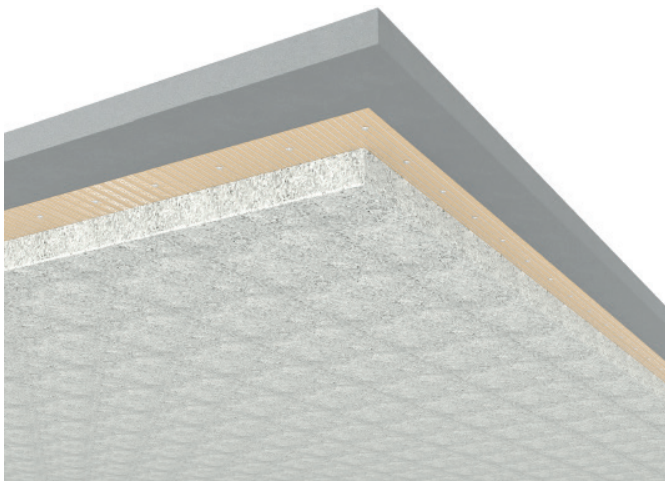


Fibrexpan® - Study report : CSTB

| Fibrexpan® thickness | Base | Fréquency in hertz | | | | | | | | | | | | | | | | | α_w | |
|----------------------|-------|-----------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------------|------|
| | | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | | 5000 |
| | | Absorption coefficient α_s | | | | | | | | | | | | | | | | | | |
| 100 mm calculated | Solid | 0,48 | 0,53 | 0,58 | 0,62 | 0,64 | 0,65 | 0,79 | 0,79 | 0,79 | 0,82 | 0,84 | 0,88 | 0,90 | 0,91 | 0,92 | 0,93 | 0,94 | 0,95 | 0,85 |
| 110 mm calculated | Solid | 0,50 | 0,55 | 0,60 | 0,63 | 0,64 | 0,71 | 0,80 | 0,78 | 0,80 | 0,83 | 0,85 | 0,88 | 0,90 | 0,92 | 0,93 | 0,94 | 0,94 | 0,95 | 0,85 |
| 120 mm calculated | Solid | 0,53 | 0,57 | 0,61 | 0,63 | 0,64 | 0,82 | 0,78 | 0,79 | 0,82 | 0,84 | 0,88 | 0,89 | 0,91 | 0,92 | 0,93 | 0,94 | 0,95 | 0,95 | 0,85 |
| 130 mm calculated | Solid | 0,55 | 0,59 | 0,63 | 0,64 | 0,75 | 0,80 | 0,79 | 0,81 | 0,83 | 0,86 | 0,89 | 0,90 | 0,92 | 0,93 | 0,94 | 0,94 | 0,95 | 0,95 | 0,90 |
| 140 mm calculated | Solid | 0,57 | 0,61 | 0,64 | 0,65 | 0,85 | 0,80 | 0,81 | 0,83 | 0,84 | 0,88 | 0,90 | 0,91 | 0,92 | 0,93 | 0,94 | 0,95 | 0,95 | 0,95 | 0,90 |
| 150 mm calculated | Solid | 0,59 | 0,63 | 0,63 | 0,80 | 0,82 | 0,81 | 0,83 | 0,84 | 0,87 | 0,90 | 0,91 | 0,92 | 0,93 | 0,94 | 0,95 | 0,95 | 0,95 | 0,96 | 0,90 |
| 160 mm measured | Solid | 0,31 | 0,56 | 0,73 | 0,86 | 0,80 | 0,87 | 0,86 | 0,90 | 0,97 | 1,01 | 0,97 | 1,01 | 1,01 | 1,00 | 0,98 | 1,01 | 1,03 | 1,04 | 1,00 |

Primers: PROJISO FIXO-B® and PROJISO FIXO-M®

Study report : CSTB



Projiso offers an innovative solution based on the spraying of Fibrexpan®, which improves acoustic insulation between superimposed spaces.

Installation principle

Attachment of an expanded metal sheet with a paper covering to the concrete slab or without expanded metal sheet to the concrete slab.

Spraying of one or multiple layers of Fibrexpan® to the desired thickness.

The following table gives acoustic reduction values R_w+C for a raw concrete slab and a slab covered with varying thicknesses of Fibrexpan® coating installed as described above.

| R_w+C (dB) | Reinforced concrete slab thickness | | | | | | | | | | | | |
|---|------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----|
| | 140 mm | 150 mm | 160 mm | 170 mm | 180 mm | 190 mm | 200 mm | 210 mm | 220 mm | 230 mm | 240 mm | 250 mm | |
| Fibrexpan® thickness without grilling plus sidairless | 80 to 120 mm | 50 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 58 | 59 | 60 | 61 |
| | 130 to 160 mm | 49 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 58 | 59 | 60 |
| | 80 to 160 mm | 49 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 58 | 59 | 60 |
| Fibrexpan® thickness + grilling + sidairless | 100 to 110 mm | 56 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 64 | 65 | 66 | 67 |
| | 120 to 130 mm | 57 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 65 | 66 | 67 | 68 |
| | 140 to 150 mm | 58 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 66 | 67 | 68 | 69 |
| | 160 mm | 59 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 67 | 68 | 69 | 70 |
| 80 to 160 mm | Adding +2 | Adding +2 | Adding +2 | Adding +2 | Adding +2 | Adding +2 | Adding +2 | Adding +2 | Adding +2 | Adding +2 | Adding +2 | Adding +2 | |

Example: A system composed of an 180 mm thick slab sprayed with 150 mm of Fibrexpan® installed as described above will have an acoustic reduction of $R_w+C = 63$ dB instead of 59 dB for the raw slab.

These values were obtained by calculations based on laboratory tests. Depending on the construction site and the installation conditions, on-site results may differ slightly.