildings with high fire ratings.

In particular, PWW-D panels can be applied in:

- Buildings requiring high fire resistance and noise insulation,
- Industrial buildings,
- Store houses and logistic centres,
- Commercial buildings and offices,
- Food industry facilities,
- Agricultural objects,
- Sport halls.

TABLE OF TECHNICAL PARAMETERS OF THE PWS-D PANELS

Parameter	Value				
thickness [mm]	80	100	120	150	200
modular width [mm]	1050				
length <sup>2)</sup> [mm]	2000 ÷ 10000				
weight [kg/m <sup>2</sup> ]	9,6	9,9	10,2	10,6	11,5
heat transfer coefficient U <sub>c</sub> [W/m <sup>2</sup> K]	0,45	0,37	0,31	0,25	0,19
resistance to external fire	B <sub>roof</sub> (t <sub>1</sub> )				
anti-corrosive protection	according to the coating used				
organic coatings	SP 25, PU, AGRO, FOOD SAFE and other				
external facing	galvanized steel 0,5 ÷ 0,6 mm				
internal facing	galvanized steel 0,4 ÷ 0,5 mm				
available profilation types	external facing T; internal facing L, R, G				
insulating core	expanded polystyrene EPS of 12,5 kg/m <sup>3</sup>				
application	non-continuous application on roofs and roof covers				

<sup>1)</sup> Minimum Production Quantity (MPQ) is from 500 m<sup>2</sup> up to 1000 m<sup>2</sup> and depends on thickness of the panel. In order to verify production possibilities of specific order please contact our Customer Service or Sales Representative.

<sup>2)</sup> Detailed information can be found in the General Terms and Conditions of Sale available at paneltech.pl.



### APPLICATION

Roof sandwich panel PWS-D is applied as roofs and roof covers. The panel is characterized by superb thermal insulation and low weight.

In particular PWS-D panels can be applied in:

- Industrial buildings,
- Store houses and logistic centres,
- Coldrooms and freezers,
- Commercial buildings and offices,
- Food industry facilities,
- Agricultural objects,
- Sport halls.

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