EPS SILVER POLYMERS
Better thermal insulation for the construction industry
WHY CHOOSE EPS SILVER POLYMERS?

Our range of EPS Silver polymers provides significantly improved thermal insulation properties, which meet or exceed the current requirements for the construction industry.

EPS Silver polymers are available in both flame retardant and non-flame retardant grades and can be used for many thermal and thermal-acoustic insulation applications.

WHY INSULATE BUILDINGS?

Insulating buildings is one of the most cost effective ways to reduce energy demand and to achieve resource efficiency.

Typical heat losses which can be reduced are:

- Up to 25% through the roof
- Up to 25% through the doors and windows
- Up to 35% through outside walls
- Up to 15% through ground floors
EPS SILVER
PRODUCT RANGE

SF grade range uses polymeric FR in place of HBCD as flame retardant. Flame retardant EPS Silver polymers are tested in accordance with DIN 4102 B1 and Euro Class E fire requirements.

An equivalent, non-flame retarded range of EPS Silver products is also available: SR400LR, SR400R, SR500R, SR700R, SR800R.

<table>
<thead>
<tr>
<th></th>
<th>Prefoam Density (kg/m³)</th>
<th>Moulded Density (kg/m³)</th>
<th>EPS Bead Size (mm)</th>
<th>Typical Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>S400LR, SF400LR</td>
<td>20</td>
<td>16-25</td>
<td>1.6-2.5</td>
<td>Low density insulation board with enhanced thermal insulation properties.</td>
</tr>
<tr>
<td>S400R, SF400R</td>
<td>17</td>
<td>11-25</td>
<td>1.0-1.6</td>
<td>Very low density insulation board with enhanced thermal insulation properties. Can be elastified for thermal and acoustic insulation.</td>
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<tr>
<td>S500R, SF500R</td>
<td>20</td>
<td>15-35</td>
<td>0.7-1.0</td>
<td>Medium to high density insulation board and shape moulding with &gt;10mm walls with enhanced thermal insulation properties</td>
</tr>
<tr>
<td>S700R, SF700R</td>
<td>22</td>
<td>17-40</td>
<td>0.4-0.7</td>
<td>High density shape moulded boards with enhanced thermal insulation properties</td>
</tr>
<tr>
<td>S800R, SF800R</td>
<td>25</td>
<td>22-50</td>
<td>0.3-0.4</td>
<td>Medium to high density for high definition shape moulding with enhanced thermal insulations properties</td>
</tr>
</tbody>
</table>
EPS SILVER PROPERTIES

EPS Silver is a material with significantly better insulation properties compared to standard white EPS. As a result of the addition of special infrared absorbers or reflectors, the contribution of heat radiation on the overall thermal conductivity has been largely eliminated, particularly in the low density area.

The figure shows that at a foam density of 15 kg/m³, EPS Silver has a thermal conductivity of about 0.032 W/m.K. To achieve the same thermal conductivity with conventional EPS, a foam density of over 30 kg/m³ would be required.

At the same density of 15 kg/m³, EPS Silver has a thermal conductivity that is about 20% better compared to standard EPS. As a result, an EPS Silver insulation board at this density with the same thermal resistance is about 20 per cent thinner compared to a standard EPS insulation board.

The use of EPS Silver is therefore especially beneficial in applications where thinner insulation can be an advantage such as:
- Internal insulation
- External insulation
- Cavity wall insulation
- Floor insulation
- Roof insulation (between or over the rafters)

To optimise their processing and application properties, please consult our product-data sheets and talk to an INEOS Styrenics technical representative before you trial our EPS Silver polymers.
**INEOS STYRENICS AT A GLANCE**

- 350,000 mt EPS production
- 400 people employed
- 450 million Euro turnover

INEOS Styrenics is one of Europe's largest producers of expandable polystyrene (EPS), supplying our customers with raw material for their expansion and moulding for products in the building and packaging sectors.

Formed originally as a joint venture with Nova Chemicals in Europe on October 1st, 2005 and expanded into a global joint venture in 2007, INEOS Styrenics is now a wholly owned subsidiary of INEOS, a global manufacturer of petrochemicals, speciality products and oil products.

INEOS Styrenics is an innovative company committed to customer satisfaction, health, safety and the environment. INEOS Styrenics is focused on producing high quality Expandable Polystyrene (EPS) for the building, construction and packaging industries.

We have more than 30 years of experience in the production, development and sales of EPS products. Our expertise is recognised and appreciated by our customers.