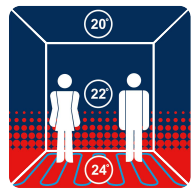


Ultraflo Liquid Floor Screed



GS UNDERFLOOR
HEATING

ultraflo[®] is a calcium sulphate, hemihydrate, pump applied liquid floor screed.

COMPLIANCE: *ultraflo*[®] has been designed to comply with BS EN 13813:2002, screed material and floor screeds, screed material – properties and requirements.

APPLICATION

- Subfloor levelling
- For use with underfloor heating systems
- Unbonded, bonded and floating floor constructions
- Suitable for both residential and commercial floors

CHARACTERISTICS

Abrasion, impact and indentation: *ultraflo*[®] provides excellent resistance to impact and exceeds the requirements for Category A Floors. (BS 8204)

Shrinkage: *ultraflo*[®] has virtually no drying shrinkage. Movement joints need only be considered where the floor exceeds 1000m², or where the floor becomes elongated and an aspect ratio of 1:6 is exceeded. Movement joints should also be considered across doorways and when used with under-floor heating systems, movement joints should be considered between different heating zones.

Compaction: The flowing characteristics of *ultraflo* means it is self-compacting thus voids and poor compaction are virtually eliminated.

Durability: As with virtually all screeds *ultraflo* is not a wearing surface and it requires covering with a suitable floor covering. *Ultraflo* can be used with all standard floor coverings i.e. tiles, wood, carpet, vinyl.

Wet Areas: *ultraflo*[®] is not suitable for areas which are in regular contact with water i.e. communal showers, wet rooms or exterior yards or similar.

TECHNICAL PROPERTIES

Flow (DIN 1060 Test)	230-250mm
Plastic Density	2060-2130 kg/m ³
Dry Density	1950-2050 kg/m ³
BRE Impact Test	Less than 2mm
Flexural Strength	4-6N/mm ²
Fire Rating	Non combustible
Thermal Expansion Co-Efficient	0.01mm/mk
Thermal Conductivity	1.66-1.88 W/mk
Drying Shrinkage	Less than 0.02%
Drying Time*	1 day/mm

*40mm depth, ambient 20°C and 65% relative humidity

KEY FEATURES

- Very low shrinkage, does not curl with minimal risk of cracking
- Movement joint requirements greatly reduced
- Can be walked on 24 hours after application
- Increased productivity – 2000m² per day can be easily achieved
- Significantly reduced thickness when compared to traditional sand:cement screeds
- Reduced depth means reduced weight and drying times
- Can be force dried
- Under-floor heating systems, can be turned on after 7 days
- Increases efficiency of under-floor heating system
- Quicker heat response time with under-floor heating



Minimum Application Thickness

- Bonded 25mm
- Unbonded 30mm
- Floating(Commercial) 40mm
- Floating (Domestic) 35mm
- Under-floor Heating 25mm min cover to pipes

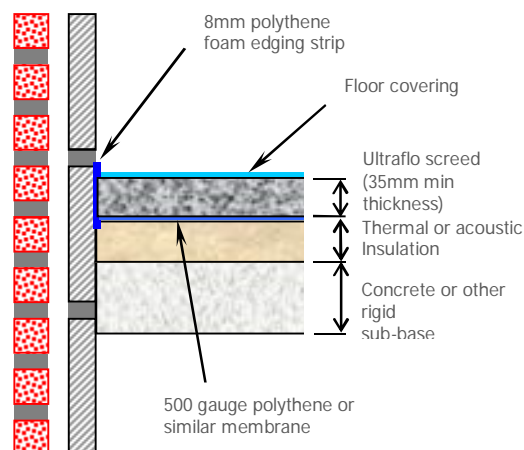
(Note: any deviations in the levels and surface regularity of the base slab should be taken into consideration when determining the thickness of screed, to ensure the minimum thickness can be achieved.)

INSTALLATION: *ultraflo*[®] must only be installed by approved contractors. The building should be weather tight, i.e. roof on, doors and windows installed and any openings made weather tight prior to installation. It is recommended that Ultraflo is laid on 500 gauge polythene, with 8-10 mm compressible edging strip around the perimeter of the room. All joints should be taped to create a tanking system. The finished level of the screed is set using laser levels and tripod indicators throughout the room. *ultraflo*[®] is delivered to site ready mixed and will have been tested prior to discharge for flow characteristics. It is pumped into place and in practice takes approximately 30 minutes to pump 6m³. The screed is then dapped to remove air bubbles and create a smooth, level surface. For further information regarding installation, please consult the *ultraflo*[®] Installation Guide available.

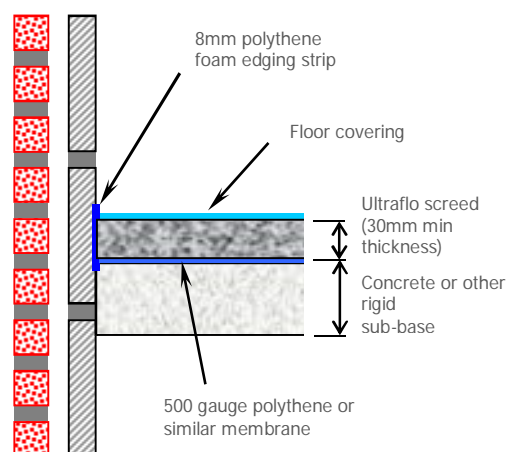
DRYING: Immediately after application and until the screed has hardened, protect the surface of the screed from water ingress, direct sunlight and severe draughts. After 48 hours, windows should be opened to allow drying. Dehumidifiers can be turned on to force dry the screed after 7 days. Ultraflo can be lightly trafficked after 24 hours, depending on drying conditions. *ultraflo*[®] will dry at 1mm/day up to 40mm thickness (20°C, 65% relative humidity). This increases for screeds of thicker depths and in poor drying conditions. The under-floor heating systems can be commissioned after 7 days to force dry the floor. The under-floor heating system should be increased from ambient to normal working temperature in 5°C steps per day. The maximum permissible water temperature is 55°C.

APPLICATIONS FOR FLOOR COVERING: The screed must be sufficiently dry before any floor coverings are applied. For permeable floors such as carpets, moisture content less than 1% is required. For impermeable floor coverings such as vinyl, tiles, moisture content less than 0.5% is required. When applying cement-based adhesives the screed must be primed with an acrylic or epoxy based primer.

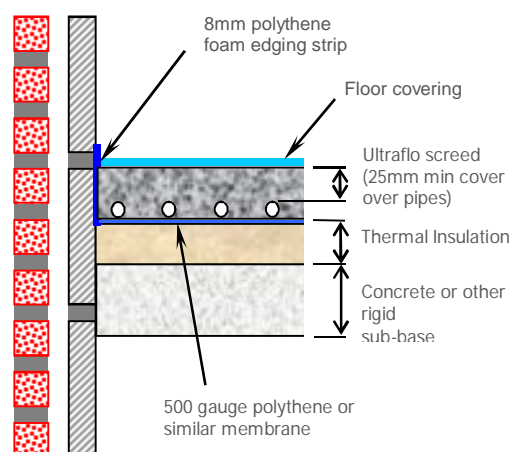
ultraflo[®] - Floating Floor



ultraflo[®] - Unbonded Floor



ultraflo[®] - with Underfloor Heating



* All thickness as per BS 8204-7

Ultraflo Aftercare Guide



To maximise the optimum performance of your ultraflo® floor screed, please follow the guidelines set out below.

FIRST 24 HOURS

Immediately after application you should keep all windows and doors closed to protect the surface of your new floor from frost, direct sunlight, wind, rain and water ingress. In extreme cold weather, please ensure the air temperature above the freshly poured ultraflo® is kept above 2°C.

AFTER 24 HOURS

After 24 hours, it is essential to open the windows and doors during the day to allow a flow of air through the building to aid the drying process. (Failure to do this will prevent the floor from drying effectively). Under standardised drying conditions, as per the British Standard (temperature of 20°C and 65% relative humidity) ultraflo® will dry at a rate of 1mm per day for the first 40mm of depth and 1/2mm per day thereafter. Storage of materials on the screed surface, accidental spillages of water, humid or cold environments will all delay drying.

FORCE DRYING *ultraflo*® USING UNDERFLOOR HEATING

Ultraflo® can be force dried after 7 days from installation by turning on the under floor heating circuits to a temperature of 20°C, and gradually increasing it by 5°C increments per day, until it reaches its normal working temperature. (Max water temp 55°C) It is essential that all windows are opened to generate enough ventilation for moisture released from the screed to escape, keeping the interior of the building free from a build up of condensation.

MOISTURE TESTING

In keeping with all screeds ultraflo® must be dry prior to application of floor finishes. The floor moisture should be checked and the British standard approved test methods are Hair Hygrometer or Carbide Bomb. For impermeable floor-coverings such as tiles, wood and vinyl, ultraflo® should be less than 75% RH (Hair Hygrometer) or less than 0.5% moisture (Carbide bomb)

NOTE

- Electronic meters are not suitable for accurate determination of the moisture content of calcium sulphate based floors, however they can be used to determine the wettest areas of the floor. An indicator of moisture is to tape a sheet of polythene, 50cm x 50cm to the floor and leaving in situ for 48hrs with the underfloor heating turned on. If condensation forms on the underside of the polythene or there is a colour change on the floor, the floor still contains moisture. (This is only an indicator, it does not replace the Hair Hygrometer or Carbide Bomb tests)
- Where underfloor heating is installed, this must be commissioned and run prior to application of impermeable floor coverings

FLOOR PROTECTION

When the ultraflo® floor surface is dry and any operations is carried out where the surface could become contaminated i.e. spray painting the floor should be protected.

APPLICATION OF FLOOR FINISHES

When applying cement based tile adhesives or levelling compounds to the floor, the floor must be primed with an acrylic or epoxy based primer. This primer is required to create a barrier between the calcium sulphate in the screed and the Portland cement in the tile adhesive. All major tile adhesive manufactures supply primers, which they recommend for calcium sulphate screeds. These should be available from your tile adhesive supplier. The surface of the ultraflo® should be clean, free of any contaminants prior to application of the primer. Follow the primer manufacturer's advice regarding application to hemihydrate calcium sulphate screeds.

If you require any further information, please contact a member of our technical sales team on 028 9085 1441.