

Warm Edge Spacer

1. Definition

Warm edge spacer separates, depending on the dimension of the interspace, the glass panes at the edge of the glass providing improved thermal performance and condensation resistance with the reduction of thermal bridge at the edge. Warm edge spacer used for sealed insulating glass unit is in accordance to the definition within ISO 10077-1.

2. Raw Materials

Warm edge spacer shall be co-extruded with two materials, plastic with a layer of thermal barrier foil. Plastic material shall be made of Polypropylene and thermal barrier foil shall be a thin layer of 0.09mm stainless steel bordering the plastic material.

The quality of warm edge spacer shall be Technoform Warm Edge Spacer SP 12/13 or equivalent.

3. Product Performance Requirements

- 1) No discoloration and glossiness on plastic surface of warm edge spacer identified upon 4,000 hours of UV exposure in accordance to DIN EN ISO 4892-2.
- 2) Warm edge spacer shall be Restriction of Hazardous Substance (RoHS) compliant.
- 3) Warm edge spacer shall be Passive house certified with efficiency class of B and better.
- 4) Warm edge spacer shall have a volatile loss of <0.05% in accordance to DIN EN 1279-6.
- 5) Warm edge spacer shall have a two-box characteristic value, $\lambda_{eq,2B}$ of ≤ 0.31 W/mK.

4. Sealed insulating glass unit with warm edge spacer

- 1) Warm edge spacer used for sealed insulating glass unit shall be bended on all 4 corners by a mechanical bending process commonly adopted by glazing fabricators.
- 2) Sealed insulating glass unit with warm edge spacer shall pass moisture penetration test, average $\leq 20\%$, in accordance to EN 1279-2.
- 3) Sealed insulating glass unit with warm edge spacer shall pass air leakage test, < 1% annually, in accordance to EN 1279-3.
- 4) Representative linear heat transfer coefficient, Ψ of the edge of glass in the following sealed insulating glass shall meet or exceed the following values
 - a. Windows
 - i. Double sheet insulating glass ≤ 0.049
 - ii. Triple sheet insulating glass ≤ 0.044
 - b. Façade
 - i. Double sheet insulating glass ≤ 0.068
 - ii. Triple sheet insulating glass ≤ 0.063

5. Environmental Performance Requirement

Warm edge spacer used in sealed insulating glass unit shall be a green product certified by the Singapore Green Building Council with a rating of 2 ticks or more

<https://web.sgbc.online/public/product>