



Thermotechnical data

Values according to standard in comparison:

Thermotechnical data of the TGI-Wave-Spacer bar in comparison to aluminium spacer bars.

$$U_w = \frac{U_f \cdot A_f + U_g \cdot A_g + \psi \cdot I_f}{A_w}$$

- U_w = Thermal transmittance coefficient of window
- U_f = Thermal transmittance coefficient of frame (window)
- U_g = Thermal transmittance coefficient of glass
- A_w = Area of window
- A_f = Area of frame
- A_g = Area of glass
- I_f = Length of the edge of frame (spacer)
- ψ = Linear thermal transmittance coefficient of edge system

$$T_{oi} = T_{la} + f_{Rsi} \cdot (T_{li} - T_{la})$$

- T_{oi} = Temperature of inner surface
- T_{li} = Temperature of air inside + 20° C (68°F)
- T_{la} = Temperature of air outside - 10° C (14°F)
- f_{Rsi} = Temperature factor at $R_{si} = 0.20m^2K/W$



SS 17 PP 0,22	Wooden window		Plastic window		Aluminium window	
	U_f Frame	1.40 W/m ² K		1.90 W/m ² K		2.00 W/m ² K
U_g Glass	1.10 W/m ² K		1.10 W/m ² K		1.10 W/m ² K	
	Aluminium Spacer	TGI-Wave-Spacer	Aluminium Spacer	TGI-Wave-Spacer	Aluminium Spacer	TGI-Wave-Spacer
ψ -Value	0.070 W/mK	0.040 W/mK	0.070 W/mK	0.037 W/mK	0.106 W/mK	0.051 W/mK
U_w Window	1.36 W/m ² K	1.29 W/m ² K	1.51 W/m ² K	1.43 W/m ² K	1.63 W/m ² K	1.50 W/m ² K
Temperature factor f_{Rsi}	0.51	0.63	0.55	0.66	0.55	0.68
Surface temperature T_{oi} at -10° C +20° C	5.3° C	8.9° C	6.5° C	9.8° C	6.5° C	10.4° C
U_g Glass	1.20 W/m ² K		1.20 W/m ² K		1.20 W/m ² K	
	Aluminium Spacer	TGI-Wave-Spacer	Aluminium Spacer	TGI-Wave-Spacer	Aluminium Spacer	TGI-Wave-Spacer
ψ -Value	0.067 W/mK	0.038 W/mK	0.067 W/mK	0.037 W/mK	0.104 W/mK	0.049 W/mK
U_w Window	1.43 W/m ² K	1.35 W/m ² K	1.58 W/m ² K	1.50 W/m ² K	1.70 W/m ² K	1.56 W/m ² K
Temperature factor f_{Rsi}	0.51	0.62	0.55	0.65	0.55	0.67
Surface temperature T_{oi} at -10° C +20° C	5.3° C	8.6° C	6.5° C	9.5° C	6.5° C	10.1° C

Conditions: Total area window A_w 1.82 m²
 Share of frame 30% A_f 0.55 m²
 Share of glass 70% A_g 1.27 m²
 Length of the edge I_f 4.54 m

TECHNOFORM GLASSINSULATION

Technoform Glass Insulation GmbH
 Dormannweg 48, D-34123 Kassel, Germany
 Phone +49 561-9 58 31 00, Fax +49 561-9 58 31 21
 info@glassinsulation.de, www.glassinsulation.de

