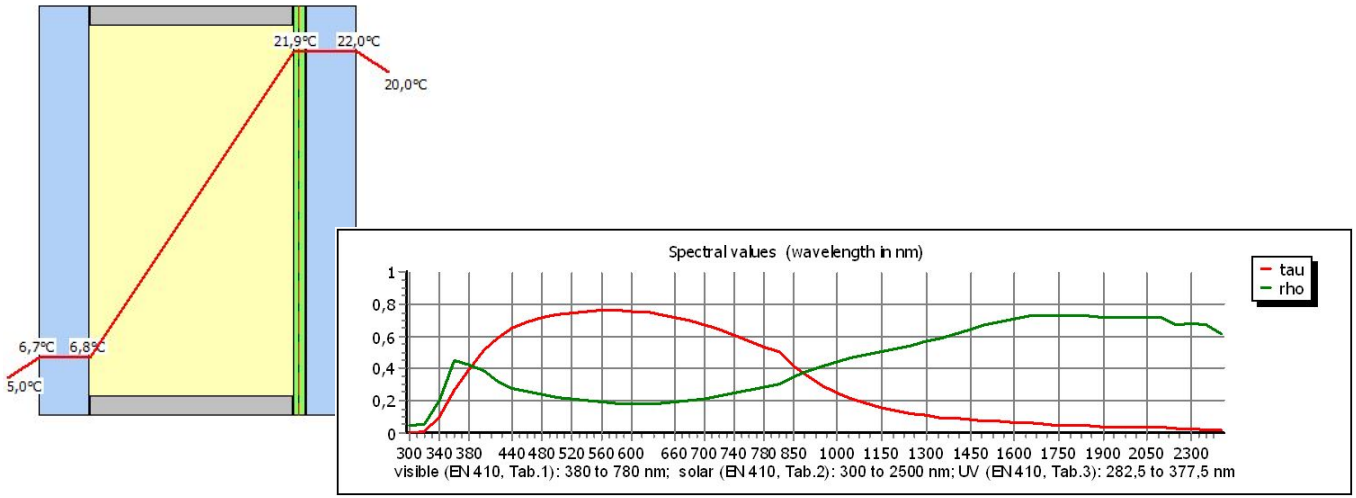
Sommer Informatik GmbH

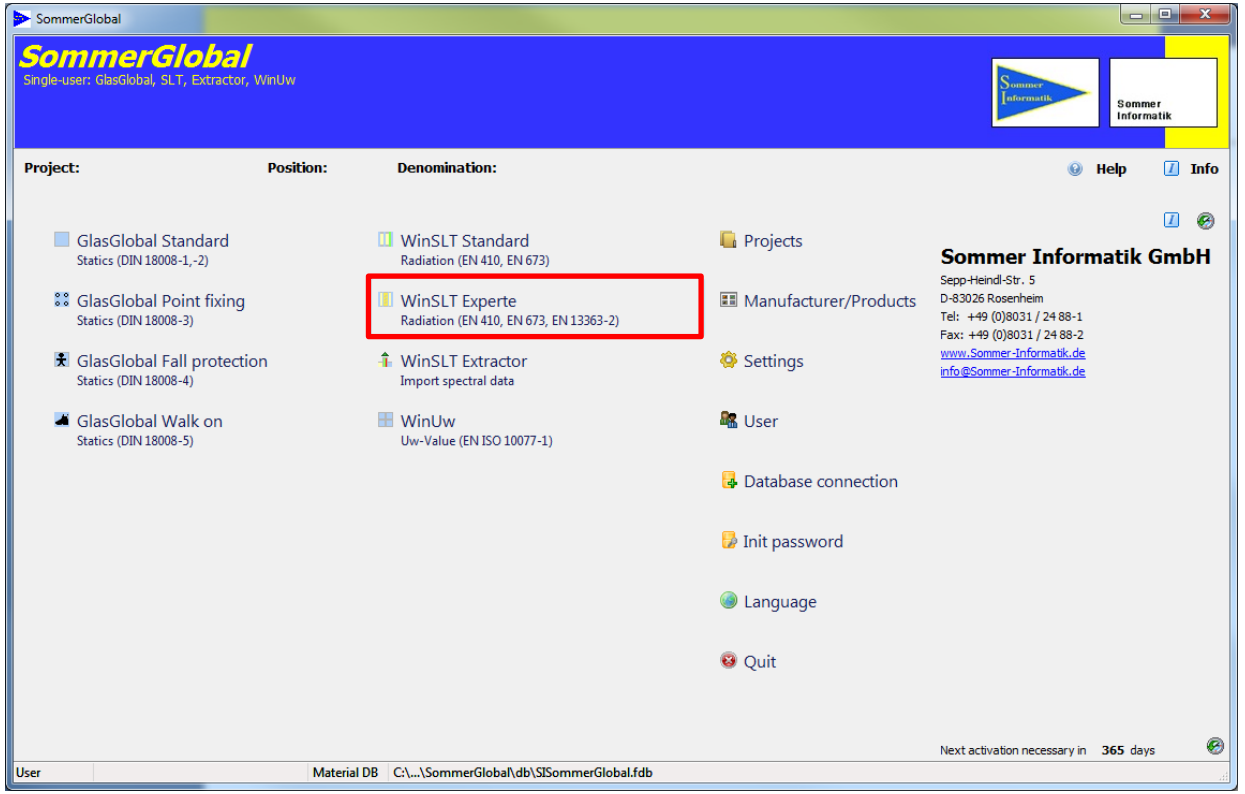
WinSLT

The software for calculating heat transfer coefficients, solar radiation and light transmittance



Start project

To start a project, please open WinSLT in the start menu



Program structure

Toolbar

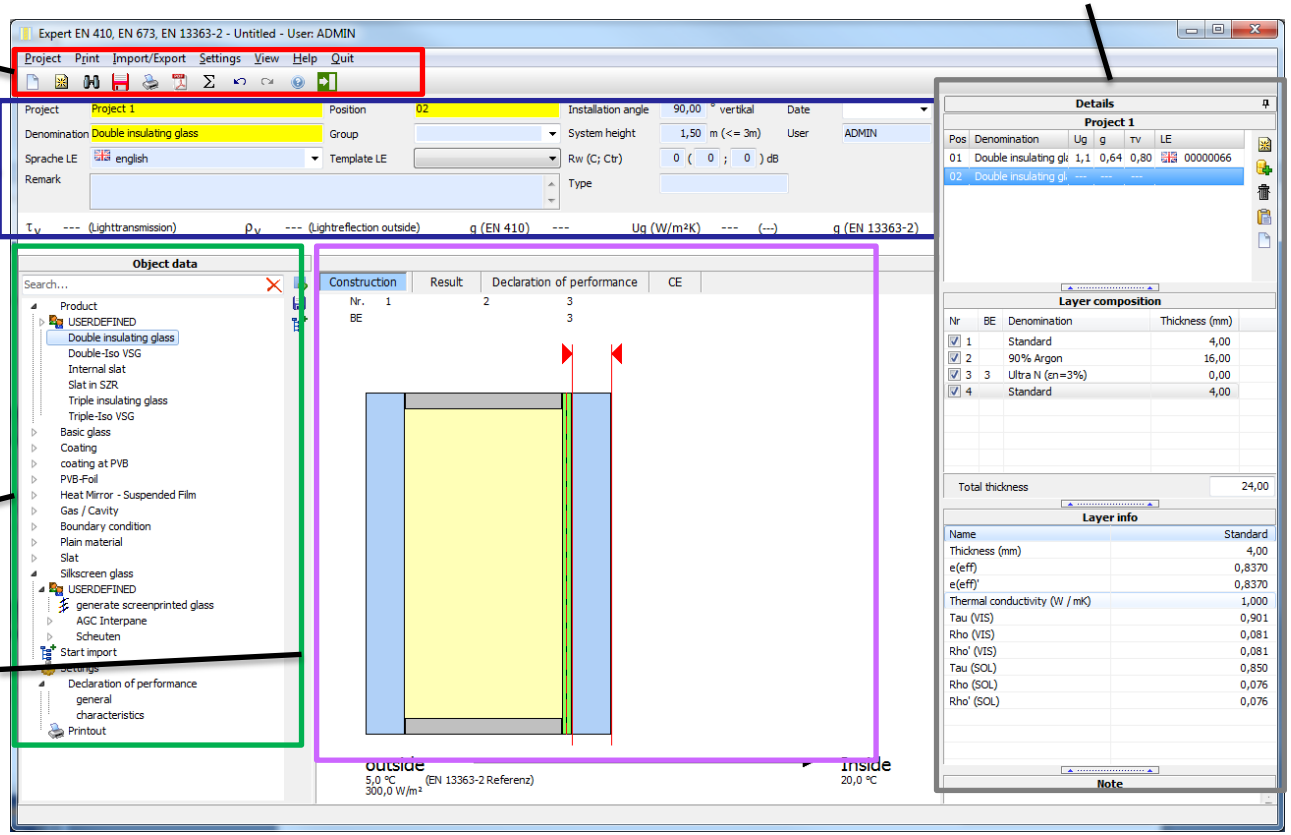
Project details

The program can be splitted in 5 parts

Object data

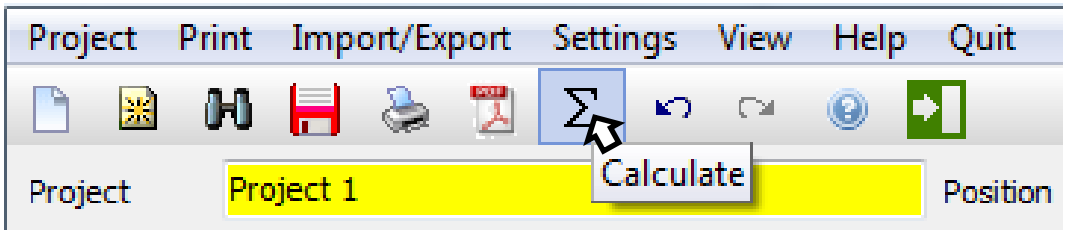
Construction

Details



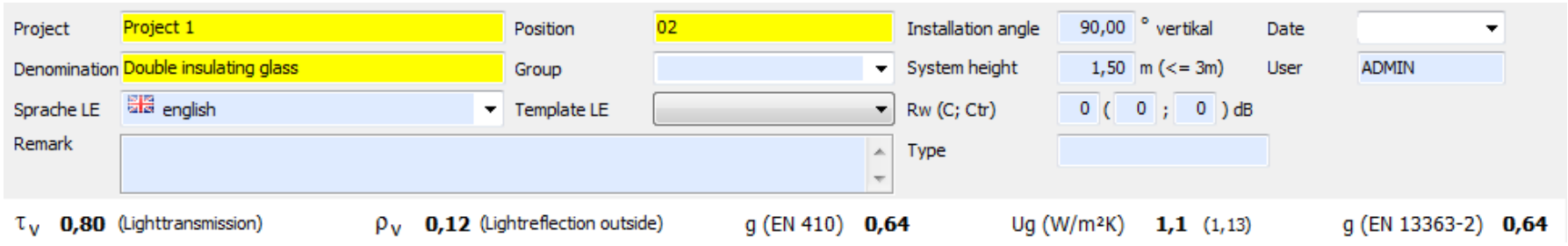
Program structure

- basic functions can be found in the toolbar
- if your cursor is on one symbol, a hint will display to explain the function



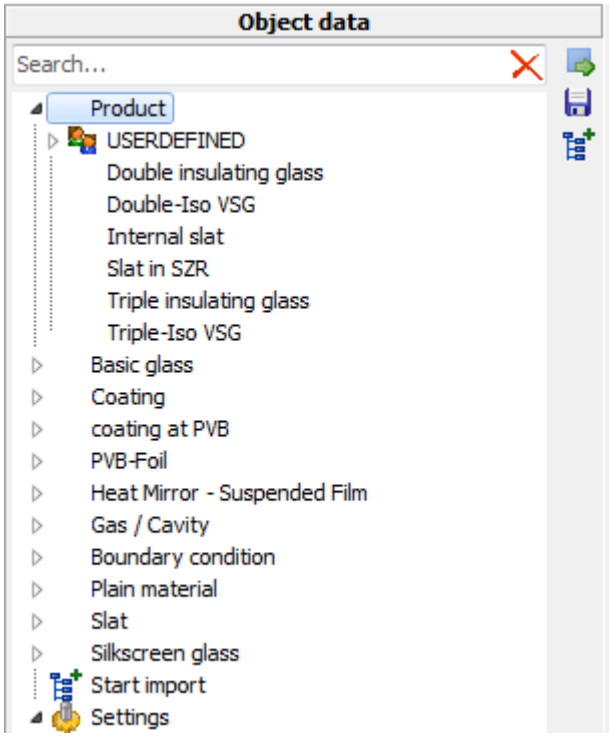
Select program details

- program information and designations can be set on the top of the project
- you will also find the results of the calculation below the details



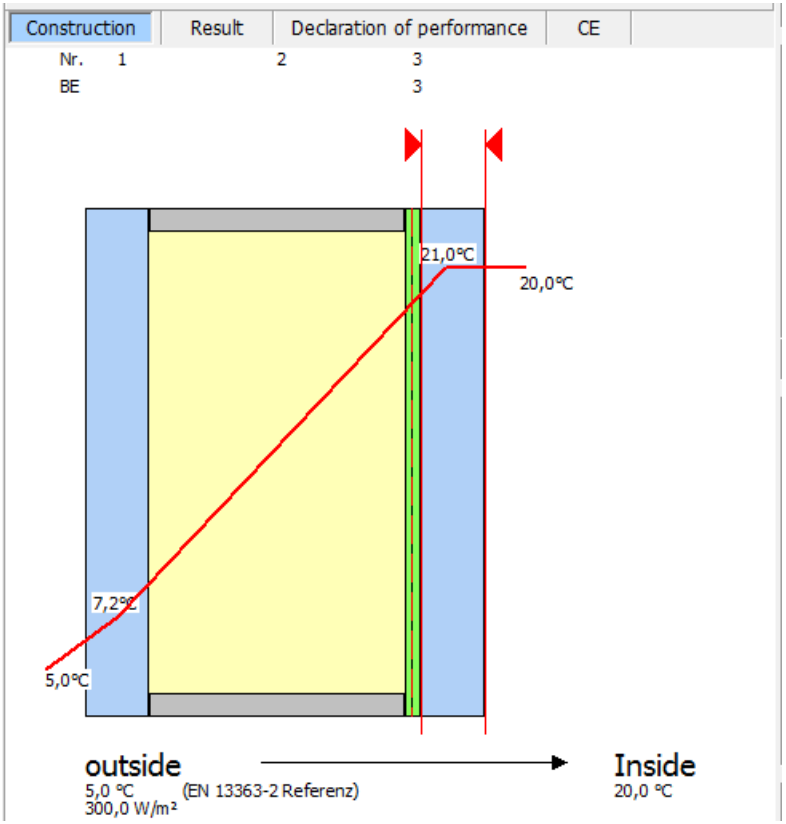
Object data

- the different materials and components can be found in the object data
- it is helpful to go through the categories one after another
- in case of there is no suitable material, you can also create userdefined components



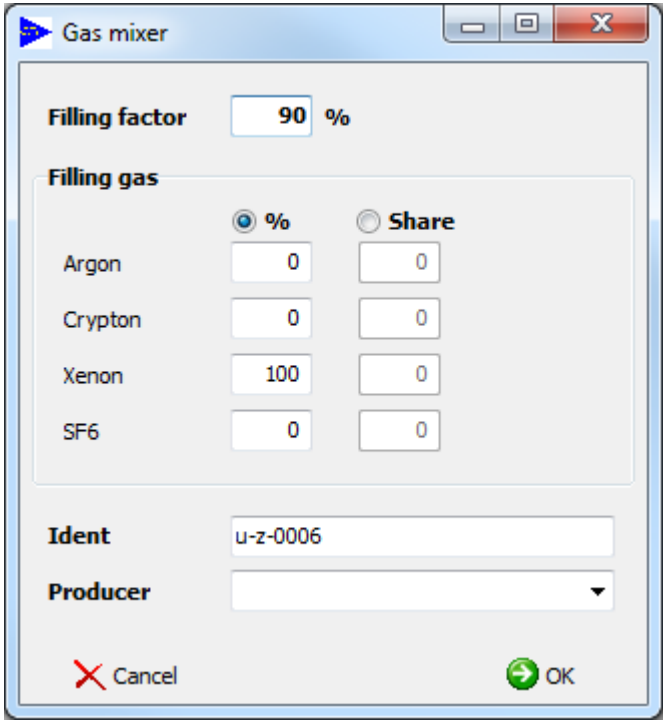
Construction

- the products can be add to the construction with a double click or drag‘n‘drop
- the construction is displayed graphically
- thickness can be changed with a double click on the layer
- more functions can be selected with a right mouse click



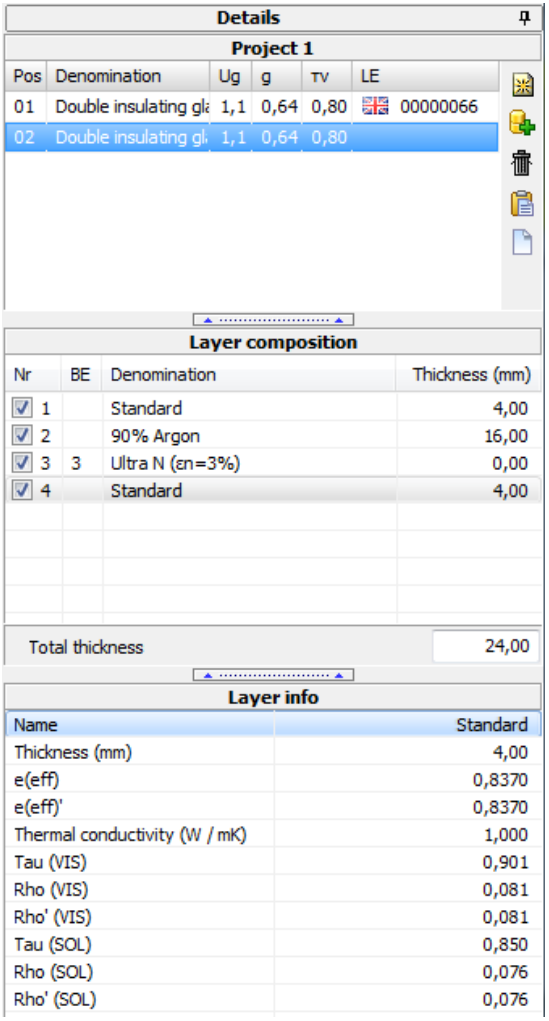
Space gap

- the gas mixer allows the creation of individually gases
- the filling factor can be changed
- the user defined gas can be found in the object data and is available for the use in other projects



Details

- details of the construction can be seen on the right
- the different constructions are listed and can be opened with a double click to edit or view the project
- layer compositions can be add or taken out for calculations by setting the check mark
- layer info shows the parameters for the selected layer



Result

- a clearly arranged printout shows all values on one sheet
- graphics for spectral data and the glazing with its temperatures makes it more easy to analyze your project

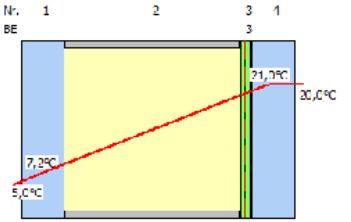
Calculation SommerGlobal
Double insulating glass

Project:
Position: 01

Layer composition (outside to inside)

Number	BE	Denomination	mm
1		Standard	4,00
2		90% Argon	16,00
3	3	Ultra N (εn=3%) *	
4		Standard	4,00
* USERDEFINED			24,00

Rw (C;Ctr) dB = npd



Transmission, reflexion, absorption

ρ_v = 0,12 (Light reflection factor outside)
ρ'_v = 0,11 (Light reflection factor inside)
ρ_e = 0,26 (direct radiation reflection factor outside)
ρ'_e = 0,26 (direct radiation reflection factor inside)
α_e 1 = 0,10; 3 = 0,09 (direct radiation absorption factor)

T_{UV} = **0,32** (ultraviolet transmittance)
T_v = **0,81** (Light transmission)
T_e = **0,56** (direct radiation transmission factor)
R_a = 98 (general color rendering index (CRI))

EN 410

SC = 0,73 (Shading Coefficient, g/0,87)
b-Faktor = 0,80 (VDI 2078, g/0,80)

q_i = **0,08** (secondary heat inside)
g = **0,64** (Total energy transmission factor)

EN 673 Installation angle = 90° vertikal

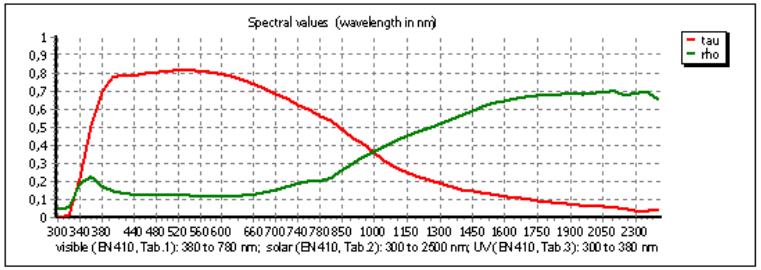
U_g = **1,1** **W/m²K** (Heat transfer coefficient)

EN 13363-2 T_e = 5,00 °C T_i = 20,00 °C E_s = 300,00 W/m² System = 1,50 m

g_{th} = 0,047 (Thermal radiation factor)
g_c = 0,035 (Convection factor)
g_v = 0,000 (Ventilation factor)

$h_{c,e}$ = 18 W/m²K $h_{c,i}$ = 3,6 W/m²K
q_i = **0,082** (secondary heat inside)
g = **0,64** (Total energy transmission factor)

Benutzerdefinierte Materialien werden verwendet.



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Building physics highlights of the Sommer Informatik GmbH:

- WinIso 2D – Calculation of two-dimensional heat flow
- WinSLT – Professional Software for light transmission
- GlasGlobal – Glass statics according to DIN 18008
- WinIso 3D – Calculation of three-dimensional heat flow