

	Traditional cement-sand 1:3 to 1:5	Proprietary Modified cement-sand	Proprietary Cementitious self-smoothing	Proprietary Calcium sulfate self-smoothing	Proprietary Lightweight aggregate
Advantages	Cheap and can be laid in small areas.	Can be very quick drying. High strength.	Fast to lay. Can be quick drying. High strength.	Fast to lay. Low drying shrinkage minimises cracking & curling. Large areas without joints. Rapid strength development. Low coefficient of thermal movement.	Reduces slab loads Can be over 200mm thick.
Disadvantages				Cannot contain steel reinforcement. Cannot be used in wet environments. They should be isolated from cementitious materials. i.e. an impermeable layer is needed on a concrete base slab & cementitious mortar or grout cannot be used to bed the flooring.	Requires finishing with a 10mm to 20mm layer of a normal weight cementitious screed applied monolithically.
Bonded screed thickness Bonded screeds require more preparation work to the base slab.	25mm to 40mm	25mm to 40mm	3mm to 40mm	25mm but not normally used	38mm to 63mm
Unbonded screed Thickness	Min. 50mm	Min. 50mm	Min. 50mm	Min. 30mm	Min. usually 75mm
Floating screed Thickness If insulation boards are sufficiently rigid the min thickness may be reduced.	Min. 65mm lightly loaded Min. 75mm heavily loaded	Min. 65mm lightly loaded Min. 75mm heavily loaded	Min. 65mm lightly loaded Min. 75mm heavily loaded Some products specify 40mm min	Min. 35mm lightly loaded Min. 40mm heavily loaded	Min. usually 75mm
Floating screed with heating pipes Thickness Higher risk of failure	Min. 25mm above the pipes Min. 75mm screed	Min. 25mm above the pipes Min. 75mm screed	Min. 25 mm above the pipes Min. 75mm screed Some products specify 50mm min.	Min. 25mm above the pipes Min. 75mm screed Some products specify 50mm min.	Min. usually 75 mm

Notes:

1. Thicknesses given are typical for the type of application but can vary depending on the screed mix and surface regularity of the concrete base.
2. Where proprietary screeds or additives are used the manufacturer's recommendations must be followed.
3. For cementitious unbonded, floating and screeds with heating pipes consider providing steel fabric to BS 4483. Typical fabric sizes used are D49 and D98.

Table 1: Comparison of screed materials and types of screed build-up

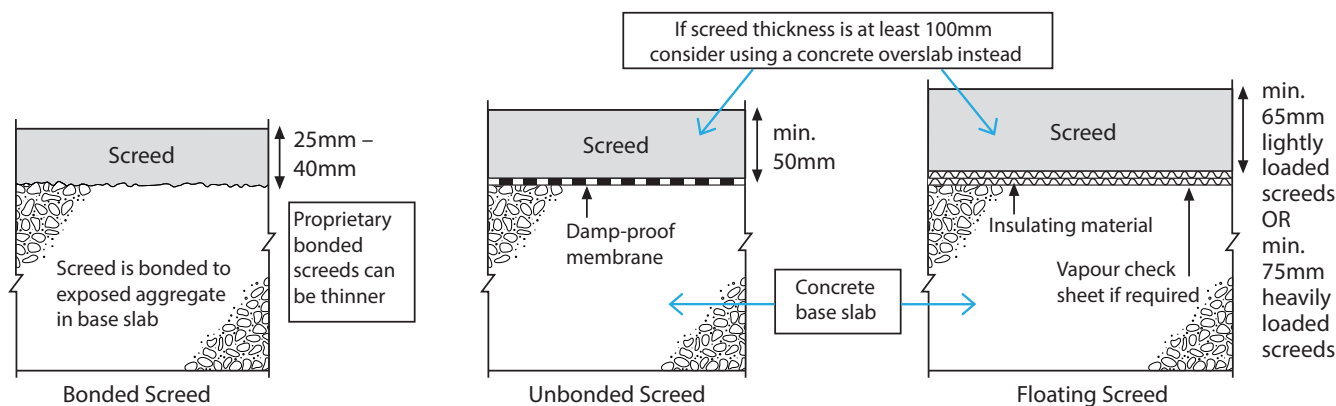


Figure 1: Types of levelling screed construction build-up

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