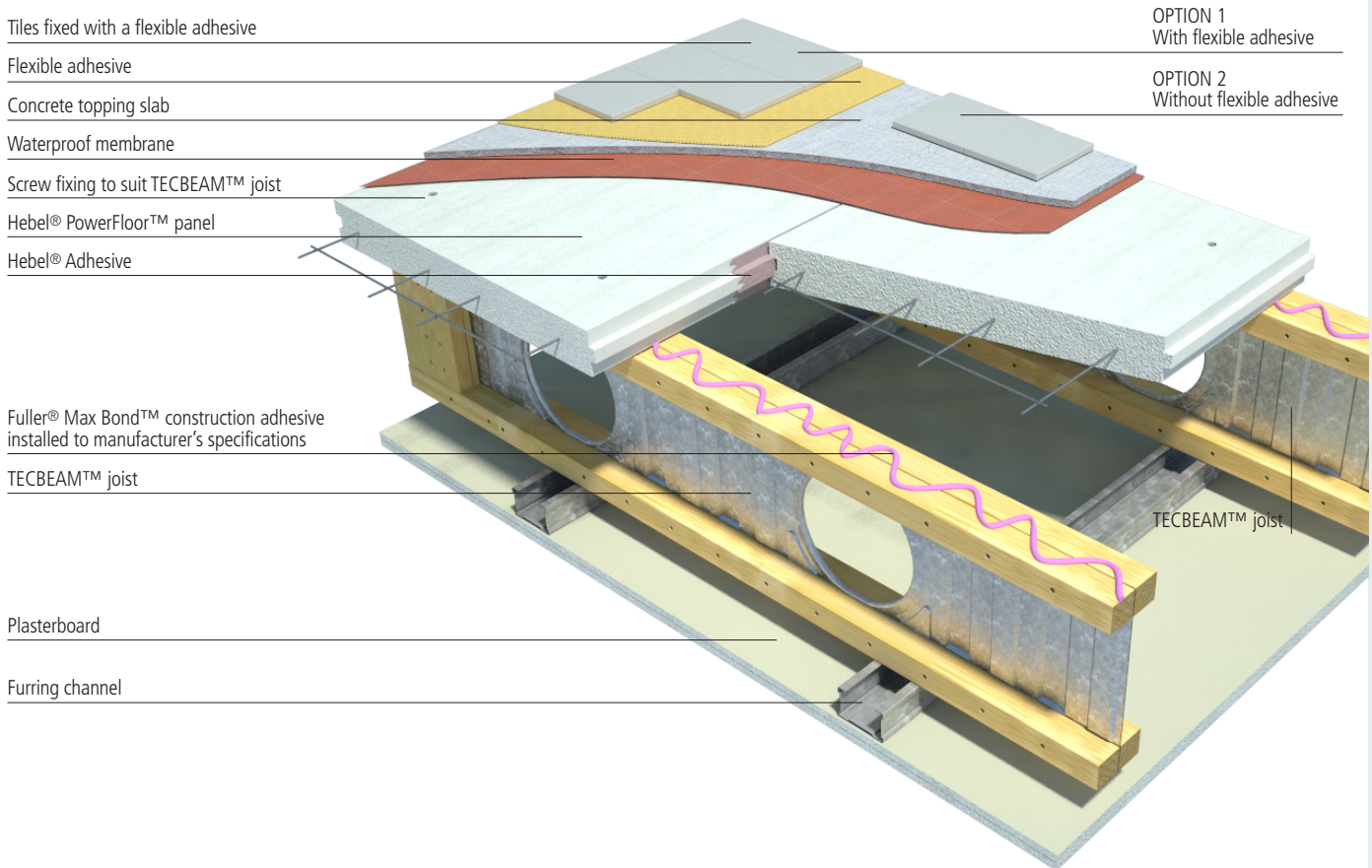


FIRE, THERMAL & ACOUSTIC PERFORMANCE

3 Ceramic Tiles on 50mm Topping Slab



NOTE: Patching of recesses at fixings or localised chipping may be required prior to installation of floor coverings.

| Fire Resistance ^① | Floor System Description | ACOUSTIC | | | THERMAL | |
|------------------------------------|--|-----------------|-----------------|-----------------|----------------------|------|
| | | R_w | $R_w + C_{tr}$ | $L_{nw} + C_l$ | R-Value ^⑥ | |
| | | | | | Up | Down |
| 240/240/240 Opinion FCO 1303 | <ul style="list-style-type: none"> Waterproof membrane Hebel PowerFloor panel Tecbeam joists at 600mm max. centres No ceiling system | 36 ^④ | 31 ^④ | 72 ^⑤ | 1.02 | 1.20 |
| FRL ^② | Ceiling System Description | R_w | $R_w + C_{tr}$ | $L_{nw} + C_l$ | R-Value ^⑥ | |
| ___/___/___ | a) CSR821 with Bradford R1.5 Glasswool Batts | 54 ^⑦ | 48 ^⑦ | 64 ^⑦ | 2.45 | 2.78 |
| 60/60/60 | b) CSR826 with Bradford R2.0 Glasswool Batts | 56 ^⑦ | 50 ^⑦ | 62 ^⑦ | 2.94 | 3.31 |
| 90/90/90 | c) CSR827 with Bradford R1.5 Glasswool Batts | 58 ^⑦ | 52 ^⑦ | 60 ^⑦ | 2.54 | 2.87 |

NOTE: *Fire source from above only.
 Fire from above only - Opinion FCO 1303
 Fire from below only - Opinion FCO 1373. (Refer to CSR Gyprock)
 Combined floor and ceiling system thermal values are opinions determined for internal

conditions above and internal conditions below.
 Airflow direction - Up = Summer, Down = Winter
 Acoustic Test CSIRO - TL413 - airborne sound transmission
 Acoustic Test CSIRO - TL413 - impact sound

transmission
 Acoustic Assessment PKA - 210 091 A071
 Thermal calculation by James Fricker 107.23 to 107.29 August 2011. Thermal calculations for second floor have assumed 140mm deep joist sections.

For detailed information on ceiling systems, please refer to 'System Components' Section of this design guide and the CSR Gyprock Fibre Cement Fire & Acoustic Design Guide (The Red Book™). For detailed information on acoustic testing, please contact CSR Hebel.