

Mulch Product Data Sheet

Our Resin Bound Rubber Mulch safety surfacing consists of 100% recycled rubber shreds that are bonded together with a polyurethane binder. The mixture is installed in-situ by a chemical mixing, pouring, levelling, screeding and rolling process.

Under every rubber mulch surface is a geotextile membrane so that weeds cannot grow through the surface. It is a porous surface, with excellent drainage properties, allowing more year round use. Our rubber mulch surfacing has been tested and fully conforms to BS EN 1176.

Colour Coated Rubber Mulch

Recycled from forklift truck tyres, the rubber shreds used to form the rubber mulch are ecologically sensitive as they help reduce landfill and CO₂ emissions. To get their subtle colour, they are coated with a polyurethane colour for durability and a strong bond when resin is applied.

No two shreds have the same appearance, meaning the rubber mulch has a resemblance to wood bark. No metal can be found embedded within the shreds as the rubber used is a solid material.

Mulch SBR Base Layer

Dependant on the CFH required, it may be necessary to install a mulch SBR base layer. The 2mm-6mm SBR granules made from recycled truck tyres produce the absorbent properties of the system. The rubber mulch is then installed over the top of the SBR.

Polyurethane Resin Binder

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

RTC Safety Surfaces provide a hard wearing, porous and absorbent surface, ideal for laying on playgrounds, pathways and daily mile tracks.

All surfaces meet the British and European Safety Standards and come with a 3 year warranty.

For any information on the required area size and depth of surfacing please see our information sheet – Depth & Area Size.

For any information on the required sub-base and edging specification please see our information sheet – Sub-Base.

Rubber Mulch Depth and Area Size

The following information is designed as a guide to help you assess the required depth and area size of Resin Bound Rubber Mulch required.

Depth of Rubber Mulch

The depth of rubber mulch safety surfacing required is calculated according to the Free Fall Height (FFH) of any play equipment and the Critical Fall Height (CFH) of the surface.

The Critical Fall Height is the height from which it is assessed that the surface will absorb the impact of a child's fall sufficiently to reduce the risk of serious head injury.

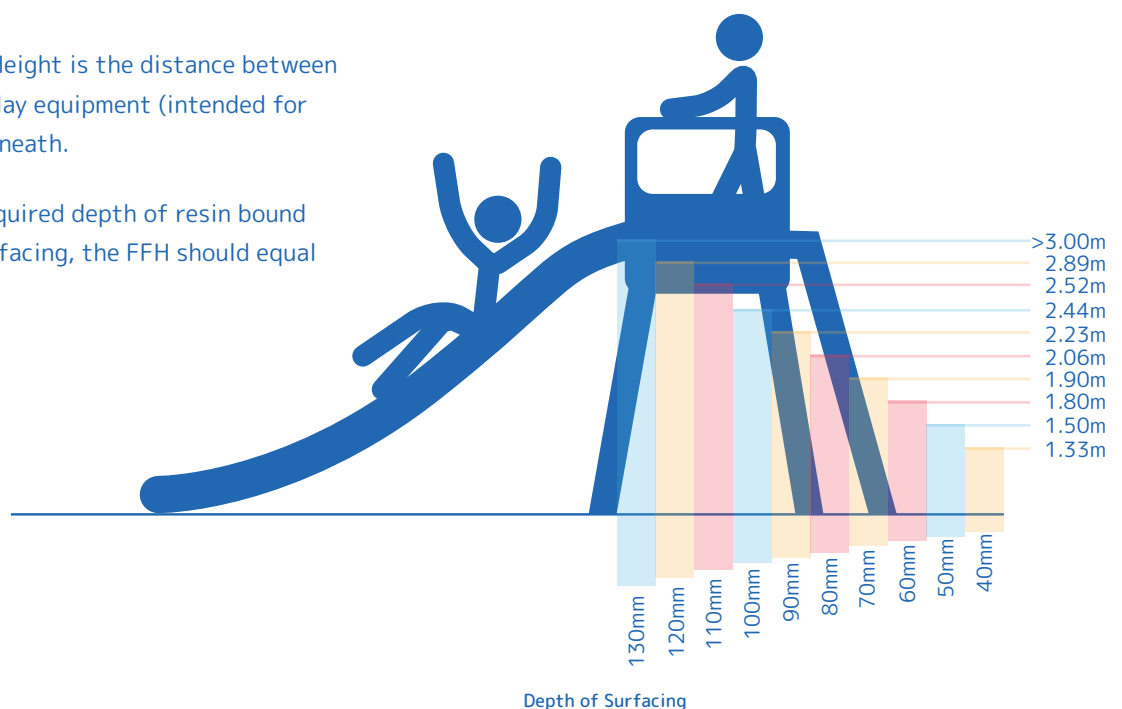
The Maximum Free Fall Height is the distance between any accessible part of play equipment (intended for play) and the surface beneath.

When calculating the required depth of resin bound rubber mulch safety surfacing, the FFH should equal

and not exceed the surfaces CFH. We can advise on these heights for any new or existing play equipment, however the general principle is detailed below.

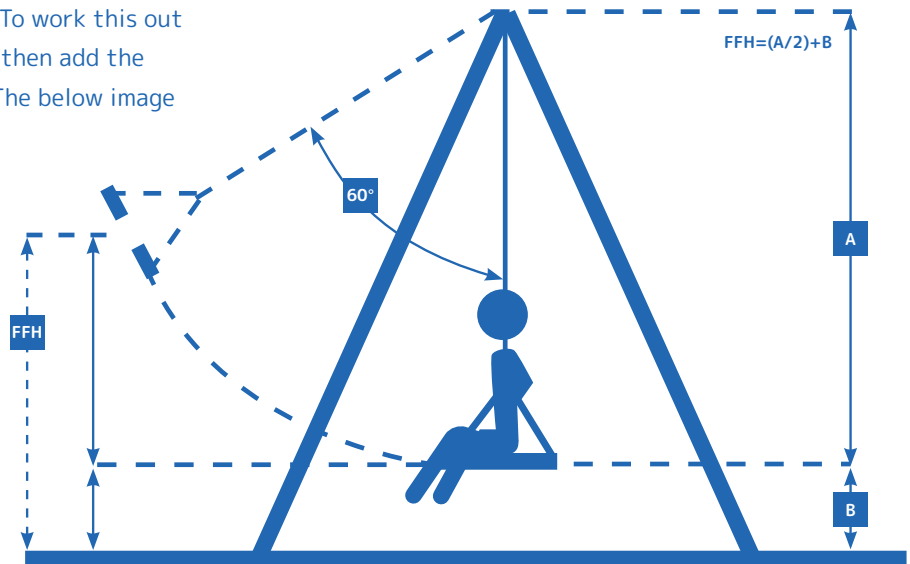
Stationary Equipment

For equipment which a child stands, the Free Fall Height is calculated from the highest point on the equipment which is intended for play – usually the platform height.



Swings

The FFH for swings 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 and then add the distance from the seat to the ground. The below image demonstrates this.



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

Critical Fall Height (CFH)	1.33m	1.50m	1.80m	1.90m	2.06m
Thickness	40mm	50mm	60mm	70mm	80mm

Critical Fall Height (CFH)	2.23m	2.44m	2.52m	2.89m	>3.00m
Thickness	90mm	100mm	110mm	120mm	130mm

Tested onto Concrete

Area of Surfacing

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

Stationary Equipment

For stationary equipment with a Free Fall Height (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 – take 2/3 of the FFH and add 0.5m.

The table (right) demonstrates this principle.

Swings

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

For swings with seats wider than 500mm the difference between the seat width and 500mm must be added to the 1.75m (50% each side of the centre of the swing seat). Please note that areas for 2 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 get in touch.

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

Mulch Sub-Base Specification

Resin Bound Rubber Mulch can be laid onto a variety of sub-bases. The most common being MOT Type 1 stone, grass or soil. We can lay Resin Bound Rubber Mulch onto other sub-bases such as concrete or tarmac, but please contact us first to discuss suitability.

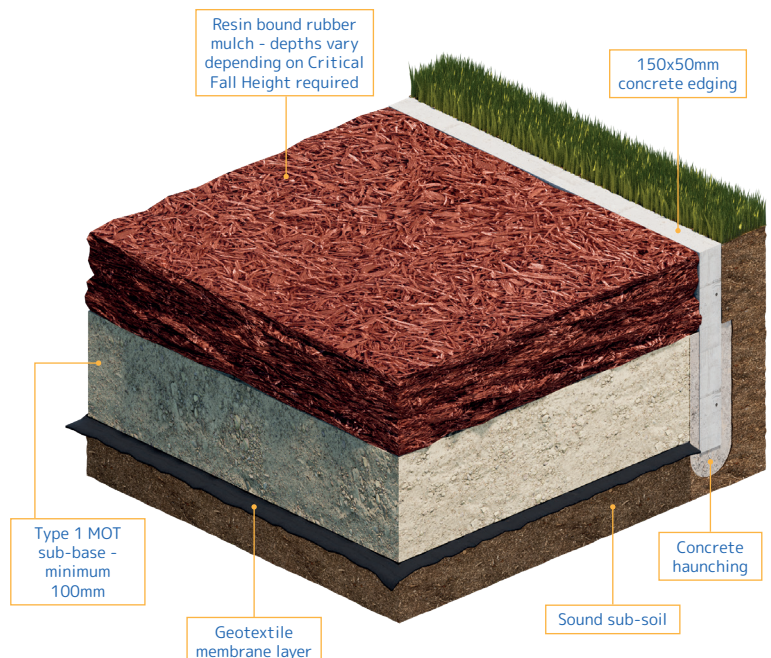
Our resin bound rubber mulch surfaces are all tested on Concrete to determine their critical fall height (CFH) so that they fully conform to BS EN 1176.

Below are the most common forms of sub-base for Resin Bound Rubber Mulch.

1

New Sub-Base – MOT Type 1 Stone

Resin Bound Rubber Mulch can be laid directly onto MOT Type 1 stone. If a formal edging is being installed, it should be set to the correct height to allow the rubber mulch to finish flush with the top of the edging. If no edging is being installed, a trench edge can be dug around the area for the rubber mulch to be ramped down into. Again, this can be backfilled with soil.



2

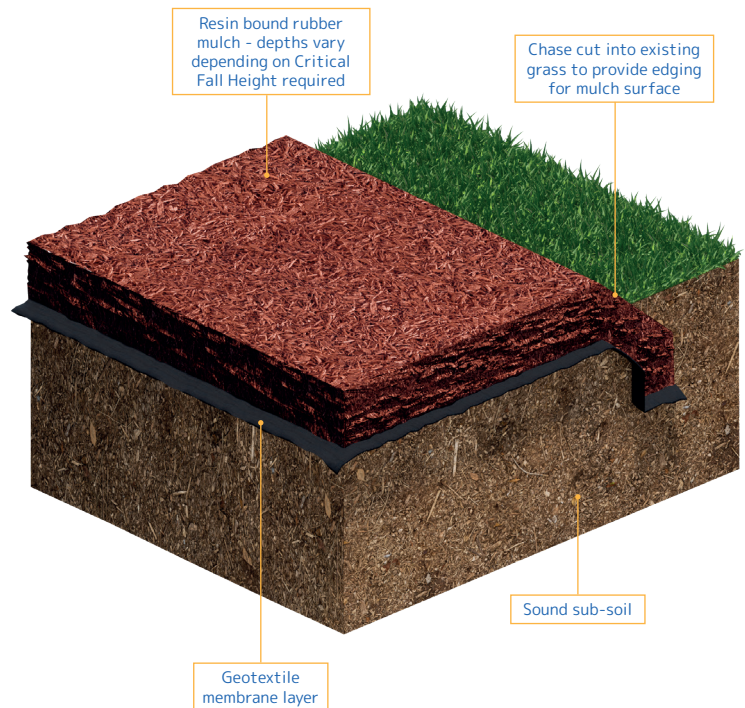
Existing Sub-Base (Grass or Soil)

Resin Bound Rubber Mulch is commonly installed directly onto grass which removes the need for groundwork preparation.

The ground needs to be firm and not overgrown in order to install resin bound rubber mulch directly on top. No formal edging is required for this type of sub-base. A trench edge is dug around the perimeter of area and the rubber mulch is ramped down in the trench edge. This can then be backfilled with soil to create a softer edge.

When laying onto grass or soil, RTC Safety Surfaces will always lay a geotextile membrane to prevent grass or weeds growing through the mulch once it is in-situ.

Should you have any queries regarding base preparation, please contact us and we would be happy to advise. RTC Safety Surfaces can prepare a sub-base for you if required. Please let us know and we can give you a price for this.



Colour Range Rubber Mulch



Red & Green Mix



Acorn Brown



**Green & Brown
Mix**



**Red, Green &
Brown Mix**



**Red, Green &
Beige Mix**



Blue



Harvest Beige



Green



Spring Green



Grey



Brown



**Beige & Brown
Mix**



Red



Brown & Red Mix