



Gypsum fiber element (Fermacell 12,5 mm)

Thermal output ceiling System IDEAL EPS | ÖKO

| | |
|--------------------------------|-------------|
| Nominal layer thickness | 12.5 mm |
| Thermal conductivity λ | 0.28 W / mK |
| Spread σ | 5 K |

$R_{\lambda,B} = 0.00 \text{ m}^2 \text{ K} / \text{W}$
Gypsum fiber 12.5 mm

$R_{\lambda,B} = 0.05 \text{ m}^2 \text{ K} / \text{W}$
Gypsum fiber 12.5 mm

| Average heating water temperature | Room temperature | VA = 125 mm | Surface temperature | VA = 250 mm | Surface temperature |
|-----------------------------------|------------------|--------------------------|---------------------|--------------------------|---------------------|
| | | RZ W / m ² | θ_F °C | AZ W / m ² | θ_F °C |
| 30 | 15 | 61.7 | 24.5 | 49.9 | 22.7 |
| 30 | 18 | 49.1 | 25.6 | 39.7 | 24.1 |
| 30 | 20 | 40.7 | 26.3 | 32.9 | 25.1 |
| 30 | 22 | 32.1 | 26.9 | 26.0 | 26.0 |
| 30 | 24 | 23.4 | 27.6 | 18.9 | 26.9 |
| 35 | 15 | 82.7 | 27.7 | 66.9 | 25.3 |
| 35 | 18 | 70.1 | 28.8 | 56.7 | 26.7 |
| 35 | 20 | 61.7 | 29.5 | 49.9 | 27.7 |
| 35 | 22 | 53.3 | 30.2 | 43.2 | 28.6 |
| 35 | 24 | 44.9 | 30.9 | 36.3 | 29.6 |
| 40 | 15 | 103.5 | 30.9 | 83.8 | 27.9 |
| 40 | 18 | 91.0 | 32.0 | 73.6 | 29.3 |
| 40 | 20 | 82.7 | 32.7 | 66.9 | 30.3 |
| 40 | 22 | 74.3 | 33.4 | 60.1 | 31.2 |
| 40 | 24 | 65.9 | 34.1 | 53.3 | 32.2 |
| 45 | 15 | 124.4 | 34.1 | 100.6 | 30.5 |
| 45 | 18 | 111.9 | 35.2 | 90.5 | 31.9 |
| 45 | 20 | 103.5 | 35.9 | 83.8 | 32.9 |
| 45 | 22 | 95.2 | 36.6 | 77.0 | 33.8 |
| 45 | 24 | 86.8 | 37.4 | 70.3 | 34.8 |
| 50 | 15 | 145.2 | 37.3 | 117.4 | 33.1 |
| 50 | 18 | 132.7 | 38.4 | 107.3 | 34.5 |
| 50 | 20 | 124.4 | 39.1 | 100.6 | 35.5 |
| 50 | 22 | 116.0 | 39.9 | 93.9 | 36.4 |
| 50 | 24 | 107.7 | 40.6 | 87.1 | 37.4 |
| 55 | 15 | 166.0 | 40.5 | 134.3 | 35.7 |
| 55 | 18 | 153.5 | 41.6 | 124.2 | 37.1 |
| 55 | 20 | 145.2 | 42.3 | 117.4 | 38.1 |
| 55 | 22 | 136.9 | 43.1 | 110.7 | 39.0 |
| 55 | 24 | 128.5 | 43.8 | 104.0 | 40.0 |

| VA = 125 mm | Surface temperature | VA = 250 mm | Surface temperature |
|--------------------------|---------------------|--------------------------|---------------------|
| RZ W / m ² | θ_F °C | AZ W / m ² | θ_F °C |
| 49.7 | 22.7 | 41.4 | 21.4 |
| 39.6 | 24.1 | 32.9 | 23.1 |
| 32.8 | 25.0 | 27.3 | 24.2 |
| 25.9 | 26.0 | 21.5 | 25.3 |
| 18.9 | 26.9 | 15.7 | 26.4 |
| 66.6 | 25.2 | 55.4 | 23.5 |
| 56.5 | 26.7 | 47.0 | 25.2 |
| 49.7 | 27.7 | 41.4 | 26.4 |
| 43.0 | 28.6 | 35.8 | 27.5 |
| 36.2 | 29.6 | 30.1 | 28.6 |
| 83.4 | 27.8 | 69.4 | 25.7 |
| 73.3 | 29.3 | 61.0 | 27.4 |
| 66.6 | 30.2 | 55.4 | 28.5 |
| 59.9 | 31.2 | 49.8 | 29.7 |
| 53.1 | 32.2 | 44.2 | 30.8 |
| 100.2 | 30.4 | 83.4 | 27.8 |
| 90.1 | 31.9 | 75.0 | 29.5 |
| 83.4 | 32.8 | 69.4 | 30.7 |
| 76.7 | 33.8 | 63.8 | 31.8 |
| 70.0 | 34.8 | 58.2 | 33.0 |
| 117.0 | 33.0 | 97.4 | 30.0 |
| 106.9 | 34.4 | 89.0 | 31.7 |
| 100.2 | 35.4 | 83.4 | 32.8 |
| 93.5 | 36.4 | 77.8 | 34.0 |
| 86.8 | 37.3 | 72.2 | 35.1 |
| 133.7 | 35.6 | 111.3 | 32.1 |
| 123.7 | 37.0 | 102.9 | 33.8 |
| 117.0 | 38.0 | 97.4 | 35.0 |
| 110.3 | 39.0 | 91.8 | 36.1 |
| 103.6 | 39.9 | 86.2 | 37.3 |

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| | Thermal output on the basis of DIN EN 1264 |
| | In constructions with counter battens, the area fraction of the counter battens is subtracted from the heated ceiling surface |
| | Construction: K9000, K9500 Product datasheet: P1000, P2000 |