

Product Datasheet

RTC's safety surfaces are a multi-component polyurethane and rubber composite which is formed in-situ by a chemical mixing, wet pouring, levelling, screeding and rolling process. RTC uses an EPDM rubber crumb combined with a polyurethane binder to create a long lasting and aesthetically pleasing surface.

Woodland House
Chestnut Business Park
Smallshaw Lane
Burnley
BB11 5SQ

Tel: 01282 414131
Fax: 01282 414133

www.rtc-safety.co.uk
sales@rtc-safety.co.uk



EPDM Rubber Granule

EPDM (Ethylene Propylene Diene Modified) rubber granules form the wearing course of the surface. When used in the two layer system this wearing course is laid at a depth of 15mm. Rubber granules between 1mm and 4mm form a hard wearing, porous and slip resistant layer.

EPDM granules are available in a variety of colours – please see our colour sample sheet for further details.

SBR Rubber Granule

SBR (Styrene Butadiene Rubber) granules form the base layer of the surface and produce the absorbent properties of the system. 2mm – 6mm SBR granules are made from recycled truck tyres.

Polyurethane Resin Binder

A polyurethane resin is used in varying quantities to bind the EPDM or SBR rubber granules together. All products are mixed on site and laid in-situ.

RTC's safety surfaces provide a hard wearing, porous and absorbent surface ideal for laying on playgrounds, golf courses, equestrian centres, swimming pools and gyms.

All surfaces meet British and European safety standards and come with a 5 year warranty.

For information on the required area size and depth of surface please see our datasheet – 'Assessing the Required Thickness and Area Size'.

For information on the required sub-base and edging specification please see our datasheet – 'Sub-Base Specification'

How to Determine the Required Thickness and Area Size

The following information is designed to help you assess the required depth and area size of safety surfacing required.

Woodland House
Chestnut Business Park
Smallshaw Lane
Burnley
BB11 5SQ

Tel: 01282 414131
Fax: 01282 414133

www.rtc-safety.co.uk
sales@rtc-safety.co.uk



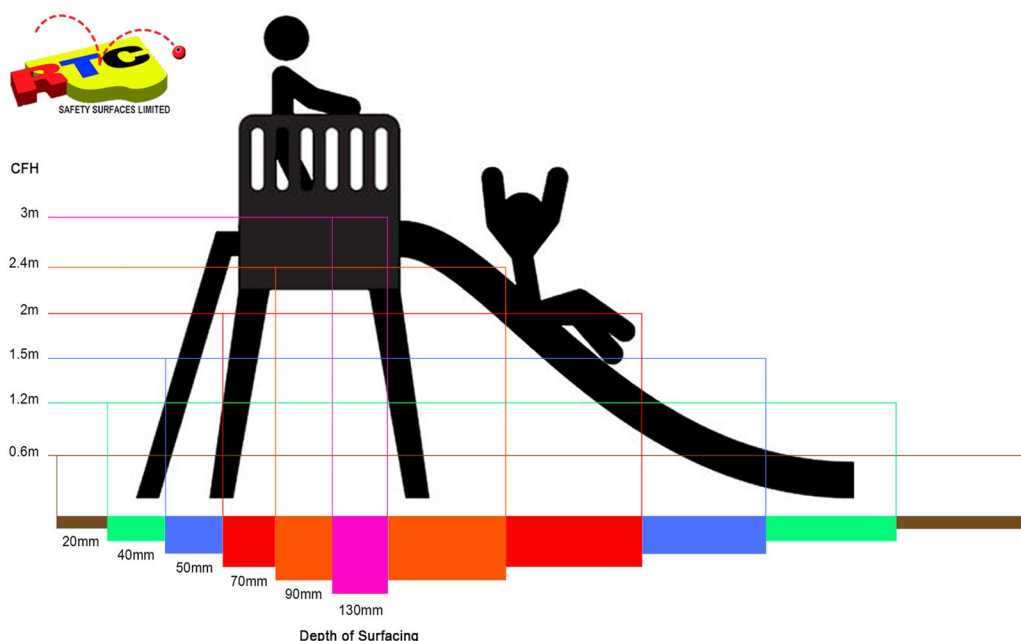
Depth of Surfacing

The depth of surfacing required is calculated according to the Free Fall Height (FFH) of any play equipment along with the surface's Critical Fall Height (CFH). This is the height from which it is assessed that a surface will absorb the impact of a child's fall sufficiently to reduce the risk of serious head injury.

The maximum FFH (i.e. the distance between any accessible part of play equipment intended for play and the surface underneath) should equal or not exceed the surface's CFH. We would be happy to advise of the FFH of any existing or planned play equipment, however the general principles are detailed below.

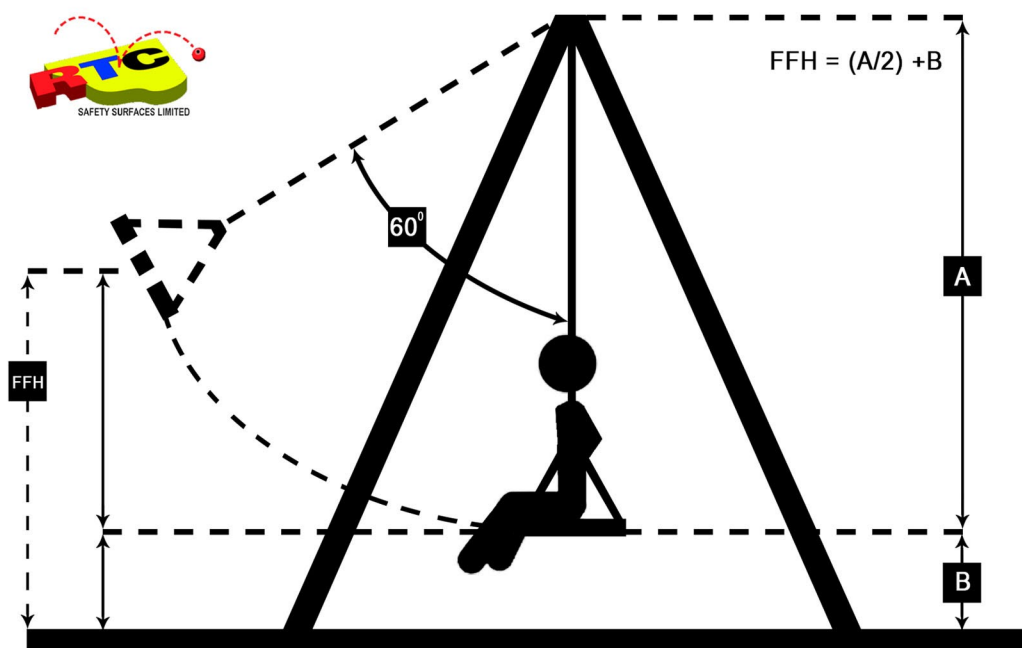
Stationary Equipment

For equipment on which a child stands, the FFH is calculated from the highest point on the equipment which is intended for play - usually the platform height. For equipment from which a child hangs, the height of the hand support is used.



Swings

The FFH is calculated from the centre of the stationary seat surface at 60 degrees. To work this out divide the length of the chain by 2 then add the distance from the seat to the ground. The image below demonstrates this.



RTC Safety Surfaces have been tested according to British and European Safety Standards to the certified levels below.

Critical Fall Height (CFH)	0.6m	0.9m	1.2m	1.5m	1.8m
Thickness	20mm	30mm	40mm	50mm	60mm

Critical Fall Height (CFH)	2.0m	2.2m	2.4m	2.7m	3.5m
Thickness	70mm	80mm	90mm	100mm	130mm

Please note that if the sub-base is Type 1 MOT stone the minimum depth which can be laid is 40mm.

Area of Surfacing

The extent of surfacing required around the play equipment is dictated by the height of any potential fall.

Stationary Equipment

For stationary equipment with a FFH of 1.5m or less, surfacing should extend at least 1.5m beyond the edge of the equipment. To calculate the surfacing distance for equipment with a FFH of over 1.5m, subtract 1.5m from the FFH and multiply the result by 0.667 before adding back the 1.5m. The table below demonstrates this principle.

Height of Fall (m)	Surface Distance (m)
1.5	1.50
1.6	1.56
1.7	1.63
1.8	1.70
1.9	1.76
2.0	1.83
2.1	1.90
2.2	1.96
2.3	2.03
2.4	2.10
2.5	2.16
2.6	2.23
2.7	2.30
2.8	2.37
2.9	2.43
3.0	2.50

Swings

The area of surfacing required for a swing is calculated as follows; to calculate the length of surfacing required to the front and back of the swing, multiply the length of the chain by 0.867 then add 1.15m. The width of surfacing required for seats no greater than 500mm width is 1.75m (i.e. 0.875m each way from the seat centre)

For swings with seats wider than 500mm the difference between the seat width and 500mm must be added to the 1.75m (50% to each side of the swing centre). Please note that areas for two seats in one bay may overlap providing the distance between seats is 20% of the swing chain +300mm.

Should you require any advice with regards to the depth or area size of surfacing required, please do not hesitate to contact us.

Sub-Base Specification

RTC Safety Surfaces can be laid onto a variety of sub-bases. The most common of these being; Type 1 MOT stone, Tarmac or Concrete. RTC can lay the surface onto other sub-bases, please contact us to discuss suitability.

The sub-base can determine the depth of safety surface laid, for example the minimum depth of surface which can be laid onto a type 1 MOT stone sub-base is 40mm. We will be happy to advise you on any aspects of sub-base or edging detail required. Below are specifications for the most common forms of sub-base.

RTC can prepare a sub-base for you if you require, please contact our office for pricing.

Woodland House
Chestnut Business Park
Smallshaw Lane
Burnley
BB11 5SQ

Tel: 01282 414131
Fax: 01282 414133

www.rtc-safety.co.uk
sales@rtc-safety.co.uk

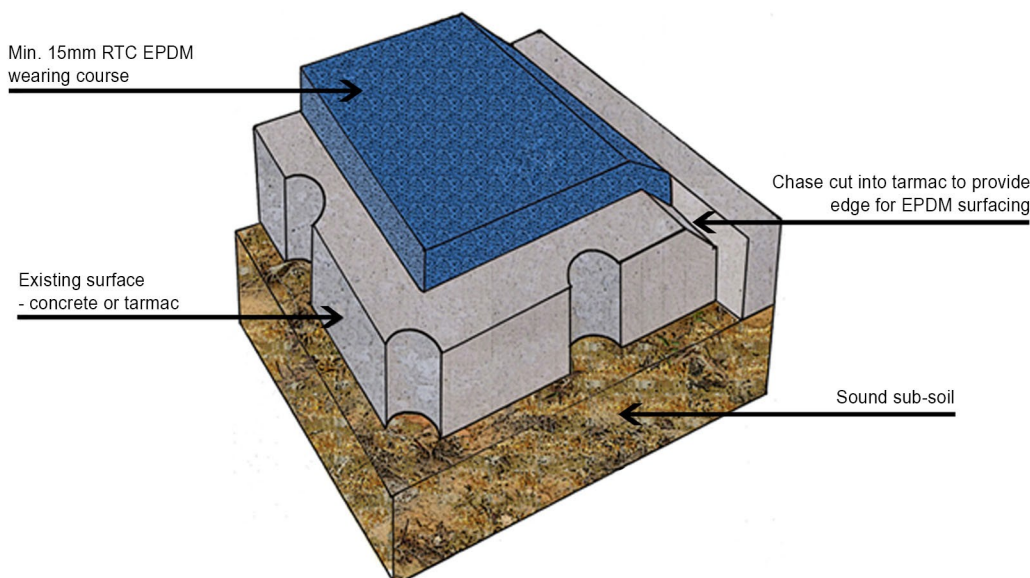


1. Existing sub-bases – Tarmac or concrete

RTC Safety Surfaces can be installed onto most existing surfaces which are in reasonable condition – this can prove to be a cost effective method, eliminating the need for groundwork preparation.

The sub-base should be solid, in good condition and free of any weeds or moss. It is important to ensure that there is sufficient drainage. There may be a requirement to drill holes into the surface in a grid pattern to provide appropriate drainage, particularly if there is no existing drains. Please discuss this further with us if you are in doubt.

The minimum depth which can be laid onto a good quality existing sub-base is 15mm.

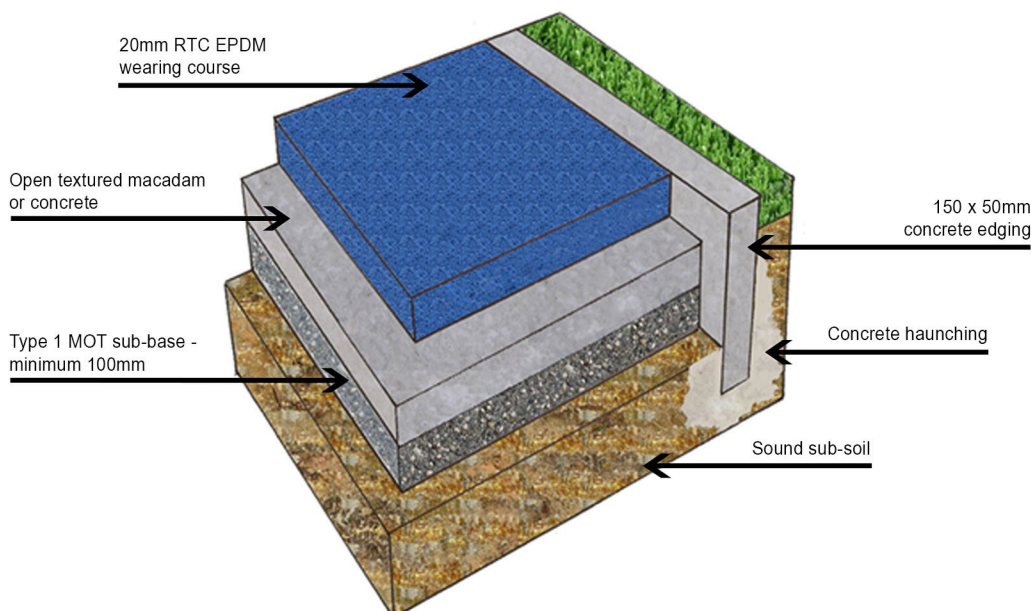


2. New Base Preparation for an RTC Safety Surface depth of less than 40mm

For surfaces less than 40mm it is necessary to lay a 50mm open textured macadam surface for the rubber to be laid onto. This should be laid onto a type 1 MOT stone sub-base. A concrete kerb edging 150 x 50mm should be installed around the perimeter of the area and set to the appropriate height above the macadam to allow the rubber to finish flush with the edge. The macadam sub-base should have deviations no greater than 7mm under a 3m straight edge.

It may be more cost effective to lay a surface which is 40mm in depth or greater as this will remove the requirement for the macadam layer as the surface can be laid directly onto a compacted type 1 MOT stone base.

It is important to ensure that the sub-base is solid and free draining to ensure maximum longevity of the surface.

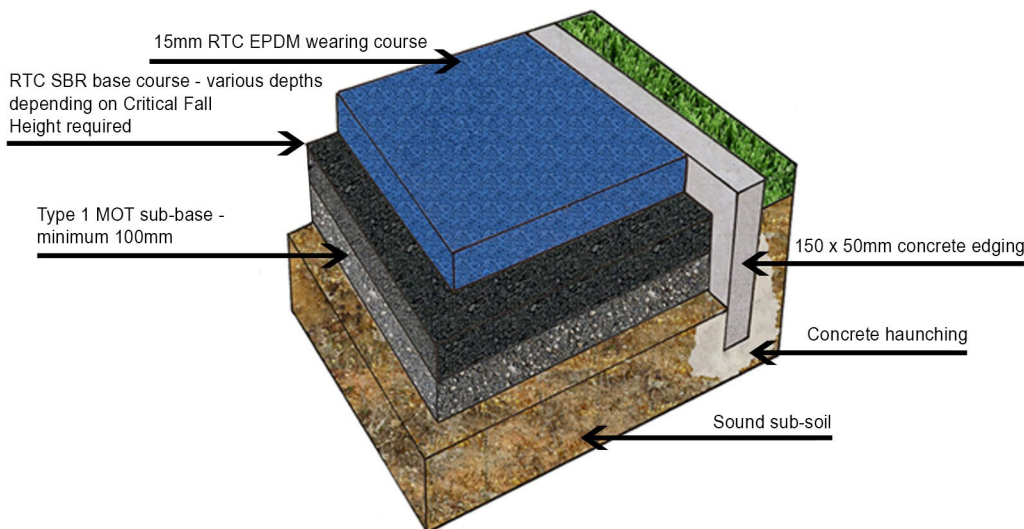


3. New Base Preparation for an RTC Safety Surface Depth of Greater than 40mm

For surfaces greater than 40mm it is possible to lay directly onto a type 1 MOT stone sub-base. The existing ground should be excavated to accommodate a base of between 100mm and 300mm depending on site conditions, plus the depth of the safety surface required.

A concrete kerb edging of 150 x 50mm should be installed around the perimeter of the specified area which is then filled with the MOT stone layer and compacted. This will then leave the correct depth below the top of the kerb to accommodate the required thickness of RTC Safety Surface.

The MOT stone layer should be compacted to a tolerance giving local deviations no greater than 7mm under a 3m straight edge in any direction.



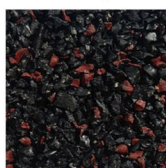
It is possible to substitute the concrete edging for a tannelised, pressure treated timber edge, however this may reduce the longevity of the surface – please contact us to discuss this option further.

Should you have any queries regarding base preparation please do not hesitate to contact our office where we will be happy to advise you or provide you with a costing for preparing the sub-base.

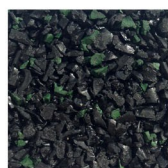
Colour Range



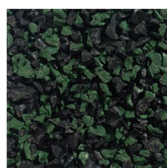
Black



Black Red Fleck



Black Green Fleck



Green Black Fleck



Red Black Fleck



Terracotta Red



May Green



Sky Blue



Dark Blue



Blue Mix



Egg Shell



Beige



Earth Yellow



Brown



Grey



Light Grey



Rainbow Green



Green Mix



Bright Yellow



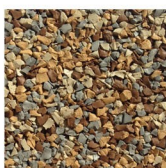
Orange



Purple



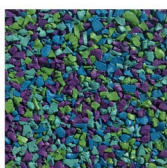
Classic Blend



Earth Blend



Fire Blend



Water Blend



Granite Blend

Other colours are available upon request.

Please note that the sample pictures are for reference only and that colours laid may vary due to batch variation, supplier variation and environmental factors.

Woodland House
Chestnut Business Park
Smallshaw Lane
Burnley
BB11 5SQ

Tel: 01282 414131

Fax: 01282 414133

www.rtc-safety.co.uk
sales@rtc-safety.co.uk



Maintenance and Repairs

Maintenance

With any synthetic surface, it is vital that your surface is maintained. Your maintenance program will depend on the usage of the surface. Heavily used play areas, will require more maintenance than a less frequently used play area.

We recommend that you visually inspect the surface on a daily basis for any foreign objects and remove them. As the finish level of surfacing is generally the same level, foreign objects should be noticeable. The surface can be swept to remove any leaves or debris. If your play area is large, then you can use a blower to remove any debris.

Should the surface become dirty we recommend a power washer be used on a low pressure setting to remove surface dirt. This should be undertaken at least every 6 months. It is very important that a high pressure setting is **not** used, as this can damage the surface. Do not use any strong chemicals / bleach or detergents on the surface, as this can also cause damage.

During the winter time, should ice form on the surface and the area become slippery, rock salt / grit should **not** be used, as this can damage the surface and reduce the porosity of the surface. We recommend a chemical de-icer, such as Magic Ice Melt, which is non-toxic to humans, animals and vegetation.

Repairs

There may be times, due to vandalism, accidental damage or fire damage, that the surface requires repairing. RTC Safety Surfaces can provide a rapid repair service using the same materials to repair any damaged area. We recommend that repairs are carried out in an alternative colour to make a 'feature' of the repair which will add to the aesthetics of the surface rather than simply repairing in the same colour. Please contact us if you have a surface which requires repairing.

For small areas (less than 1m²) RTC can supply repair kits which will allow repairs to be carried out without the need for sending a specialist team. The repair kits come with all of the necessary materials and instruction on how to use them.

Queries

Should you have any queries regarding your RTC Safety Surface please do not hesitate to contact us. We will be happy to advise you over the phone or should you wish, RTC Safety Surfaces can carry out any maintenance or repairs required.

Woodland House
Chestnut Business Park
Smallshaw Lane
Burnley
BB11 5SQ

Tel: 01282 414131
Fax: 01282 414133

www.rtc-safety.co.uk
sales@rtc-safety.co.uk



Wetpour Quotation Request Form

Company: _____

Contact name: _____

Telephone no: _____

Fax no: _____

Email: _____

Location of site: _____

Access to site (please give details): Good ☐ Bad ☐

Sub-base: _____

Graphics: _____

Design/plan attached: ☐

Cut and chase required (if applicable): l/m

Area size (m2)	Black	Colour	C.F.H	Depth (mm)	Details of colours/graphics
			0.6	20	
			0.9	30	
			1.2	40	
			1.5	50	
			1.8	60	
			2.0	70	
			2.2	80	
			2.4	90	
			2.7	100	
			3.5	130	

Please return via Fax / Email / Post

Woodland House
Chestnut Business Park
Smallshaw Lane
Burnley
BB11 5SQ

Tel: 01282 414131
Fax: 01282 414133

www.rtc-safety.co.uk
sales@rtc-safety.co.uk

