

2 Substructure specifications

Although **Playtop**® can be installed as a package contract, some playground operators may wish to install the substructure themselves, leaving just the specialised work of mixing and laying the porous-rubber upper layers to us. This section gives basic details of substructure specifications - we can provide more detail on request.

Existing hard surfaces

Playtop® can be laid on most existing hard surfaces of concrete, bituminous macadam or asphalt in sound condition. Provided the surface is firm and even, it can usually be treated to achieve a suitable substructure. However, to avoid problems, please always refer to us for approval. Note that the finished surface will only drain freely if the existing hard surface is porous. Where there is existing play equipment on the site - especially moving equipment such as swings or carousels - the ground clearance under it must usually be maintained. This may mean raising the equipment or lowering the existing surface to allow for the thickness of **Playtop**®.

New construction

An important cost advantage of **Playtop**® is that the very strong porous-rubber surface can usually be laid directly onto a dynamic (crushed-stone) foundation layer, without the considerable extra expense of an engineered structural layer. A structural layer is needed only when the thickness of the rubber is 20 mm, for example on run-about areas of a playground or under low-level play equipment. But it may be cheaper to increase rubber thickness to 40 mm to avoid building a structural layer (see Section 1).

Foundation layer

The aggregate used to construct the foundation layer should be graded crushed rock, compacted and regulated to a finished thickness to suit site conditions. The foundation layer should be laid with local deviations no greater than 10 mm under a 3-metre straight edge in any direction. This specification applies both to foundation layers for direct application of **Playtop**® and where there is to be an intervening structural layer.

Structural layer

Where a structural layer is needed (under 20-mm thickness of **Playtop**®) we recommend a porous construction of open-textured bituminous macadam, so that the surface will drain freely. This may be laid as a single course with minimum consolidated thickness 50 mm, using aggregate of 10 mm nominal size. Alternatively, two courses may be laid. First a base course of minimum consolidated thickness 40 mm using aggregate of 20 mm nominal size, followed by a top course of minimum consolidated thickness 20 mm using aggregate of 6 mm or 10 mm nominal size. The macadam should be laid with local deviations no greater than 8 mm under a 3-metre straight edge in any direction. A steel-wheeled roller should be used to compact the area while the materials are in a workable condition. Compaction should continue until the roller leaves no marks. Particular attention should be given to the location and standard of all joints.

If an impervious base is specifically required, the top course should be a dense bituminous macadam or hot rolled asphalt.

The structural layer should be completed at least 14 days before **Playtop**® is installed.

Perimeter detail

The surface is normally retained by edgings. Hydraulically pressed precast concrete edgings are best, although pressure-treated timber edgings, block pavings or engineering bricks may also be used. Edgings should be set in a concrete bed and haunch and set above the level of the substructure by the required thickness of **Playtop**® and any structural layer. They should be laid to an accurate line and level and to a tolerance compatible with the finished surface level. If **Playtop**® is to surface only part of an existing hard area, it may be possible to cut a chase at the perimeter to assist bonding and allow the top surface to form a gentle ramp rather than a dangerous trip-edge.



www.playtop.com

a Charles Lawrence Group plc company

Playtop Limited

Head Office: Brunel House, Jessop Way, Newark,
Nottinghamshire, NG24 2ER, England
Tel: +44 (0)1636 615868 Fax: +44 (0)1636 610222 sales@playtop.com

Northern Office: Newbridge Industrial Estate, Newbridge,
Midlothian, EH28 8PJ, Scotland
Tel: +44 (0)131 335 6818 Fax: +44 (0)131 333 4154 sales@playtop.com

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