

# PHONIC

ACOUSTIC CEILING TILES

## PHONIC DIRECT FIX

High Performance Acoustic Ceiling Tile



High Absorption



Hygrothermal



Hygiene



Fire Test- Group 15



Glasswool



### PRODUCT SUMMARY

Phonic Direct Fix is a white painted, textured glasswool acoustic ceiling tile. Direct Fix eliminates the need for an exposed grid and enhances the clean smooth monolithic surface.

- It has a high noise reduction coefficient (NRC 0.75 – 1.00 depending on installation method) to reduce reverberation time. A high end tile.
- Designed for direct fix application to new existing gypsum board or over timber/metal battens. The Direct Fix 20mm tile on batten exceeds Department of Education acoustic requirements when installed over gypsum board backing.
- Tested to the principal requirements in accordance 14644.1:2015 and ISO 14644.3:2015 and the tile meets Cleanroom ISO Class 3.
- This product is constructed from 90% dry felt resin bonded glass-wool, utilizing longer fibres in a compact fibre arrangement. The non-absorbent, non-water soluble design gives Phonic Direct Fix improved durability when compared to mineral fibre.
- Phonic Direct Fix achieves a density of 100kg/m<sup>3</sup>. This results in a lightweight, high performance ceiling tile which is user friendly and ideal for use in classrooms, offices, medical centres, lobbies and receptions and other commercial interiors.

30 year lifetime system warranty to withstand conditions up to 40°- 99% relative humidity without visible sag.

### EMISSIONS, SUSTAINABILITY AND THE ENVIRONMENT

For Green Star rated projects, Phonic meets the Greenguard Emission Certificate standard.


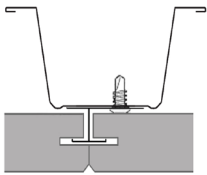
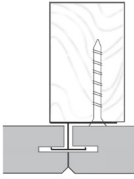
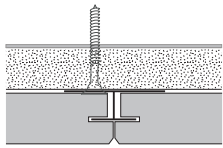
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GENERAL TEST DESCRIPTION	RESULT	TEST METHOD
Absorption (ISO 354) 20mm Direct Fix	NRC 0.75	ASTM C432
	$\alpha_w$ 0.55	ISO 11654
	SAA 0.94	ASTM C423
With 35mm air gap	NRC 0.85	ASTM C432
	$\alpha_w$ 0.85	ISO 11654
	SAA 0.92	ASTM C423
Attenuation (ASTM E1414-11A) 20mm (without plasterboard backing)	CAC & D <sub>n,c,w</sub> 23	ISO 717-1 ASTM E413-10
Light Reflectance	LR 87% +	ASTM E1477-98
Density	120kg/m <sup>3</sup>	
Weight	20mm: 2.4kg/m <sup>2</sup>	
Fire Test - ISO 5660 Part1	Group 1-S 	Cone Calorimeter NZBC C/VM2 Appendix A
Cleanroom	ISO Class 3	ISO 14644.3:2015
Moisture Rate	≤ 1%	JC/T 670 – 2005
Thermal Conductivity	≥ 0.04 (kcal/mh°C)	JIS A 1412
Est. R-Value (m <sup>2</sup> k/w)	20mm: R0.5	
Size	20mm Depth x [600x600] [1200x600] Other sizes available on request.	
Colour	White	
Installation	<p>Tiles are best installed in an Ashlar pattern. Phonic Direct Fix is only covered by warranty if only installed in the Ashlar pattern.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Shown with air gap</p> </div> <div style="text-align: center;">  </div> <div style="text-align: center;">  <p>Shown as direct fix</p> </div> </div>	



## VOC INFORMATION

GENERAL TEST DESCRIPTION		ASTM D5116-06	
ASTM D5116-06: Standard Guide for Small-Scale Environmental Chamber Determination of Organic Emissions From Indoor Materials/Products.			
Test	Test Results (after 24 hours)	Criteria for Singapore Green Label Product	Pass
Total Volatile Organic Compounds (TVOC) Emissions Rate Test Result	0.11 mg per m <sup>3</sup> per hour	0.25 mg per m <sup>3</sup> per hour or less	YES
Test	Test Results (after 48 hours)	Criteria for Singapore Green Label Product	Pass
Formaldehyde Emission Rate Test Result	< 0.01 mg per m <sup>3</sup> per hour	0.02 mg per m <sup>3</sup> per hour or less	YES
Test	Test Results (after 48 hours)	Criteria for Singapore Green Label Product	Pass
4-Phenylcyclohexene Emission Rate Test	Not Detected*	0.0065 mg per m <sup>3</sup> per hour or less	YES
Test	Test Results (after 48 hours)	Criteria for Singapore Green Label Product	Pass
Total Phthalate Emission Test Result	< 0.003 mg per m <sup>3</sup>	< 0.01 mg per m <sup>3</sup>	YES
Test	Test Results (after 48 hours)	Criteria for Singapore Green Label Product	Pass
Total Particles Emission Test Result	0.01 mg per m <sup>3</sup>	<0.02 mg per m <sup>3</sup>	YES

## ENVIRONMENTAL INFORMATION

Recycled product: the rate of pre-consumer recycled content in Phonic fibreglass ceiling tiles is 80%. The recycled content includes 30% industrial waste and 70% civilian used waste, all procured from reclamation depots.

The Factory has invested significant amounts into energy conservation and emission reduction and the factory runs on renewable energy sources. Professional air purification devices purify polluted air at the factory.

The Factory supplies a Gypsum Brick which utilises the scrap glasswool material created as a by-product during manufacture of the Phonic tiles. This brick is commercially available overseas.

## INGREDIENTS

**Fibreglass tissue face with acrylic resin (back and front of tile) 7-10%** - Fibreglass (Glasswool) 80-85%, Acrylic resin 15-20%, **Acoustic board 70-80%** - Glasswool 88-89%, Phenolic resin 11-12%, **Water-based paint 20-25%** - Acrylic emulsion 10-15%, Inorganic filler (Kaolin, Calcium carbonate) 40-55%, Environmentally friendly flame retardant 15-25%, A variety of additives (Dispersant, Leveling agent; from Polycarboxylate ammonium salt, EGBE-Ethylene glycol monobutyl ether, Water) 3-5%, Ion water 15-20%, **Glue 2-4%** - Acrylic resin 50-55%, Ion water 45-50%.