



## TM50 SE SG

## TABLE HEAT TRANSFER COEFFICIENT

### GENERAL BASICS FOR CALCULATION

Calculation Ucw Element Size 1.000 mm x 2.500 mm

Basics for Calculation:

DIN EN ISO 10077-1, DIN EN ISO 10077-2, DIN EN 13947

DIN 4108, DIN EN 673

Basis of calculation is standard frame widths.

If the proportion of the glass surface increases in relation to the frame surface, the Ucw-value improves.

The assignment of the types of wood to the thermal conductivities (TC) is made according to DIN EN ISO 10077-2 [2012-06]. The used thickness affects the Uf-value.

Formula for Calculation:

$$\frac{\Sigma (A_g \times U_g) + \Sigma (A_f \times U_f) + \Sigma (l_g \times Y_g) + \Sigma (A_p \times U_p)}{\Sigma (A_g + A_f + A_p)}$$

### DEFINITIONS VARIABLES

Glass Surface	Ag
Frame Surface	Af
Panel Surface	Ap
Length Edge Seal	Lg
Heat Transfer Coefficient of Glass	Ug
Heat Transfer Coefficient of Frame	Uf
Heat Transfer Coefficient of Panel	Up
Heat Transfer Coefficient of Edge Seal	Ψg

### BASICS FOR CALCULATION U-VALUES

Plastic Edge Seal Double Insulated Glazing	0,040 W/mK
Plastic Edge Seal Triple Insulated Glazing	0,035 W/mK
Heat Insulation Panel	0,035 W/mK

TYPE OF WOOD CLASS	THICKNESS	UF W/(M²K)	UG 1,1/ DOUBLE, ISO	UG 1,0/ DOUBLE, ISO	UG 0,7/ TRIPLE, ISO	UG 0,6/ TRIPLE, ISO	UG 0,5/ TRIPLE, ISO
<b>1 - TC=0,110 W/(m²K)</b>	44	0,75	1,13	1,05	0,81	0,73	0,65
Fir, Spruce	50	0,66	1,12	1,04	0,79	0,71	0,63
Silver Fir	56	0,63	1,11	1,03	0,79	0,71	0,62
<b>2 - TC=0,130 W/(m²K)</b>	44	0,75	1,13	1,05	0,81	0,73	0,65
Pine, Douglas Fir	50	0,66	1,12	1,04	0,79	0,71	0,63
Larch, Hemlock	56	0,63	1,11	1,03	0,79	0,71	0,62
<b>3 - TC=0,160 W/(m²K)</b>	44	0,76	1,14	1,06	0,81	0,73	0,65
Meranti, Teak	50	0,67	1,12	1,04	0,79	0,71	0,63
Eucalyptus	56	0,64	1,11	1,03	0,79	0,71	0,63
<b>4 - TC=0,180 W/(m²K)</b>	44	0,76	1,14	1,06	0,81	0,73	0,65
Oak	50	0,67	1,12	1,04	0,79	0,71	0,63
White Oak	56	0,64	1,11	1,03	0,79	0,71	0,63

The Ucw values change depending on the element's structure and size. Frame widths and choice of edge seal equally influence these values. We gladly calculate concrete Ucw values of the window elements of your project. The current batimet conditions at [www.batimet.com](http://www.batimet.com) are valid. Technical changes are reserved. State of 12/03/2016. You can find current details via: