



## Polymeric Type 4 Sports Surfacing

### Meeting the Classifications

Textured Type 4 Surfacing is a porous resilient polymeric surface developed for use as a multi sport surface and suits a variety of games played at recreational level. It will meet the performance requirements classified by Sport England in conjunction with The Sports and Play Construction Association (SAPCA) as a Type 4 Multi Use Games Area ( MUGA ) Polymeric Surface.

### The Materials

Polymeric Type 4 surfacing is a combination of specially graded recycled sbr black rubber particles, size 1-4 mm, and polyurethane binder, which is mixed on site and normally laid by a specialist paving machine to form a continuous surface. The surface is normally laid to a thickness of 12mm prior to the application of the coloured textured wearing course.

Coloured textured wearing course comprises a coloured elastomer incorporating small particles of coloured epdm rubber, size 0.5-1.5 mm. This is mixed on site and then spray applied in two passes onto the black surface at a combined rate of 2Kg/m<sup>2</sup> giving an even textured finish. Colour options are either red or green.

The combination of the black rubber particles with the application of the textured wearing course process forms the finished surface. The surface is porous and should be laid onto an accurately constructed permeable base. Refer to Base Guideline Specification sheet.



## CURING PERIOD

Textured Type 4 Surfacing is a wet pour in situ laid system and requires a curing period before the surface can be walked on. The surface 'sets' by a moisture cure process with the length of curing time being dependent on local climatic conditions. In general most surfaces will cure overnight following each day's laying/spraying, but sometimes can take longer.

During the curing period it is critical that security measures are taken to prevent access onto the newly laid surface. This is usually prevented by the use of temporary security fencing and/or a static security guard and is an effective control against pedestrians or animals etc.

Textured Type 4 Surfacing is a two part process and the cure time applies to both the black rubber layer and each coat of the spray coating.

## SEASONALITY OF TRADE

A successful installation is dependent upon favourable weather conditions. Historically, surfaces and line marking carried out in the UK have normally been laid between the months of April and September and consideration must be given to achieving contract commencement and completion within this period. Sometimes installation can be started earlier than April or finished later than September if favourable climatic conditions prevail.

All processes require ground and ambient temperatures to be approximately 10°C on a rising thermometer in dry and ideally warm conditions to be totally effective. They cannot be laid onto wet substrates. In particular, the spraying works require still or tolerable wind conditions, must be carried out in dry conditions and cannot be sprayed onto wet rubber or rubber that contains frost or any form of latent damp.

### TECHNICAL SPECIFICATION

Colour	Red or Green	
Thickness	13-15mm	
Specific Gravity	0.7 ± 0.05	
<b>Rebound Resilience</b>		
• Football	25-50%	BS 7044 : Part 4 :1991
• Tennis Ball	80-105%	LTA
• Netball	45-65%	BS 7044 : Part 4 :1991
Porosity	≥ 100mm/hr	BS 7044 : Part 4 :1991
Slip Resistance	60-140	BS 7044 : Part 4 :1991
Traction	1.1-2.0	BS 7044 : Part 4 :1991
Impact Response (force reduction)	32-52%	IAAF
Flammability	Charring radius ≤ 50mm (Low radius of effective ignition)	
Resistance to Bacteria & Fungi	Will not promote growth	
Stability	All colours will change slightly over a period of time due to ageing, U V reaction, air borne pollutants and foot carried contamination,	
Footwear Requirements	Patterned rubber soled sport footwear for good grip is recommended. Do not use moulded studded boots that can damage the surface.	

## EXTENT OF WORKS

Stage 1 Baseworks : - When a new multi sport facility is being constructed the guideline specification for the baseworks as Sport-Top MUGA Base Spec is recommended. The exacting demands and tolerances of sport require the works to be constructed to great accuracy. Special attention is needed to meet the stringent surface tolerance requirements of the final bitumen macadam course and is often achieved by the use of specialist contractors utilising laser guided machinery. This operation is a pre requisite to achieving a uniform polymeric surfacing thickness and a primary factor in achieving the correct performance characteristics for the sports surface.

Some existing tarmac surfaces can be used. Usually they require additional treatment to improve the drainage characteristics of the tarmac and some may also require a new bitumen macadam overlay prior to the installation of the polymeric surface.

Stage 2 Black rubber surface : - Polyurethane moisture curing primer is spray applied to the permeable base using purpose made equipment. Black recycled sbr rubber granule is mixed with polyurethane moisture curing binder and laid in situ to a nominal depth of 12mm using a specialist paving machine. This is laid in bays, jointing adjacent bays as the work progresses.

Stage 3 Texture coat wearing course : - Physical features such as fence lines etc are protected against possible over spray/wind drift in the vicinity of the works. Coloured epdm synthetic rubber is mixed with a coloured polyurethane moisture curing elastomer, and spray applied to the rubber surface using specialist spraying machinery. This is carried out in two passes, normally on successive days.