

MATERIAL DESCRIPTION & PROPERTIES

ACM17 is an engineered cork and rubber composite material used to damp vibration before it is radiated as noise and before it is transmitted to other system components.

Used as core material in constrained damping layer constructions (sandwich panels).

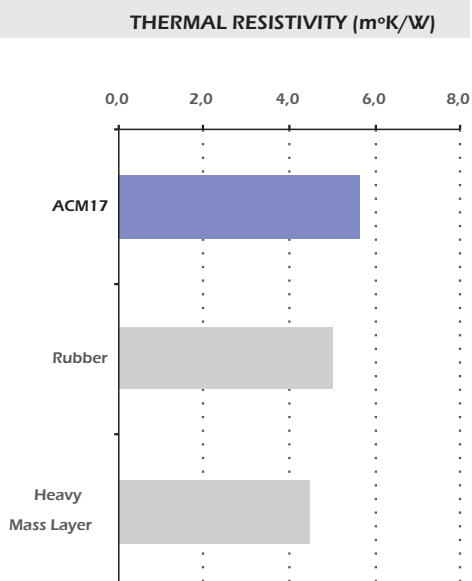
This product is suitable to be bonded to many different substrates like:

- Plywood
- Aluminum
- Steel
- GRE (Glass Reinforced Epoxy)
- GRP (Glass Reinforced Plastic)
- Carbon fiber sheets

using existing industry adhesives and technologies.

Features:

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



Density (kg/m ³) ¹	965
Tensile Strength (MPa) ²	2,3
Compression Set - 50% def, RT(%) ³	10
Thermal Resistivity (m ² K/W) ⁴	5,6
Stress at 10% compression (MPa)	1,85
Glass Transition Temperature (T _g) (°C)	- 71
Loss Factor at 20 °C at 1 Hz	0,17
Max Loss Factor at 1Hz	0,42 @ -52°C

⁽¹⁾ ASTM F1315

⁽²⁾ ASTM F152

⁽³⁾ ISO 1856

⁽⁴⁾ ISO 8301

ACM17 is free of:

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

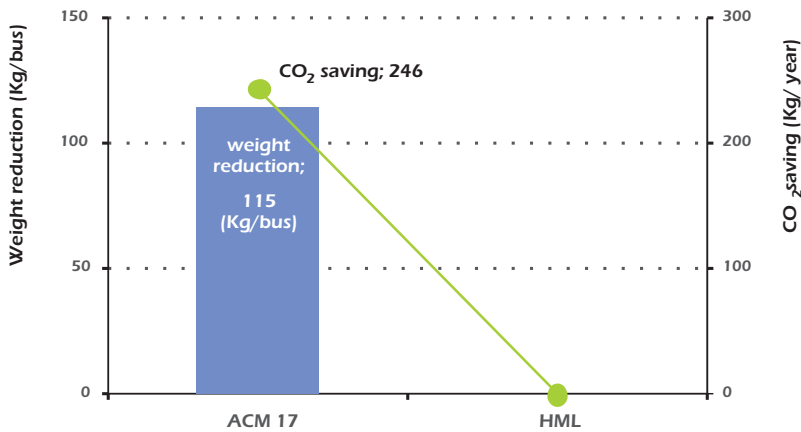
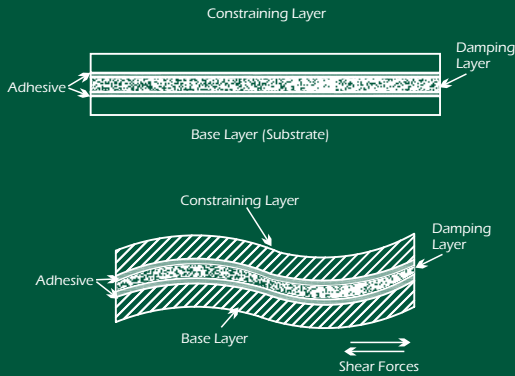
Comply with RoHS and ELV 2000/53/EC European Directives



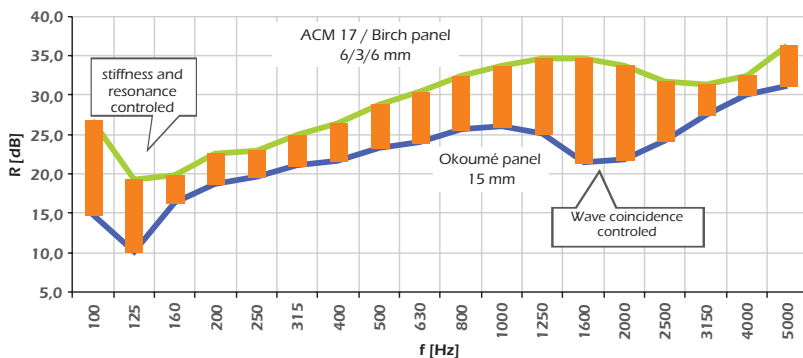
Constrained-layer damping

During vibrations 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.



a) comparing against a HWL core (2500 kg/m³), in a configuration 6/3/6 an 500 kg/m³ plywood



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 utilize 25 m² of composite panel, ACM17 core material we can reduce up to 115 kg with an equivalent CO₂ saving of more than 240 kg/year (a).

Airborne Sound Isolation Vibration Damping

ACM17 is a core material with a very good noise control performance at the mass controlled region and at the medium and high frequency region, while keeping a lower panel weight.

Check our Noise Reduction Simulator software on our website for a quick and comprehensive calculation of airborne sound isolation using ACM materials.

The data provided in this brochure represents typical values. This information is not intended to be used as a purchasing specification and does not imply suitability for use in a specific application. Failure to select the proper sealing product may result in either engine damage or personal injury. Please contact Amorim Cork Composites regarding specific application recommendations. Amorim Cork Composites expressly disclaims all warranties, including any implied warranties or merchantability or of fitness for a particular purpose. Amorim Cork Composites is not liable for any indirect, special, incidental, consequential, or punitive damages as a result of using the information listed in this brochure, any of its material specification sheets, its products or any future use or re-use of them by any person or entity.