Superior solar control and thermal insulation
Double function for your own comfort: SUPERIOR solar control and thermal insulation. With the new **SGS PLANITHERM**® 4S Evolution you can enjoy the perfect temperature and ideal light no matter the season. The summer-winter comfort function maintains a pleasant atmosphere all year long, and the reflexivity provides a comfortable level of privacy.

**Applications**

The characteristics of **SGS PLANITHERM**® 4S Evolution glass enable the use of product both in the residential (individual houses, blocks of flats), and in non-residential sector (office buildings, hotels and restaurants, trade centers, schools etc).

**Types of Applications:**

**SGS PLANITHERM**® 4S Evolution glass is dedicated for the windows of any new or renovated building.
- Windows and skylights
- Terrace doors and other exterior door types

**SGS PLANITHERM**® 4S Evolution combines perfectly with all types of joinery: PVC, wood, aluminum; also in renovation projects, the glazing units with **SGS PLANITHERM**® 4S Evolution may be used in the existing frames.

**Description**

**SGS PLANITHERM**® 4S Evolution coatings are obtained through cathodic sputtering deposits in specific installations (magnetron) under high vacuum and controlled atmosphere. These coatings are featured by low emissivity and have double qualities: they reflect the infrared radiation, characteristic to the warmth derived from the heat and at the same time, reflect a large part of the solar energy.

**SGS PLANITHERM**® 4S Evolution glass performances have been improved, providing an increased sun protection and enhanced aesthetics, through lowering the external reflection level.
Insulating Glazing
PLANITHERM® 4S Evolution coatings are always placed on the #2 face of the insulating glazing.

Lamination
PLANITHERM® 4S Evolution glass can be laminated with one condition: the coating shouldn’t be in contact with the PVB film.

Mounting of Glazing
The PLANITHERM® 4S Evolution glazing has to be mounted according to the standards and general guidelines for processing.

Benefits
Superior comfort in summer and thermal insulation in winter

PLANITHERM® 4S Evolution turns you into a passive witness of the seasons inside your home, ensuring your ideal thermal comfort regardless of weather changes. With PLANITHERM® 4S Evolution you lose the sense of time thanks to the ambiently environment created by the constant optimum temperature and ideal light input throughout the year.

Summer
The ideal temperature for your house - comfort and coolness are ensured even in hot days.

PLANITHERM® 4S Evolution enables a perfect symbiosis between the infusion of natural light and cool inside thanks to the reflection degree of up to 62%, even in the case of large glass surfaces. This benefit of the PLANITHERM® 4S Evolution glass to maintain an optimal temperature indoors is reflected into a lower energy consumption due to the diminished rate of using the air conditioning.

PLANITHERM® 4S Evolution sets new window design standards to the detriment of unaesthetic blinds, while providing a light input essential to the quality of life.

Also, the increased thermal comfort enables the use of large glazed surfaces by accessing new contemporary architectural exterior design trends.

Winter
PLANITHERM® 4S Evolution represents a further step on the evolutionary scale of the PLANITHERM family comfort products, providing a three times higher insulation than ordinary double glazing. The main advantages during cold season are the warmth and the comfort ensured by this.

With PLANITHERM® 4S Evolution, heat loss will decrease and the cold areas close to windows will be imperceptible.

Spring
The double-glazed window with PLANITHERM® 4S Evolution provides all the necessary comfort regardless of climate changes characteristic to the season.

Autumn
With PLANITHERM® 4S Evolution the transition towards the cold weather becomes imperceptible, thus being ensured the comfort and cutting of early heating costs.
Substantial savings – an effective thermal insulation means reduced energy consumption. With the PLANITHERM® 4S Evolution, the cooling and heating costs are significantly reduced!

### Amounts saved annually* (RON)
Using thermally insulated Planitherm® 4S Evolution glass, Comparing to the simple Clear glass (one glazing unit)

<table>
<thead>
<tr>
<th>House type</th>
<th>Studio</th>
<th>Apartment 2 rooms</th>
<th>Apartment 3 rooms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount Saved (RON)</td>
<td>1028</td>
<td>1460</td>
<td>2374</td>
</tr>
</tbody>
</table>

### Amounts saved annually* (RON)
Using thermally insulated Planitherm® 4S Evolution glass, Comparing to the classical thermally insulated Clear glass Clear (double glazing units)

<table>
<thead>
<tr>
<th>House type</th>
<th>Studio</th>
<th>Apartment 2 rooms</th>
<th>Apartment 3 rooms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount Saved (RON)</td>
<td>469</td>
<td>779</td>
<td>1004</td>
</tr>
</tbody>
</table>

### Amounts saved annually* (RON)
Using thermally insulated Planitherm® 4S Evolution glass, Comparing to the classical thermally insulated Clear glass LowE (double glazing units)

<table>
<thead>
<tr>
<th>House type</th>
<th>Studio</th>
<th>Apartment 2 rooms</th>
<th>Apartment 3 rooms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount Saved (RON)</td>
<td>203</td>
<td>456</td>
<td>557</td>
</tr>
</tbody>
</table>

*Calculations are performed using the PARASOL® program, the margin of error being of approx. +/- 5%. Results obtained will vary depending on the winter climatic area, summer climatic area, glazing weight, shape and facing of building etc. The table values represent the money savings that are get through the replacement of other more advanced glazing, being attained based on an energy price of RON 0.4330 / KWh (CD tariff - monomar type).

*The thermal transfer coefficient U=1.0 W/m²K (for a standard thermal insulating window) decreases the heating expenses and contributes to the environment protection, through cutting the CO₂ emissions.

### Performances *

<table>
<thead>
<tr>
<th></th>
<th>Light transmission TL [%]</th>
<th>Solar factor, g</th>
<th>Thermal transfer coefficient, U [W/mpK]</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PLANITHERM® 4S Evolution</strong></td>
<td>60</td>
<td>0.38</td>
<td>1.0</td>
</tr>
</tbody>
</table>

* DGU: 4mm PLANITHERM® 4S Evolution, face #2 – 16 Argon 90% - 4mm Planilux®
Available thickness

<table>
<thead>
<tr>
<th></th>
<th>4 mm</th>
<th>6 mm</th>
<th>8 mm</th>
<th>10 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>5mm</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>Upon demand</td>
</tr>
</tbody>
</table>

**Additional Features**

The windows with 5mm PLANITHERM® 4S Evolution may also fulfill additional features in combination with other types of glass:

**Safety and Security**
- In combination with 5mm STADIP®, 5mm STADIP® PROTECT
- In laminated form 5mm STADIP® 4S Evolution

**Acoustic Insulation**
- In combination with 5mm STADIP® SILENCE

**Rules and Regulations**

5mm PLANITHERM® 4S Evolution meets the durability requirements of the European standard C category EN 1096, 1 and 2.

The Saint-Gobain Glass Romania Partner

5mm PLANITHERM®, 5mm PLANILUX®, 5mm STADIP®, 5mm STADIP® PROTECT, 5mm STADIP® SILENCE, 5mm DECORGLASS® and all the other projects and logos are trademarks of Saint-Gobain.