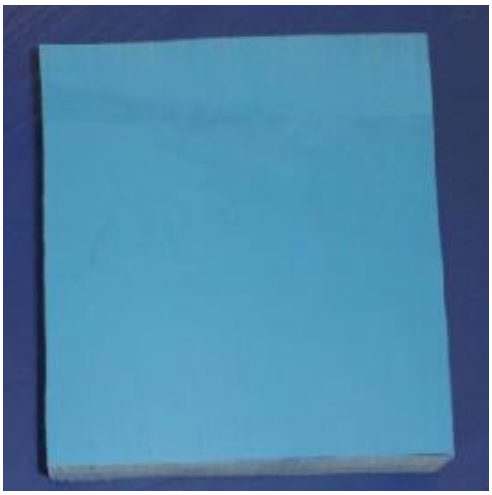
PRODUCT INFORMATION

低周波用
超音波音響吸収材
AptFlex F48

Aptflex F48

suitable for sub MHz for test tanks linings



The NPL's acoustic absorber Aptflex F48 has been designed to meet the need to reduce reflections in low frequency test tanks.

The combination of the acoustic properties of the new material and its simple design, makes it the cost-effective solution for large-scale applications This new material is only available from Precision Acoustics Ltd.

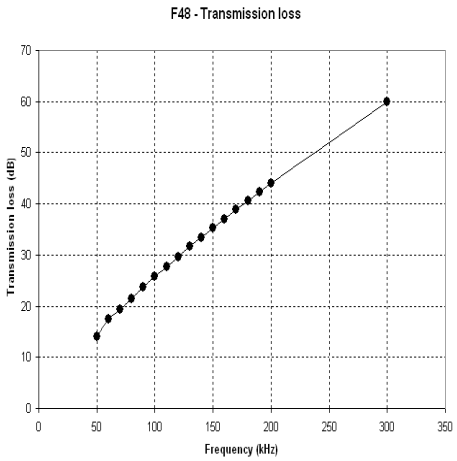
Ultrasonic tank wall linings… For long tone-burst or continuous-wave ultrasonic applications, acoustic output measurements or ultrasonic testing in general can be strongly affected by reflections or echoes from test tank walls. To overcome this, test tanks are coated with ultrasonically absorbent linings which must be of low ultrasonic reflection yet highly absorbing to ultrasound. Broadband anechoic materials of the required properties have not until now been commercially available. NPL's new material has been designed specifically to meet this requirement. Its simple design, being a single-ply layer, ensures that the material is the cost effective solution for coating large areas such as the walls of an ultrasonic test tank.

Specifications…

- based on a polyurethane rubber material
- single ply nominally homogeneous layer
- thickness of tile: 10 or 26mm mm
- tile dimensions: 1200 mm by 600 mm
- density of 1.910gm/ml +/--0.030

イーステック株式会社 〒160-0004 東京都新宿区四谷2-10-502 ☎03-3358-1923 FAX 03-3358-1905
E-Mail: info@eastek.co.jp

■TRANSMISSION LOSS (TL)

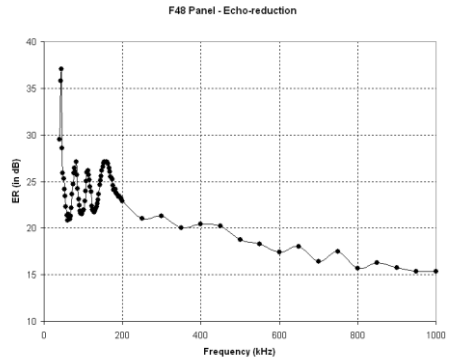


This limits or affects the performance at low frequencies, as TL goes down with frequency.

At 100 kHz, single-pass transmission loss of a 26.5 mm thick layer of the material is 21 dB, which means that double pass (the wave which goes through, bounces off the tank wall & comes back out) is 42 dB (0.8% amplitude).

The transmission loss increases rapidly with frequency in the following way: 100 dB single pass; 1 MHz: 200 dB single pass; 3 MHz: >500 dB single pass.

■ECHO-REDUCTION (ER)



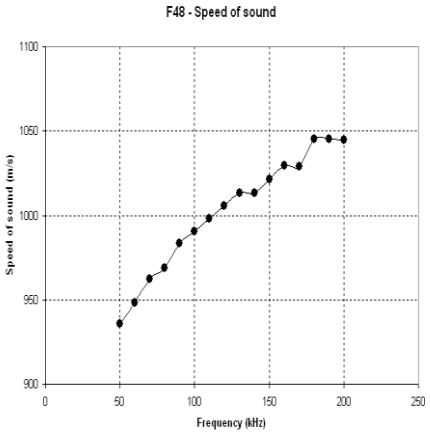
This limits or affects the performance of the tank-wall lining at high frequencies (> 1MHz).

For a 26mm tile the ER is better than -20 dB.below 0.5 MHz, The peak in the ER is sensitive to temperature, and it is possible match the performance to the temperature of the customers test-tank If matched, then it is possible to obtain an ER better than 30dB. Please contact us for more information.

At 1MHz, the echo-reduction of a 26mm tile is -20dB (10% reflected amplitude) and at 3MHz, it is -15dB (18% reflected amplitude). Careful angling of the flat panels, will improve performance greatly. Anything twice reflected will come down in amplitude to 1% at 1MHz and about 3% at 3MHz.

Note the structure shown below 200kHz is caused by the reflected wave from the front surface interfering with the reflected wave from the back surface of the tile.

■SPEED OF SOUND



・Specifications is subject to change without notice.

イーステック株式会社 〒160-0004 東京都新宿区四谷2-10-502 ☎03-3358-1923 FAX 03-3358-1905
E-Mail: info@eastek.co.jp