

Design of the base

General

Most forms of solid construction will provide a suitable base for mastic asphalt flooring applications.

Surfaces to which mastic asphalt is to be applied should be installed or prepared so as to have a true and even surface substantially free from irregularities such as abrupt changes in levels, hollows, ridges, dips, concrete, mortar or plaster droppings.

The building design should enable the mastic asphalt to be applied to a uniform thickness. Any irregularities in the horizontal substrate will be reflected in the final surface with the accompanying inconsistencies of thickness.



Concrete bases / cementitious screeds

Concrete bases to receive mastic asphalt flooring should be designed and constructed following the recommendations in BS8204-1.

The surface should be provided with a float finish and a surface regularity of SR2. Any falls required should be formed in the base and, where the concrete base is uneven, a levelling coat of asphalt or sand cement screed may be required. Any damp-proof membrane and/or thermal insulation requirements should be placed below the concrete base slab. If an SR1 finish to the mastic asphalt floor is required, an SR1 finish to the concrete base will be required (see [Table 1](#)).

If the mastic asphalt flooring is installed on a base consisting of precast concrete beams, hollow beams or hollow tiles, a suitable screed - designed in accordance with BS 8204: part 1 - may be required. Adequate end and side restraint should also be provided to pre-cast concrete beams and similar units in order to reduce structural movement to a minimum.

Stone flags, quarry tiles or brick floors

Old floors of these types can form a good base to install mastic asphalt flooring. However, it may be necessary to provide a levelling coat of asphalt to take up irregularities in the surface.

Timber floors

Mastic asphalt can be laid over timber boarded floors providing the structure is free from deflection. Minor deflection can be catered for by the inclusion of a 10mm cushion coat of roofing or tanking asphalt. In all cases, a separating membrane of black sheathing felt is required .

Metal floors

After the surface has been prepared, a thin coat of bituminous primer must be applied to the metal. The asphalt flooring is laid directly to the substrate without using a separating membrane. To compensate for deflection, a 10mm roofing or tanking layer should be specified as a cushion coat.

Table 1

Classification of surface regularity of direct finished base slab or screed

Class	Maximum permissible departure from a 3m straightedge laid in contact with the floor
SR1	3mm
SR2	5mm
SR3	10mm