The most cost-efficient PUR/PIR roof insulation system for full-surface insulation below rafters provides an all-in-one highly efficient insulation and supporting structure, ideal for combination with insulation between rafters.

**ThCG/WLS 024 - diffusion-sealed design**
Diffusion-sealed design steep roof insulation system made of PUR/PIR high-performance rigid foam insulating material, CFC- and HCFC-free, application type PUR 024 DI, with a 50 µm aluminum outer layer on both sides for full-surface insulation below rafters with no thermal bridging, with two factory-made multi-layer wood strip inlays as a supporting structure (moisture barrier or airtight layer to be installed on site).

**Advantages:**
- Excellent insulating performance
- Ideal for combining with insulation between rafters
- Insulating substructure
- Material saving max. room volume
- No further substructure necessary
- Finished interior
- Good thermal insulation in winter and summer
- An optimized panel format makes for easy handling
- Easy installation, no mounting aids necessary
- Harmless from a biological and building ecology point of view, non-rotting, recyclable, mould- and mildew-resistant

**Improves the U-value by approx. 48 % - see next page for sample calculations**

**Formats:**
- External dimensions 2400 x 620 mm
- Fitting dimensions 2380 x 600 mm

**Edges:**
- Front end tongue+groove
- Long side stepped profile

Based on the enormous efficiency of our puren insulating elements, the clever elements below rafters will leave you with as much of your precious interior volume as possible, simultaneously providing an extremely high insulation performance.
Technical data: puren® UKD

<table>
<thead>
<tr>
<th>puren UKD roof insulation component ThCG/WLS 025 - diffusion-sealed design</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PUR/PIR rigid foam</strong></td>
</tr>
<tr>
<td><strong>Bulk density</strong></td>
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<tr>
<td><strong>Coefficient of vapour diffusion resistance</strong></td>
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<tr>
<td><strong>Thermal conductivity grade</strong></td>
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<td><strong>Application type</strong></td>
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<td><strong>Fire classification</strong></td>
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<td><strong>Temperature resistance</strong></td>
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<td><strong>Cover layers</strong></td>
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<td><strong>Edges</strong></td>
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<td><strong>External dimensions</strong></td>
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<td><strong>Fitting dimensions</strong></td>
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<tr>
<td><strong>Thicknesses in mm</strong></td>
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<tr>
<td><strong>Package content in m²</strong></td>
</tr>
<tr>
<td><strong>Recommended accessories for fastening</strong></td>
</tr>
<tr>
<td><strong>Recommendation</strong></td>
</tr>
</tbody>
</table>

**Examples for improving the U-value [W/(m²·K)] of the roof component using puren UKD and a traditional ThCG/WLS 035 insulation between rafters**

<table>
<thead>
<tr>
<th>Insulation between rafters/thickness in mm</th>
<th>Without puren UKD</th>
<th>With puren UKD</th>
<th>Improvement of U-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>WLS 035 100</td>
<td>U-value 0.45</td>
<td>U-value 0.220</td>
<td>approx. 48 %</td>
</tr>
<tr>
<td>WLS 035 120</td>
<td>U-value 0.38</td>
<td>U-value 0.200</td>
<td>approx. 44 %</td>
</tr>
<tr>
<td>WLS 035 140</td>
<td>U-value 0.33</td>
<td>U-value 0.183</td>
<td>approx. 41 %</td>
</tr>
<tr>
<td>WLS 035 160</td>
<td>U-value 0.29</td>
<td>U-value 0.169</td>
<td>approx. 38 %</td>
</tr>
</tbody>
</table>

*Structure: Rafter width: 80 mm, distance between rafters: e = 700 mm, insulation between rafters: ThCG/WLS 035.*$

* Thermal transfer resistances $R_v$ and $R_w$ and a 19 mm wood paneling are taken into account. Other project-specific features such as those in accordance with DIN EN ISO 6946 are not taken into account.*