

TECHNICAL DATA SHEET

PANELTIM® MULTIPOWER

HDPE

Material: HDPE Prime (High-Density Polyethylene)

Depth: 50 mm

Surface: Both sides smooth

Internal Cell Structure: 50 mm x 50 mm

Size: 2600 mm x 1000 mm
1200 mm x 1000 mm



2600 mm x 1000 mm



1200 mm x 1000 mm

Exterior Wall Thickness:

Size	Depth	Wall Thickness
2600 mm x 1000 mm	50 mm	4.5 mm
1200 mm x 1000 mm	50 mm	3.3 mm

Weight:

Size	Depth	Weight
2600 mm x 1000 mm	50 mm	13.8 kg/m ²
1200 mm x 1000 mm	50 mm	12.5 kg/m ²

Fire Class: Class E (ISO 11925-2 assessment without test certificate)

Material properties :

Test method / standard Typical value(s)

General		
Density	ISO 1183-1	954 kg/m ³
Mechanical properties (23°C)		
Yield stress	EN ISO 527	24.8 MPa
Strain at yield	EN ISO 527	8.8 %
Tensile modulus of elasticity	EN ISO 527	1020 Mpa
Thermal properties		
Thermal conductivity	DIN 52612-1	0.43 W/(m*K)
Thermal capacity	DIN 52612	1680 J/(kg*K)
Coefficient of linear thermal expansion	DIN 53752	100 - 200 * 10 ⁻⁶ /K

Test results supporting the "typical values" listed are available upon request.

Recycling: 100% recyclable
Recycling Code:



Disclaimer:

This information contains only typical properties of the products. This means these values can deviate. It is the customer's responsibility to inspect and test the product(s) in order to establish the suitability of the product(s) for its and its customer's particular purposes. The customer is responsible for the appropriate, safe and legal use while processing and handling all product(s) purchased from us. Nothing herein is intended to be nor shall it constitute a warranty whatsoever, in particular, warranty of merchantability or suitability for a particular purpose.

The latest version of this technical data sheet will be available on our online platform. Contact Paneltim for more information.

Technical data sheet

Paneltim® MultiPowered Panels 50/50 in PE BLACK UV



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General Material Properties *

♦ General properties

	Value	Units	Test Method	Remarks
Type of material	PE High Density			
Density	+/- 0.960	g/cm ³	ISO 1183	
Melt Flow Index	4 +/- 2	g/10min	ISO 1133	at 190°C/2,16 kg
Stress at Yield	>= 22	Mpa	ISO 527	
Strain at Yield	>= 10	%	ISO 527	
Flex E-Modulus	850 - 1000	Mpa	ISO 178	
Notched Izod	>= 80	kJ/m ²	ISO 180	at 23°C
Hardness	61 +/- 2	Shore D	ISO 868	
Cristaline Melt Point	133 +/- 3	°C	DSC	
Caloric value	+/- 45	Mjoule/kg		
Water absorption	< 0,05	%		

♦ ROHS

EC2002/95

♦ Chemical resistance

Oils and greases	Excellent resistance
Cleaning and disinfectant products	Excellent resistance
Midrew, algae and bacteria	Excellent resistance
Most acids, alkali, salts & others	List of chemical resistances on request

* We work with values within a range (+ / -, > =) because of variations in specific characteristics of raw materials of different suppliers.

Panel properties

♦ Standard dimensions

	Value	Units	Test method	Remarks
Length x width	2600 x 1000 (+/- 0,4%)	mm	measured at 20 °C	
Thickness	51 (+/- 3%)	mm	measured at 20 °C	

♦ Weight

Value	Units	Test method	Remarks
13,50 (+/- 4%)	kg/m ²	measured at 20 °C	

♦ Mechanical

Value	Units	Test method	Remarks
780	Mpa		Paneltim® test report on demand
>= 1,5	m	Dart drop test 2,7 kg impactradius 1,5"	

♦ Electrical properties

Value	Units	Test method	Remarks
>= 10 exp14	Ohm	DIN VDE 0303	Paneltim® test report on demand

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Paneltim® MultiPowered Panels 50/50 in PE BLACK UV



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♦ Thermal properties		Value	Units	Test method	Remarks
Thermal conductivity		1,7	W/m ² °K		Paneltim® test report on demand
Linear thermal expansion		1,2 - 1,5mm/m/10°C	°C	Paneltim®	In an area range from -20°C to + 80°C
Utilisation range					
Permanent	Air	-40°C tot + 60°	°C		Related to load and environment conditions
Permanent	Water	0°C tot + 40°C	°C		Others on demand
Shortly	Steam	0°C tot + 100°C	°C		For cleaning
Euro fire resistance		E		EN-ISO 11925-2	Paneltim® test report on demand
♦ UV and Weathering Resistances		Value	Units	Test method	Remarks
UV resistant panels		10	year	Q-Sun	In mid european climate
		50 % of mechanical characteristics maintain			KLangley <= 100
♦ Sound insulation		Value	Units	Test method	Remarks
		RW 25-26	dB	EN ISO 717-1	Paneltim® test report on demand
♦ Welding guidelines parameters *		Value	Units	Test method	Remarks
Butwelding	Melting	+/- 24	sec	Paneltim®	0,12 N/m ²
	Heating	+/- 5	sec		0,05 N/m ²
	Welding	+/- 30	sec		0,12 N/m ²
Thickness panel		8-18	mm		
Temperature		184	°C		
Extrusion welding	Bulk T°	225	°C	SKZ	Paneltim® test report on demand
	Hotgas T°	265-270	°C		
Hotgas flow rate		300	l/min		
Shoe width		14	mm		
Shoe length		40	mm		
Shoe A-Value		6-8	mm		
Hot air welding	T°	265-270	°C	Paneltim®	
* Values can vary depending the type of welding machine.					
♦ Horizontal charge		Value	Units	Test method	Remarks
Point load		3,60	kN/m ²		Paneltim® test report on demand
Equally distributed load		5,75	kN/m ²		For 1000 mm span, with maximum 1% deflection
					For 1000 mm span, with maximum 1% deflection
♦ Food contact		Value	Units	Test method	Remarks
				EC1935/2004	Paneltim® test report on demand
				EC90/128 and EC2002/72	
♦ Recycling		100% recyclable			



For the calculation of rectangular tanks, we refer to our software program PanTanC 2.0, which is made based on DVS 2205-5.



nv **PANELTIM®**

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