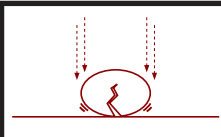
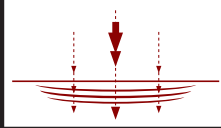
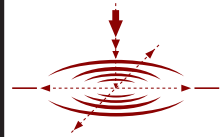
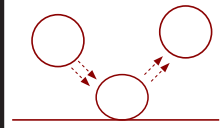

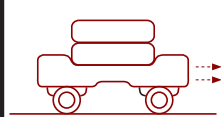


# Testing your sports floor.

Sports floor performance, while best assessed by the athletes themselves, also can be evaluated scientifically using criteria widely accepted by the architectural engineering community.

## DIN standards

DIN standards measure a variety of performance characteristics for many building products. In DIN testing for sports flooring, the typical demands on a floor are simulated mechanically, and ranges of acceptability are set for three broad categories – wood, synthetic and combination (synthetic over a wood subsurface).

		area elastic (wood)	point elastic (synthetic)	combination (wood & syn)
	<b>shock absorption</b>	53% min.	51% min./class 1 45% min./class 2	58% min.
	<b>vertical deflection</b>	2.3 mm min.	3.5 mm max./class 1 3.0 mm max./class 2	3mm-5mm
	<b>deflective indentation</b>	15% max.	NA	5% max.
	<b>ball bounce</b>	90% min.	90% min.	90% min.
	<b>friction</b>	.4 $\mu$ k-.6 $\mu$ k	.4 $\mu$ k-.6 $\mu$ k	.4 $\mu$ k-.6 $\mu$ k
	<b>rolling load</b>	1500 N min.	1000 N min.	1500 N min.

## Main physical properties

For synthetic materials, there are three key mechanical tests used to determine a product's suitability and performance. Tensile strength, elongation and tear strength, measured by ASTM testing methods, are generally accepted baselines for making comparisons for synthetic flooring materials.



**1. Tensile strength**  
Material's strength; ability resist to being pulled apart (e.g., forged steel chain has great tensile strength)



**2. Elongation**  
Ability to stretch (like a rubber band)



**3. Tear strength**  
Ability to resist being torn once a tear is started (e.g., sheet metal has high tear strength)

**Note:** When assessing sports floor materials and products, look for third-party verification from established (e.g. USSL or Otto-Graf) testing organizations to validate manufacturer's claims.