MATERIAL DESCRIPTION & PROPERTIES

ACM87 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.

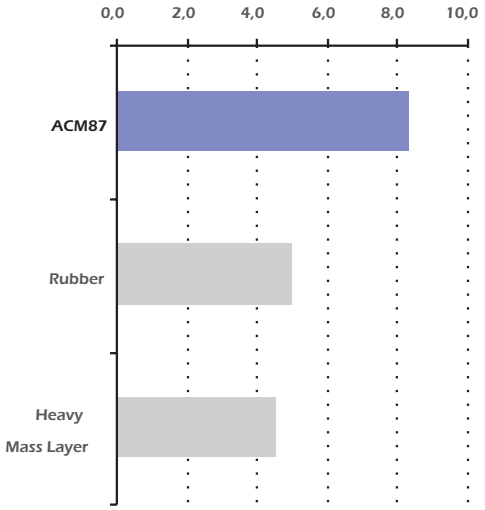
Features:

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

Density (kg/m³) [1]	800
Tensile Strength (MPa) [2]	1,2
Compression Set - 50% def, RT(%) [3]	45
Thermal Resistivity (m°K/W) [4]	8,3
Stress at 10% compression (MPa)	0,4
Glass Transition Temperature (Tg) (°C)	- 46
Loss Factor at 20 °C at 1 Hz	0,16
Max Loss Factor at 1Hz	0,41 @ -36°C

(1) ASTM F1315
(2) ASTM F152
(3) ISO 1856
(4) ISO 8301

THERMAL RESISTIVITY (m°K/W)



ACM87 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

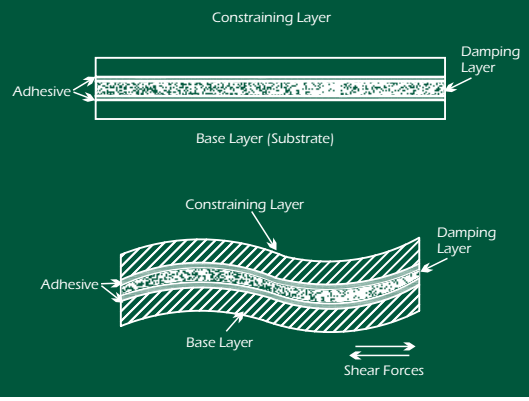
ACM87

Material Data Sheet

Constrained-layer damping

During vibrations distortion the system flexes creating sheer forces on the constrained layer.

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



Fire Classification

Railway and Bus Application

Fire Propagation:

M2 at 3mm, according with NF P 90-503

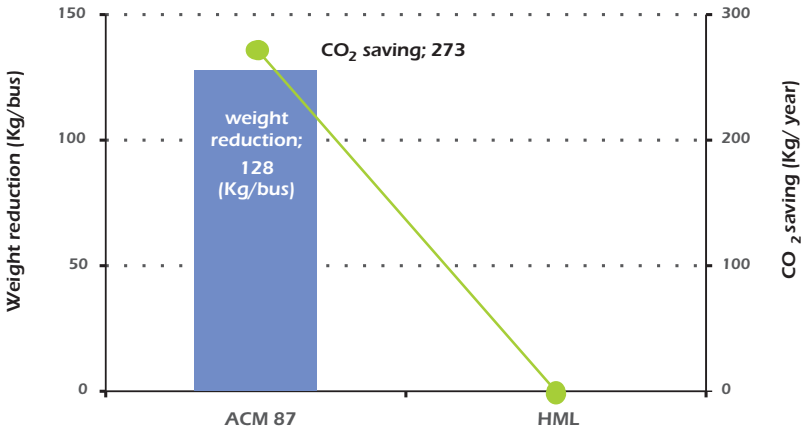
Class 1 at 3mm, according with BS 476 Part 7

Pass, according with EN ISO 11925-2

Meets FMVSS302 standard

Smoke density+toxicity:

F3 at 3 mm, according with NF F16 101



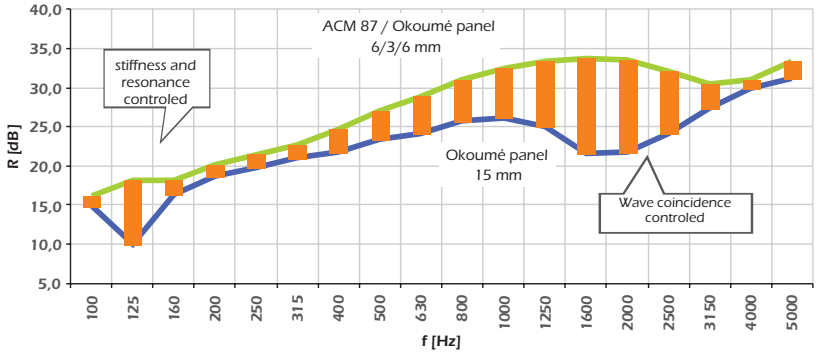
a) comparing against a HWL core (2500 kg/m3), in a configuration 6/3/6 an 500 kg/m3 plywood

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 acchieve higher speeds.

When composite panels are used in the manufacture of such vehicles, the reduction of the panel surface weight is the 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 m^2 of composite panel, ACM core materials can reduce up to 128kg with an equivalent CO_2 saving of more than 270 kg/ year (a).



Airborne Sound Isolation
Vibration Damping

ACM87 is a core material with a very good noise control performance in 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.