

DeAmp



DeAmp's technology is developed during 10 years of research at SINTEF and The Norwegian University of Science and Technology. The technology is based on the well-known acoustic principle Helmholtz resonator. DeAmp's unique technology utilizes laser cut micro slits to perforate the surface. When sound waves, defined as compressed air, hit the perforated surface an overpressure arises on the front of the panel. To equalize the pressure, the compressed air is forced through the micro slits, and viscous forces between the very narrow slit and the air causes friction. Sound waves are absorbed and transformed into heat without use of any porous fibre-materials. The technology is internationally patented by DeAmp.

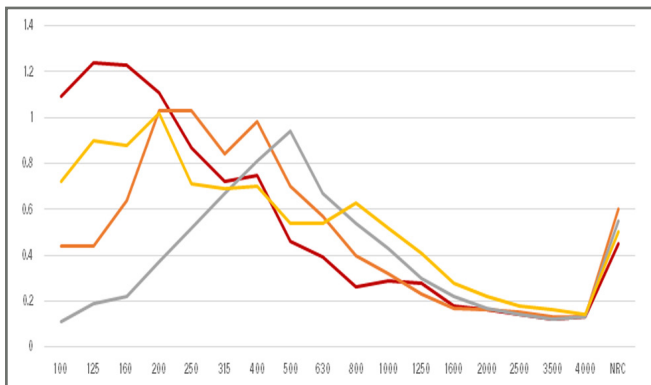
DeAmp's absorbers can be anodized, painted, engraved or printed on, and because they are fibre free, they can be transparent, translucent or coloured. Panels can be mounted in traditional ceiling suspensions, directly on walls, as panel elements in office furniture systems or standalone partition walls.

The Healthy Alternative

Fiber free sound absorbers ensure a better indoor environment, especially for children and people with respiratory disorders. The products do not emit fibre particles, nor do they collect dust in the slits. They do not absorb moisture, which can lead to fungi and rot, and they are easy to clean with water-based products.

Recyclability

DeAmp acrylic products can be recycled fully into monomer and are environmentally friendly.



Acoustic Data

Compared to the best porous absorbers, micro perforated products perform somewhat poorer in higher frequencies. However, higher frequencies are more easily absorbed by furniture, people and surface elements in the room. Therefore, excellent acoustic conditions can still be achieved based on the high absorption at low and middle frequencies. Scientific measurements from our reference projects show that values are below the required reverberation time for the whole frequency band.

f (Hz)	200mm Cavity	100mm Cavity	50mm Cavity	Double Layer, 100mm, 25mm Cavities
100	1.09	0.44	0.11	0.72
125	1.24	0.44	0.19	0.9
160	1.23	0.64	0.22	0.88
200	1.11	1.03	0.37	1.02
250	0.87	1.03	0.52	0.71
315	0.72	0.84	0.67	0.69
400	0.75	0.98	0.81	0.7
500	0.46	0.7	0.94	0.54
630	0.39	0.57	0.67	0.54
800	0.26	0.4	0.54	0.63
1000	0.29	0.32	0.43	0.52
1250	0.28	0.23	0.3	0.41
1600	0.18	0.17	0.22	0.28
2000	0.16	0.16	0.17	0.22
2500	0.14	0.15	0.14	0.18
3500	0.12	0.13	0.12	0.16
4000	0.13	0.13	0.13	0.14
NRC	0.45	0.6	0.55	0.5

