S-LEC™ Sound Acoustic Film

Interlayer Film for Automobiles
A laminated glass with a flexible and intense sheet of interlayer film, with performance that surpasses the qualities of a conventional mono-layer glass.

This glass has become essential in today’s highly advanced car models. SEKISUI S-LEC™ Film is a polyvinyl butyral film (PVB) resin with superior transparency and adhesive quality, perfect for realizing the various functions required for automotive glass.

In addition to safety, crime prevention and UV filtering, the film features many different functions to enhance the interior environment, helping to create comfortable and efficient car models.

SEKISUI S-LEC™ Film - industry leader in automotive interlayer films.
**S-LEC™ Film Key Performance**

### Keeps all shattered bits in one

Broken glass shatters into pieces, flying in all directions. The same is true for tempered glass. When accidents occur, drivers lose visibility with a smashed windshield. However, damage could become extremely serious if occupants crash through a windshield. S-LEC™ Film, with high impenetrability, will protect the glass from shattering, saving visibility by minimizing the crash to only a spider web-like crack on the windshield. As a result, even if glass does break, fragments adhere to the interlayer film, preventing the shattering, and minimizing the likelihood of occupant injury.

### S-LEC™ versus Hammers

Glass is fragile. Even tempered glass could break easily. Car thieves can break glass in an instant. However, tremendous intensity is added with S-LEC™ Film between the two sheets of glass. Thieves cannot break the glass easily when laminated glass with S-LEC™ Film is used.

### Sun screen glass

Sunbeams contain ultraviolet rays which can cause sunburns and color fade for car interiors. The rays can also cause skin cancer and retinal damage. With the growing hole in the ozone layer, the threat towards ultraviolet rays is becoming increasingly alarming than ever before. S-LEC™ Film filters out more than 99% of these harmful ultraviolet rays. S-LEC™ Film is the key to maintaining the beauty of both passengers and the car interior.
Cutting irritation down to one-third.

Sound Acoustic
S-LEC™ Sound Acoustic Film

Car noises travels through glass.
Ever turned off the engine and sighed with relief after a long drive? This is the moment when many drivers realize how much noise penetrates into a car when driving.
S-LEC™ Sound Acoustic Film brings peace and calmness to the interior of a car by dramatically reducing all noises coming through the glass; including unpleasant engine and wind noise.
S-LEC™ Sound Acoustic Film, with SEKISUI multi layer extrusion technology, has succeeded by improving the level of sound acoustic performance by adding an extra layer of special polyvinyl butyral (PVB) resin between standard S-LEC™ interlayer films.
Maintaining intensity, and ability to prevent glass from shattering to pieces as standard interlayer films, S-LEC™ Sound Acoustic Film is a multifunctional interlayer film which brings safety and peace to your car.

Vibration
Minimizing vibration sounds from engine compartments.

Vibration generates sound. In case of cars, the engine compartment generates most of the sound. A 100-500Hz vibration causes car body components, including glass on all sides of your car, to generate low-frequency sounds. As the graph indicates, vibration-suppressing S-LEC™ Sound Acoustic Film cuts this noise and vibration more effectively than any other conventional interlayer film.

Noise
Wind noise intruding through glass.

A major source of noise during high-speed driving is wind noise. Most noise pass through glass to the inside of your car. The sound frequency of wind, between 1000-5000Hz is the most sensitive sound range to humans. The graph indicates that the S-LEC™ Sound Acoustic Film excels at shielding noise, particularly in the frequency range just mentioned.
S-LEC™ Sound Acoustic Film

Feature

Wind noise and high frequency sound is effectively reduced for a quieter vehicle interior. Engine noise and low frequency vibration, along with noises of rain falling on roofs or windshields can also be minimized.

Comparison of Acoustical Performance

<table>
<thead>
<tr>
<th>Composition</th>
<th>ISO 717-1</th>
<th>ASTM E413</th>
<th>JIS A 4706</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rw (C, Ctr)</td>
<td>30 (-2 ; -3)</td>
<td>27</td>
<td>25</td>
</tr>
<tr>
<td>Clear Glass 4mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clear Glass 2mm / Regular PV8 0.76mm / Clear Glass 2mm</td>
<td>31 (-1 ; -3)</td>
<td>31</td>
<td>25</td>
</tr>
<tr>
<td>Clear Glass 2mm / Sound Acoustic Film 0.76mm / Clear Glass 2mm</td>
<td>32 (-1 ; -4)</td>
<td>32</td>
<td>30</td>
</tr>
</tbody>
</table>

Product Specification

<table>
<thead>
<tr>
<th>Product</th>
<th>Thickness (mm)</th>
<th>Length (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-LEC™ Sound Acoustic Film</td>
<td>0.76 (30mil)</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td></td>
<td>250</td>
</tr>
<tr>
<td></td>
<td></td>
<td>510</td>
</tr>
</tbody>
</table>

Color : Available in both Clear and Shade. Width : Available upon request. Length / Thickness : Please consult your SEKISUI Sales Representative.

Data tested by SEKISUI SEIKI CO, LTD. is not responsible for the data or any damage related to the figures above.