RUAG Space developed COOLCAT B-R50 specifically for thermal insulation in cryogenic applications. With **lowest infrared emittance** on its **outer surface**, it is optimized for **cryogenic environment**.

- It is composed of a 25 µm polyester foil carrier, **double-sided aluminized** and a **high purity** pressure sensitive acrylic adhesive.
- It is **most recommended** for the closing of **superinsulation joints**, for example of COOLCAT 2 NW layups.
- The procedure for cryogenic tests follows **AFERA** as far as required and is adapted to cryogenic temperatures as necessary.
- The tape meets the standard **outgassing requirements for satellites** of the **European Space Agency**.

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**Emittance of aluminized tapes**  
*(low value required for good radiative insulation)*

<table>
<thead>
<tr>
<th>Infrared emittance</th>
<th>COOLCAT B-R50</th>
<th>25 µm Second Surface Mirror tape</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.03</td>
<td>0.57</td>
</tr>
</tbody>
</table>

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**Diagram:**  
- **Alu coating**  
- **Mylar Carrier**  
- **Adhesive**  
- **Mylar carrier**  
- **Alu coating**  
- **Adhesive**
Application of COOLCAT B-R50

For example:
Superinsulation joints (butt joints) closed with small pieces of COOLCAT B-R50

Bonding strength at room temperature
- Peel strength: min. 16 N / 25 mm width (AFERA 5001)
- Shear strength: min. 60 N / 625 mm² (AFERA 5012)

Bonding strength on stainless steel at 4K (tested)
- Peel strength: 3 N / 12 mm width
- Shear strength: 47 N / 144 mm²

Dimensions
The tape is wound on a plastic core. The adhesive of the tape is protected by release liner.

<table>
<thead>
<tr>
<th>Article no.</th>
<th>Dimensions</th>
<th>Packing Unit</th>
<th>Liner</th>
</tr>
</thead>
<tbody>
<tr>
<td>PL100134</td>
<td>50 m x 25 mm</td>
<td>32 rolls</td>
<td>yes</td>
</tr>
<tr>
<td>PL100138</td>
<td>50 m x 50 mm</td>
<td>16 rolls</td>
<td>yes</td>
</tr>
<tr>
<td>PN100148</td>
<td>Tape dispenser</td>
<td>Automatically winds up the release liner (for up to 50 mm wide tape)</td>
<td></td>
</tr>
</tbody>
</table>

Contact
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