THERMINCOAT®

ThermINCoat Integration on Room Facing Surface - Manufacturer Application Benefits

1 Optimised Thermal Barrier at Point of Occupant Interaction

Applying ThermINCoat to the interior-facing surface creates a final thermal barrier between the indoor space and the glazing system. This surface is most sensitive to radiant heat exchange with occupants, furniture, and internal heating systems.

- Real-World Impact:
- Prevents cold radiation in winter.
- Reflects radiant heat from heaters back into the room.

2 Enhanced Surface Temperature

Reduces Cold-Glass Effect

Surface #4 typically has the lowest temperature in winter. ThermINCoat helps raise and stabilise this temperature by reducing radiative and conductive losses.

- Real-World Impact:
- Eliminates cold-wall sensation near glazing.
- Reduces need for radiators under windows.

3 Heat Dispersion Across the Room

Facing Surface

ThermINCoat disperses retained heat laterally across the surface, preventing uneven temperatures and improving thermal uniformity.

- Real-World Impact:
- No thermal hot/cold spots.
- HVAC systems operate more efficiently.

4 Reflects Indoor IR Radiation

Thermal Recycling

ThermINCoat reflects longwave infrared radiation (heat) emitted from people and objects back into the room, reducing heat loss.

- Real-World Impact:
- Less energy loss through glazing.
- Greater retention of ambient heat in winter.

5 Condensation Risk Significantly Lowered

By raising the surface temperature of the room-facing pane, ThermINCoat helps keep glazing above dew point in most conditions, reducing condensation risk.

- Real-World Impact:
- Lower risk of mould and moisture damage.
- Reduces maintenance and improves air quality.

6 Condensation Risk Significantly Lowered

Because ThermINCoat is applied externally to the room-facing surface, it does not interfere with spacer bars, gas fills, or IGU sealing, and can be integrated into production lines without altering the IGU cavity.

- Real-World Impact:
- Lower complexity than cavity-integrated solutions.
- Suitable for both double and triple glazed units.

7 Still Enables Improved Declared U-Values

Surface #4 film contributes to total resistance when calculated using EN ISO 10077. This supports improved declared U-values and can bring double-glazed units close to triple-glazed performance.

- Example Results:
- From 1.1 to 0.78 W/m²·K (double glazing)
- From 1.0 to 0.73 W/m²·K (triple glazing)

8 Summary Table – Benefits of ThermINCoat on Room-Facing Surface

Benefit Area	Impact When Applied to Room Facing Surface (Surface #4)
Thermal Comfort	Warmer inner glass, reduced cold radiation
HVAC Efficiency	Less energy lost to glass, IR reflected back to room
Surface Temperature	Fewer cold spots and edge cool-downs
Condensation Control	Minimised inner pane condensation risk
Production Simplicity	Easy to apply in factory; no interference with IGU sealing
Declared Performance	Improved U-value (~0.73–0.83 W/m²·K achievable)
Occupant Experience	Noticeably more comfortable to stand or sit near