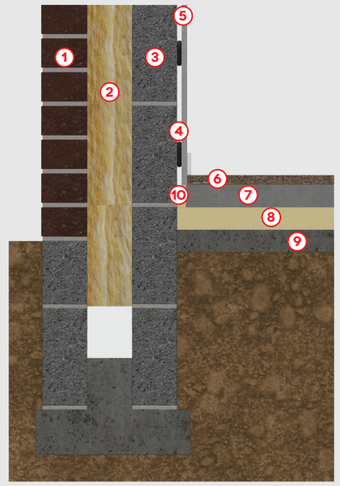
E05A - Ground Floor (Slab-on-Ground)

Superglass Superwall 32 Cavity Batt



1. 102.5mm Outer Leaf Brickwork
2. Superglass Superwall 32 Cavity Batt
3. 100mm Inner Leaf Blockwork
4. 15mm Plaster Dabs
5. 12.5mm Standard Plasterboard
6. 22mm Chipboard Flooring
7. 75mm Concrete Screed
8. 100mm Floor Insulation
9. 100mm Concrete
10. 30mm Edge Insulation

Images for illustration purposes only.

Date of Issue: September 2026

	Wall Build-up	
	Thickness (mm)	**Thermal Conductivity (W/mK)**
Outer Leaf Brickwork	102.5	0.77
Superglass Superwall 32 Cavity Batt	Shown in tables below	
Inner Leaf Blockwork	100	Shown in tables below
Plaster Dabs	15	0.088
Standard Plasterboard	12.5	0.19

	Floor Build-up	
	Thickness (mm)	**Thermal Conductivity (W/mK)**
Chipboard Flooring	22	0.13
Concrete Screed	75	1.15
Floor Insulation	100	0.022
Concrete	100	1.15

Linear Thermal Transmittance (Ψ-value) and Temperature Factor (f-value) calculated for a range of block types and insulation thicknesses.

Superwall 32 – 0.032W/mK											
	Insulation & Cavity Thickness	**100mm**		**125mm**		**150mm**		**175mm (100+75mm)**		**200mm (2x100mm)**	
Block Type	**Thermal Conductivity (W/mK)**	**Ψ-value (W/mK)**	**f-value**	**Ψ-value (W/mK)**	**f-value**	**Ψ-value (W/mK)**	**f-value**	**Ψ-value (W/mK)**	**f-value**	**Ψ-value (W/mK)**	**f-value**
Lightweight Aircrete	0.11	0.032	0.941	0.032	0.942	0.028	0.945	0.029	0.946	0.025	0.947
Standard Aircrete	0.15	0.038	0.937	0.039	0.939	0.034	0.942	0.035	0.943	0.031	0.944
High Strength Aircrete	0.19	0.043	0.935	0.044	0.937	0.040	0.940	0.041	0.940	0.037	0.942
Ultra Lightweight Aggregate	0.28	0.055	0.931	0.056	0.933	0.051	0.936	0.053	0.936	0.049	0.938
Medium Dense	0.45	0.072	0.926	0.074	0.928	0.070	0.931	0.072	0.931	0.067	0.933
Dense Concrete	1.13	0.125	0.912	0.129	0.920	0.124	0.923	0.128	0.923	0.123	0.925

The ground floor Perimeter/Area ratio (P/A) = 0.25.
30mm edge PIR insulation has a thermal conductivity of 0.022W/mK.

The results have been generated using AutoPsi Thermal Modelling Tool. The calculations have been completed using the methodology outlined in BS EN ISO 10211 and in accordance with BR497 2nd Edition.

Any deviation from the details used as part of this calculation will result in the calculation being inaccurate. To request a copy of a calculation or a different build-up please email technical.stirling@etexgroup.com