

# PLEXIGLAS HEATSTOP® XT

Reduces heat buildup indoors  
Cuts air-conditioning costs



Factory unit glazed with double-skin light domes

## Before:

Outer skin:  
PLEXIGLAS® XT White  
WN670 (01670)

Inner skin:  
PLEXIGLAS® XT White  
WN670 (01670)

Light transmission 59%

**64%**  
Heat buildup  
indoors



## Now:

Outer skin:  
PLEXIGLAS HEATSTOP® XT  
WZ001

Inner skin:  
PLEXIGLAS® XT Clear  
0A000 (20070)

Light transmission 47%

**32%**  
Heat buildup  
indoors

### Important note:

50% less heat buildup indoors due to solar energy, using PLEXIGLAS HEATSTOP® XT

## Material

PLEXIGLAS HEATSTOP® XT WZ001 is a new translucent grade of polymethyl methacrylate (PMMA) for roof glazing. It reflects a large proportion of incident solar energy due to its unique permanent coating. The material's good light transmission and excellent light diffusion ensure uniform lighting indoors. Applications: light domes, conservatories, barrel vaults, bus shelters and striplighting.

## Model Calculations by Cologne University of Applied Sciences

The Institute for Lighting and Structural Engineering at Cologne University of Applied Sciences performed model calculations under simulated conditions, comparing PLEXIGLAS HEATSTOP® XT glazing with standard glazing consisting of PLEXIGLAS® XT White WN670 (01670). The study was based on a standardized factory unit with double-glazed skylights and indoor daylight illuminance according to DIN 5034. The German heat insulation regulations for buildings with low indoor temperatures were also taken into account. According to these regulations, the room temperature is not to drop below 16 degrees Celsius in the course of the year nor rise above 26 degrees Celsius.

The model calculations provided the following results under Central European climate conditions:

### Results of model calculations by Cologne University of Applied Sciences

	Skylights made of PLEXIGLAS® XT White WN670 (01670) and PLEXIGLAS® XT Clear	Skylights made of PLEXIGLAS HEATSTOP® XT and PLEXIGLAS® XT Clear
Glazed proportion of entire roof	11%	17%
Comparison of heating requirements	100%	104%
Comparison of cooling requirements	100%	64%
Comparison of solar load	100%	72%
Number of hours with temperatures above 26 °C, without cooling	272	186

® = registered trademark

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