Rosehill Sports & Play

VISIT OUR WEBSITE:

RANGE OF 22 COLOURS

MADE IN THE UK

BS EN 1177 CRITICAL FALL HEIGHT

WORLDWIDE DISTRIBUTION

UNRIVALLED UV STABILITY

9001:2015 CERTIFIED

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ROSEHILL TPV®

Outstanding Surface Strength

Rosehill Sports & Play

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Outstanding Surface Strength

Safe, attractive and long-lasting sports and play surfaces rely on high quality coloured rubber granules being combined with a polyurethane moisture curing binder to create strong and durable rubber surfaces.

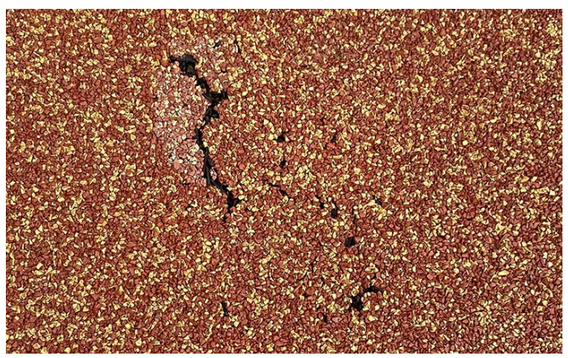
Although some manufacturers talk about the high tensile strength of their rubber granules, it is not the tensile strength of the granule that is important. It is the tensile strength of the finished surface that matters - the strength of the adhesion between the rubber granules and the polyurethane binder.

Poor adhesion between the rubber granules and polyurethane binder leads to three main points of failure:

FAIL #1

Surface Granulation (Crumbing)

Poor tensile strength causes rubber granules to come loose and break off more easily from the solid polyurethane binder, especially in areas of high wear such as at the bottom of slides or underneath swings.



FAIL #2

Surface Cracking

Cracks will appear in the coloured rubber layer as the poor tensile strength fails to cope with stress of the expansion/contraction effect caused by high day time temperatures and cool night time temperatures.

FAIL #3

Surface Holes & Base Layer Deterioration

Over time granulation continues and cracks grow into holes. Without regular maintenance, the base layer will deteriorate, breaking up into chunks and becoming a hazard for children.

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ROSEHILL TPV®

Better adhesion, less cost

Rosehill TPV® has been specifically designed to work with polyurethane binders to create long-lasting surfaces. With its high surface energy, it has a much stronger adhesion to polyurethane binders than EPDM and other rubber granules, delivering long lasting adhesion in a wide range of environments.

To assess the adhesion performance of rubber granules with standard wet-pour polyurethane moisture curing binders, independent testing was carried out in accordance with *EN 12230 - Surfaces for sports areas – Determination of tensile properties of synthetic sports surfaces.*

Tensile strength test data from composite samples of wet-pour systems that combine rubber granules with polyurethane binder demonstrate the ability of a particular rubber granule to adhere to the binder.

This determines the performance and longevity of the safety surface after installation. The lower the tensile strength, the more easily the surface will fail in service compared to one with a higher tensile strength.

Test Method	Sample	Mean Result
EN 12230 : 2003	"Premium" European EPDM 18% Binder	0.583 MPa
	Asian EPDM 18% Binder	0.456 MPa
	Asian TPV 18% Binder	0.411 MPa
	Colour Coated SBR 18% Binder	0.346 MPa
	Rosehill TPV® 12% Binder	0.522 MPa
	Rosehill TPV® 15% Binder	0.624 MPa
	Rosehill TPV® 18% Binder	0.702 MPa

From the data above, at a commonly used level of binder (18%), it can be seen that Rosehill TPV® has a greater tensile strength than even the best EPDM alternatives with a tensile strength of 0.702 MPa, 20% higher than a "Premium" European EPDM with a tensile strength of 0.583 MPa.

It is also worth noting that even at much lower levels of binder (12%) Rosehill TPV® outperforms most rubber granules.

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