ACM16 is an engineered cork, rubber and EVA composite material used in multilayer panel constructions as a CLD (constrained layer damper) preventing and dissipating structural vibration before it is transformed into airborne noise.

This product is suitable to be bonded using existing industry adhesives and technologies to different substrates like:

- Plywood
- Aluminum
- Steel
- GRP (Glass Reinforced Plastic)
- CFRP (Carbon Fiber Reinforced Plastic)

**Features**

- Non-hazardous
- Meets FMVSS302 fire resistance in 3mm
- Wear-resistant
- Low water absorption
- Good dimensional stability
- Non brittle
- No mould growth

**Material Description & Properties**

**Acoustic isolation**

**Thermal insulation**

**Vibration damping**

**Sustainable and energy efficient**

ACM16 is free of:

- PVC (Poly Vinyl Chloride)
- Heavy Metals (Pb, Cd, Hg and Cr (VI))
- Formaldehyde

Complies with RoHS and ELV 2000/53/EC European Directives

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density (kg/m³)</td>
<td>620-740</td>
</tr>
<tr>
<td>Tensile strength (MPa)</td>
<td>&gt;0.4</td>
</tr>
<tr>
<td>Thermal resistivity (m°K/W)</td>
<td>7.5*</td>
</tr>
<tr>
<td>Stress at 10% compression (MPa)</td>
<td>0.10*</td>
</tr>
<tr>
<td>Glass transition temperature (Tg) (°C)</td>
<td>-38*</td>
</tr>
<tr>
<td>Loss factor at 20 °C @ 1 Hz</td>
<td>0.13*</td>
</tr>
</tbody>
</table>

* Typical values

**Thermal resistivity (m°K/W)**

![Graph showing thermal resistivity comparison between ACM16, Rubber, and Heavy Mass Layer]
Constrained-layer damping

During vibration distortion the system flexes creating shear forces on the constrained layer.

It is these shear forces that cause the energy to dissipate and turn into heat.

Panel surface weight

Lightweight materials enable vehicles to reduce weight without reduction in size, load-carrying capacity and safety. It also allows the vehicle to achieve higher speeds.

When composite panels are used in the manufacture of such vehicles, the reduction of the panel surface weight is the most cost-effective mean to reduce fuel consumption and release of greenhouse gases to the atmosphere.

In the transportation sector and considering that a bus utilizes 25m² of composite panel, ACM16 core material can reduce up to 140kg with an equivalent CO₂ saving of more than 300kg/year (a).

Airborne sound isolation vibration damping

ACM16 is a multilayer panel material with a very good relationship between weight and noise control performance at low frequency and at the coincidence frequency.