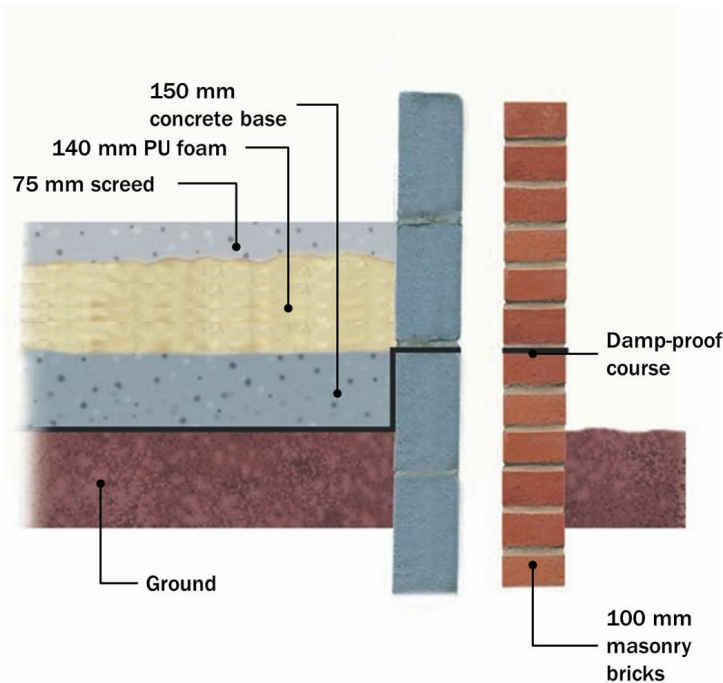


Concrete Ground floor



General

Spray applied polyurethane foam directly onto concrete

Average foam depth:	140 mm
U-value:	0.13W/m ² K
Condensation risk:	Not applicable
Ventilation:	Not applicable
Additional insulation:	None

PU foam is applied directly to the concrete. Under-floor heating pipes can be fixed to the foam with the normal clips. A layer of tamped or self-levelling screed is applied, usually to a depth of 75 mm. The process is extremely quick to apply compared to other methods and the problems of insulation boards lifting are avoided. Site overhead time and material waste from off-cuts are minimised.

The foam has sufficient compressive strength to withstand foot traffic before the screed is laid. Open cell foams are also available for intermediate floor applications to reduce sound transmission.

U-value Analysis

Construction details Concrete ground floor	Thickness (mm)	Thermal conductivity (W/mK)	Thermal resistance (m ² K/W)
Inside surface	-	-	0.040
Screed – cast (BS5250)	75.0	1.401	0.054
Spray Applied PU foam	140.0	0.025	3.000
Concrete, dense (BS5250)	150.0	1.701	0.088
Ground	-	-	0.170
U-value – 0.13 W/m²K			

Ground Floor Details

Calculation method:	EN ISO 13370
Perimeter:	40.00m
Area:	100.00m ²
P/A:	0.400m
Floor type:	Solid floor
Edge insulation:	None