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INSULATION

# TROCELLEN AIRSILENT-APLOMB®

Wall and Pipe applications

Acoustic Insulation



# Airsilent

Flexible, open cell polyester-based polyurethane foam used for sound-proofing.

## PHYSICAL-CHEMICAL CHARACTERISTICS

- Density: 25 kg/m<sup>3</sup>
- Colour: anthracite
- Uniform cell structure
- Resistant to air flow with consequent improvement in sound absorption
- Increased hysteresis and reduced elasticity for enhanced shock absorption
- Resistant to organic solvents
- Stretch and tear resistant
- Hard wearing
- Temperature resistant from -20 °C to + 120 °C

Thanks to these characteristics, **AIRSILENT** can be cut into ashlar shapes making the product aesthetically attractive too when used externally and in view. The special composition of the foam with polyester base ensures that the product is conforms to the fire behavior standard **FMVSS MOTOR VEHICLE SAFETY Std 302** for all the supplied thicknesses.

## FLAT AIRSILENT

Available types:

- **K**: polyester-based polyurethane foam, anthracite colour
- **KP**: as K type bonded on one side with black embossed polyolefin film
- **AL**: as K type bonded on one side with metallic embossed polyolefin film
- **K-ALU**: as K type bonded on one side with aluminium

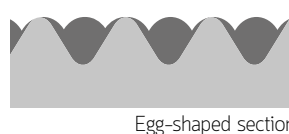
The black or metallic film covering is applied for protection, making the protect resistant to dust and humidity and prolonging its life span.

- Size: **1.500 mm** high rolls in various lengths
- Thickness: **10 - 15 - 20 - 25 - 30 mm**

## EGG-BOX SHAPED AIRSILENT

Same characteristics as K type

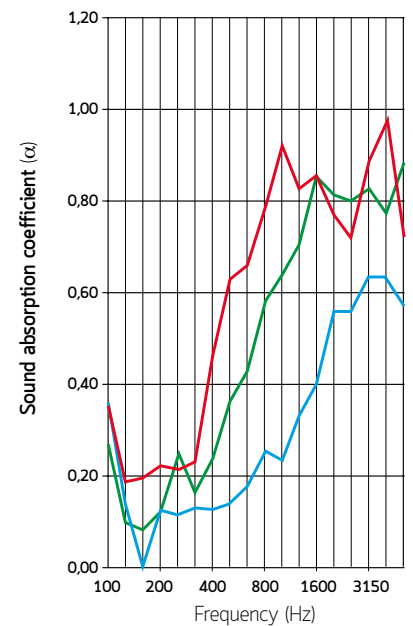
- Thickness:
  - 20 mm** = 10 flat and 10 Egg-box shaped
  - 30 mm** = 15 flat and 15 Egg-box shaped
  - 40 mm** = 20 flat and 20 Egg-box shaped
  - 50 mm** = 25 flat and 25 Egg-box shaped
- Size: **1.500 mm** high rolls in various lengths
- 40 mm thick available in 1,00 x 2,00 m sheets



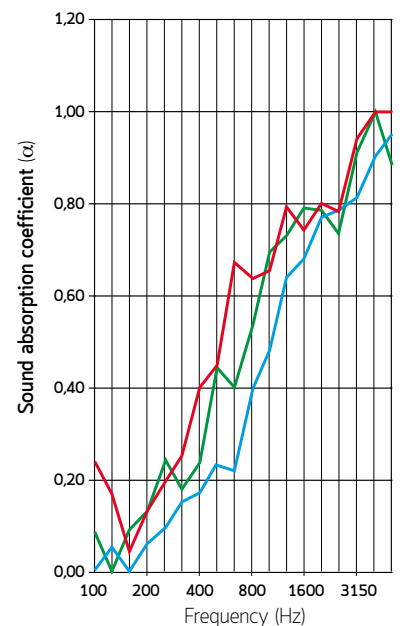
Egg-shaped section



Full range



- 30 mm K-type Airsilent
- 20 mm K-type Airsilent
- 10 mm K-type Airsilent

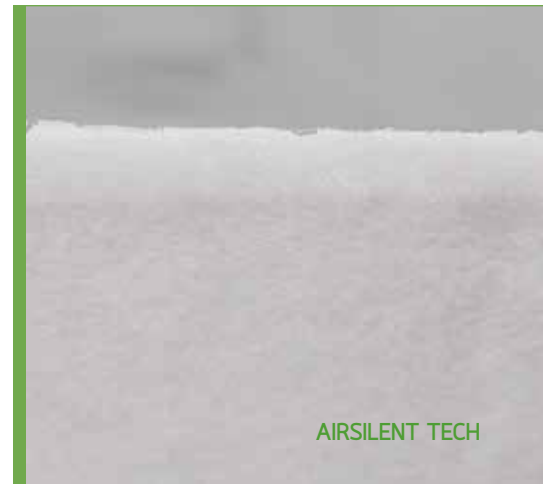


- Egg-box shaped Airsilent: 20+20 mm
- Egg-box shaped Airsilent: 15+15 mm
- Egg-box shaped Airsilent: 10+10 mm

# AIRSILENT TECH

Textile polyester fibres (80-90% regenerated), thermo-welded without resins and glue, density 40 kg/m<sup>3</sup>, colour white or green.

- Very good mechanical resistance
- Fire resistant, flammability classification can be Class 1/B-s2,d0; no afire dripping
- Ultra low toxicity and opacity of fumes in case of fire (F1 classification, according to FR F 16-101)
- Atoxic
- Thickness: **10 - 20 - 30 - 50 mm**
- Size: **1.000 or 1.200 mm** high rolls in various lengths



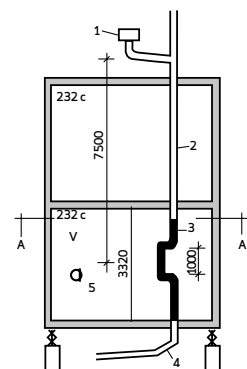
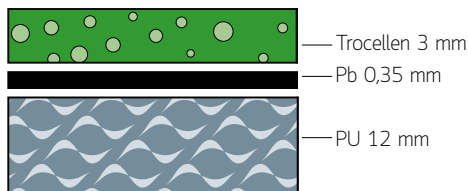
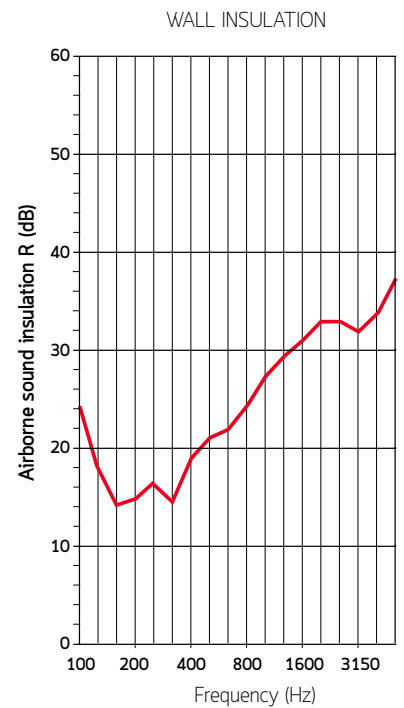
AIRSILENT TECH

# Aplomb

Multi-layered product with one or more layers of lead bonded with flexible, muffling and sound-absorbing materials.

## APLOMB 11

- Composition:
  - layer of polyethylene foam (anti-vibration) laminated with embossed black film, **3 mm** thick
  - **0,35 mm, 4 kg/m<sup>2</sup>** weight lead layer
  - layer of open-cell (sound-absorbing) polyurethane foam, **12 mm** thick
- Size: **1.00 x 3.00 m** sheets
- Packing: rolled in cardboard (0.25 x 0.25 x 1.00 m)
- Uses: noise **insulation for waste water piping in polyethylene** or PVC. Wrapped around the pipes, lowers the noise level from waste water by c. 15 dB
- Sound insulation for walls: Evaluation index, with a sample curve at 500 Hz, calculating the frequency range from 100 Hz and 3150 Hz (ISO 140/3, ISO 717/1): **R<sub>w</sub> = 26 dB**



1. 9 lt. WC cistern
2. ø100 PC waste pipe
3. test section
4. 45° Z bend
5. measuring instrument
- V. measuring chamber

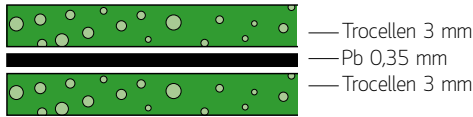
(Tests carried out at EMPA, Swiss regulation Authority, Pb 0.5 mm lead layer)

AIRBORNE SOUND INSULATION TEST			
FLOW RATE (l/min)	NOT INSULATED dB(A)	INSULATED dB(A)	REDUCTION dB(A)
50	63	46	17
100	66	50	16
200	68	54	14
			average= 16



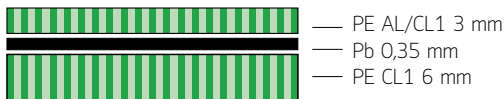
## APLOMB 22

- Composition:
  - layer of anti-vibration polyethylene foam laminated with black embossed film, **3 mm** thick
  - **0,35 mm, 4 kg/m<sup>2</sup>** weight lead layer
  - layer of anti-vibration polyethylene foam laminated with black embossed film, **3 mm** thick
- Size: **1,00 x 3,00 m** sheets
- Packing: rolled in cardboard (0,20 x 0,20 x 1,00 m)
- Uses: Underlay and walls for houses, offices etc. This product is used to prevent noise entering or leaving a specific area or room (especially low frequency waves)
- Evaluation index, with a sample curve at 500 Hz, calculating the frequency range from 100 Hz and 3150 Hz (ISO 140/3, ISO 717/1): **Rw = 24 dB**



## APLOMB AL/CL1

- Composition:
  - layer of polyethylene foam (anti-vibration) laminated with embossed metallic film, **Class 1, 3 mm** thick
  - **0,35 mm, 4 kg/m<sup>2</sup>** weight lead layer
  - layer of polyethylene foam (anti-vibration), **6 mm** thick **Class 1**, bonded with black embossed film
- Size: **1,00 x 1,50 m** sheets
- Packing: on sight
- Uses: sound proof cladding for pipes, walls and cabins (when **Class 1** product is required)

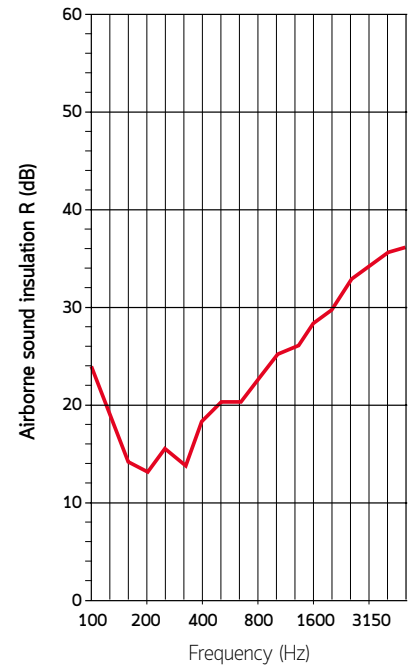


## APLOMB 1

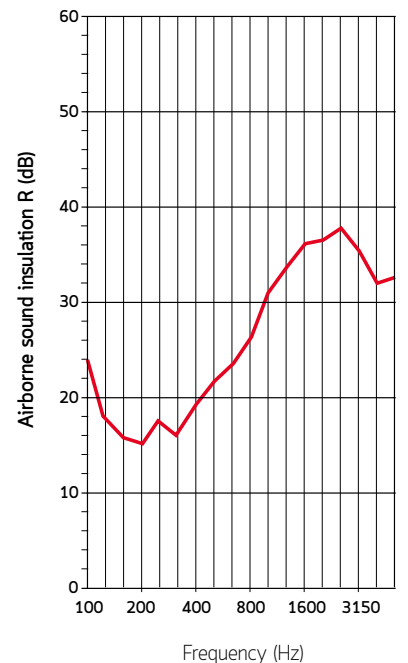
- Composition:
  - layer of open cell polyurethane foam, variable thickness
  - **0,35 mm, 4 kg/m<sup>2</sup>** weight lead layer
  - layer of open cell polyurethane foam, variable thickness
- Size: **1,00 x 1,50/2,00 m** sheets
- Packing: 1,00 x 1,50 m flat sheets or 1,00 x 2,00 m rolled up on pallet
- Uses: used for sound-proof walls where the dampening capacity of the lead is backed up by the high absorption capacity of polyurethane
- Evaluation index, with a sample curve at 500 Hz, calculating the frequency range from 100 Hz and 3150 Hz (ISO 140/3, ISO 717/1): **Rw = 27 dB**



WALL INSULATION

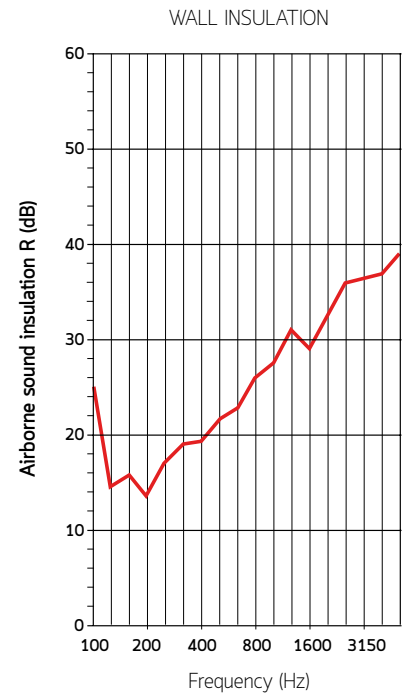
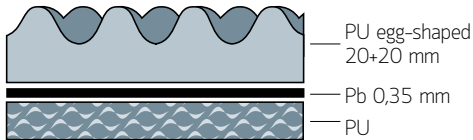


WALL INSULATION



## APLOMB 1/B

- Composition:
  - layer of polyurethane foam, **10 mm** thick
  - **0,35 mm, 4 kg/m<sup>2</sup>** weight lead layer
  - layer of 20 + 20 mm Egg-box shaped polyurethane foam.  
Also available 15 + 15 mm
- Size: **1,00 x 1,50 m** sheets
- Packing: rolled or laid flat
- Uses: for visible sound insulation
- Evaluation index, with a sample curve at 500 Hz, calculating the frequency range from 100 Hz and 3150 Hz (ISO 140/3, ISO 717/1): **R<sub>w</sub> = 27 dB**



## ITEM SPECIFICATIONS

### AIRSILENT (sound absorption)

Flexible, open-cell polyester based polyurethane foam

### APLOMB (sound absorption)

Three-layer composite product with sheet of lead sandwiched between two flexible foam layers (polyethylene and polyurethane).

See detailed descriptions of the products above for information on product uses.

### AD (adhesive)

All the above listed products can be supplied with self-adhesive on request.



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## TROCELLEN\*

Trocellen is the first choice European polyolefin foam-solution provider. Through continuous innovations and successful partnerships we dedicate ourselves to one goal: protecting and providing comfort for people.

After more than 40 years, with 600 employees at seven sites and many cooperating companies, various partner universities, institutes and designers we offer solutions for our business partners in various industries such as construction and insulation, automotive, leisure and professional sport, adhesive tapes, footwear and packaging.

\*Trocellen is the member of Furukawa Group.

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50° 49' N	07° 09' O	Germany
40° 28' N	03° 21' O	Spain
41° 53' N	12° 28' O	Italy
47° 30' N	19° 02' O	Hungary
02° 54' N	101° 28' O	Malaysia
35° 40' N	139° 49' O	Japan FURUKAWA

