## Technical properties

<table>
<thead>
<tr>
<th>Physical properties</th>
<th>Test Method</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density</td>
<td>ASTM D 1678</td>
<td>18-25 kg/m³</td>
</tr>
<tr>
<td>Cell structure</td>
<td>Microscope liquid measurement</td>
<td>Uniform, small, closed cell</td>
</tr>
<tr>
<td>Color</td>
<td>Anthracite</td>
<td></td>
</tr>
<tr>
<td>Thermal conductivity (λ)</td>
<td>EN ISO 8497</td>
<td>0,038 at 40°C according to EN 14313</td>
</tr>
<tr>
<td>Minimum closure temperature (0%)</td>
<td>EN 13501-1</td>
<td>0% - 95%</td>
</tr>
<tr>
<td>Water-vapour diffusion resistance (μ)</td>
<td>EN 13501-1</td>
<td>&gt; 10.000</td>
</tr>
<tr>
<td>Odour</td>
<td>Neutral</td>
<td></td>
</tr>
<tr>
<td>Compression strength</td>
<td>EN 844 / DIN 53577</td>
<td>Excellent</td>
</tr>
<tr>
<td>Fire performance</td>
<td>Germany DIN 14410</td>
<td>0,1</td>
</tr>
<tr>
<td>Duct</td>
<td>EN 13501-1</td>
<td>0,17-0,9</td>
</tr>
<tr>
<td>Sheet</td>
<td>EN 13501-1</td>
<td>0,61-0,9</td>
</tr>
<tr>
<td>Flame and toxicity</td>
<td>EN 13501-1</td>
<td>Class 1</td>
</tr>
<tr>
<td>Fracture mechanics</td>
<td>EN 13467</td>
<td>No damage (1-2 hours and 0% moisture)</td>
</tr>
<tr>
<td>Non-compliance</td>
<td>EN 13501-1</td>
<td>Good</td>
</tr>
<tr>
<td>Chemical resistance</td>
<td>EN 13501-1</td>
<td>Good</td>
</tr>
<tr>
<td>Linear dimensions</td>
<td>EN 13501-1</td>
<td>Pass according to EN 13501-1</td>
</tr>
<tr>
<td>Dimensional stability</td>
<td>EN 13501-1</td>
<td>Pass according to EN 13501-1</td>
</tr>
</tbody>
</table>

ThermaFlex develops and manufactures products which help to save energy and which stimulate the use of alternative energy sources.

In the five ThermaFlex plants in The Netherlands, Poland, Russia, Thailand and Turkey, products are only made from modern plastics that are environmentally friendly in production, which are good to recycle and which, on combustion, do not release toxic substances.

The heating and cooling of buildings create the world’s most harmful CO2 emission. That’s exactly why professionally insulated pipes in heating and cooling are essential. At ThermaFlex, with over 35 years experience in this field, you always find the best, energy efficient and environmentally friendly solution. 

Taking care of energy and the environment

ThermaFlex develops and manufactures products which help to save energy and which stimulate the use of alternative energy sources.

In the five ThermaFlex plants in The Netherlands, Poland, Russia, Thailand and Turkey, products are only made from modern plastics that are environmentally friendly in production, which are good to recycle and which, on combustion, do not release toxic substances.

The heating and cooling of buildings create the world’s most harmful CO2 emission. That’s exactly why professionally insulated pipes in heating and cooling are essential. At ThermaFlex, with over 35 years experience in this field, you always find the best, energy efficient and environmentally friendly solution.
ThermaSmart PRO™ is a new and innovative Ultra Flexible insulation foam for all HVAC applications. The material has a good insulation value and meets the new European fire performance standards. It does not ignite, produces hardly any smoke and no toxic gases. Environmental friendly because of the 100% recyclability. The fully closed cell structure guarantees no risk of corrosion or water vapour into this insulation material.

A robust lightweight material that is easy to install. The excellent insulation choice! ThermaSmart PRO™ is easy to apply to all insulations with a very low risk of damaging the material. The 100% closed cell structure, the insulation value, the highest classification on fire safety and no emission of toxic elements make ThermaSmart PRO™ an energy saving, environmental friendly and safe product.

Main characteristics:
- Insulation value ($\lambda$): 0.038 W/mK at 40°C
- Temperature range: -80°C up to +90°C
- Reaction to fire: Euro class CL s1 d0 (EN13501)
- 100% closed cell structure
- Water-vapour diffusion resistance ($\mu$): >10,000

Advantages:
- Easy to install: lightweight, flexible and shape consistent
- Robust material: high puncture and tear resistance
- Excellent fire properties: no toxic gases, no drops and very low smoke in case of fire
- No risk of corrosion or fatigue because of the 100% closed cell structure
- High energy savings and reduction in CO₂ emission
- 100% recyclable
- One product for all applications

Tube insulation
- 6mm up to 30mm insulation thickness
- 6mm up to 40mm inner diameter
- Standard length: 2 meters

Tube insulation with self adhesive seam
- 9mm, 13mm and 20mm insulation thickness
- 6mm up to 40mm inner diameter
- Standard length: 2 meters

Tube insulation in coils
- 6, 9 and 13mm insulation thickness
- 6mm up to 40mm inner diameter
- Lengths from 14m up to 50m

Sheet insulation
- 9mm, 13mm and 20mm insulation thickness
- Standard width: 1 meter
- Also with self adhesive side available

Sheet insulation in coils
- 8, 10, 13, 15, 18, 20, 23, 25 and 30mm insulation thickness
- Standard width: 1 meter
- Also with self adhesive side available

Tube insulation in coils
- 6, 9 and 13mm insulation thickness
- 6mm up to 40mm inner diameter
- Lengths from 14m up to 50m

Advantages:
- Easy to install: lightweight, flexible and shape consistent
- Robust material: high puncture and tear resistance
- Excellent fire properties: no toxic gases, no drops and very low smoke in case of fire
- No risk of corrosion or fatigue because of the 100% closed cell structure
- High energy savings and reduction in CO₂ emission
- 100% recyclable
- One product for all applications