QUIETSTONE
Innovative acoustics

Quietstone FR 30®
Unrivaled sound absorption panels.

Truly multi functional sound absorbers.

Rigid, durable sound absorption panels capable of withstanding temperatures of up to 1150°C.

Quietstone FR 30 is made from specially bonded aggregates. This produces a porous panel with excellent sound absorption capabilites and high durability. Similar to the original Quietstone but with extensive development, thermal insulation is now exceptional.

Advantages

- High sound absorption
- High heat resistance - up to 1150°C
- Weather resistant - impervious to frost and rain
- Durable - high impact resistance and can be easily cleaned
- Aesthetically neutral- naturally appealing and can be pigmented to suit surroundings

Applications

- Underground stations to reduce noise buildup and improve speech intelligibility
- As a tunnel liner to reduce reveberant noise and protect services behind in the event of a fire
- Wherever sound absorption is required and fire safety is also a key concern

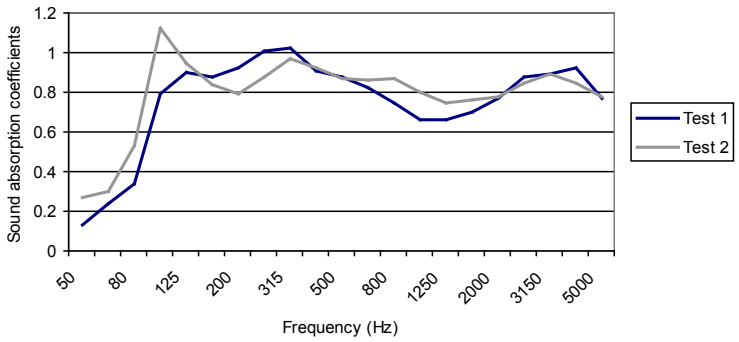
Close up

Physical properties

- Standard thickness: 30mm
- Width: 600mm
- Length: 1000mm
- Other sizes are available on request
- Weight: 37.5m²

Acoustic performance

- Test results provided by TNO test house, Delft, Holland, Test proceedure; EN-ISO 354: 2003



Mounting parameters

Both tests were carried out with typical mounting parameters for tunnels with a heavy duty steel framework.

Test 1: 190mm total buildup; 30mm panel, 90mm air gap, 70mm Rockwool.

Test 2: 190mm total buildup; 30mm panel, 30mm Rockwool, 60mm air gap, 70mm Rockwool.

	Sound absorption coefficients, α_p						EN-ISO 11654 α_w	EN 1793-1 DLα	RMR 2006 DL $\alpha_{,rail}$
	125 Hz	250Hz	500Hz	1000Hz	2000Hz	4000HZ			
Test 1	0,85	1,00	0,85	0,70	0,80	0,85	0,80 (L); class B	7 dB(A); cat A2	7 dB(A)
Test 2	0,95	0,90	0,90	0,80	0,80	0,85	0,85 (L); class B	8 dB(A); cat A3	8 dB(A)

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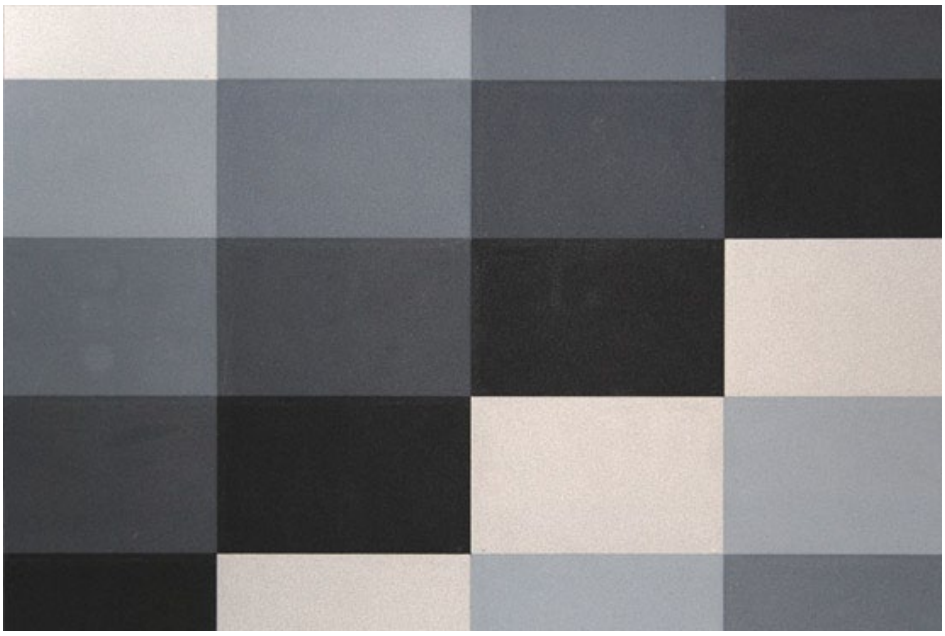
Project: A4 Burgerveen tunnel lining

Quietstone FR30 used to control reverberant noise in a tunnel with a slotted, open roof. The solution alleviated the need for noise barriers outside the tunnel and fire protection panels inside.

- Panels mounted on a wall. Mechanical fixings and interlocking 'lips' still visable



- The completed wall with holes plugged to provide a cleaner and more durable finish

30,000m^2 of Quietstone FR30 is to line the walls of the new A4 Burgerveen tunnel. The panels will be in a gradient from white to black in ten shades.

The treatment provides high broadband absorption to control noise break out through the slotted roof which could affet local residents. Also, the high heat resistance provides protection for the tunnel services behind the panels, alleviating the need for extra fire protection.

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