Comparison of Acceptable Playground Surfacing Systems from the Consumer Product Safety Commission's Handbook for Public Playground Safety

Organic Loose Materials - Wood Chips, Bark Mulch, Engineered Wood Fibers, etc.

ADVANTAGES	DISADVANTAGES
Low initial cost.	The following conditions may reduce cushioning potential: rainy weather, high humidity, freezing temperatures.
Ease of installation.	With normal use over time, combines with dirt and other foreign materials.
Good drainage.	Over time, decomposes, is pulverized, and compacts requiring replenishment.
Less abrasive than sand.	Depth may be reduced by displacement due to children's activities or by material being blown by wind.
Less attractive to cats and dogs (compared to sand).	Can be blown or thrown into children's eyes.
Attractive appearance.	Subject to microbial growth when wet.
Readily available.	Conceals animal excrement and trash (e.g. broken glass, nails, pencils, and other sharp objects that can cause cut and puncture wounds).
	Spreads easily outside of containment area.
	Can be flammable.
	Subject to theft by neighborhood residents for use as mulch.

Inorganic Loose Materials - Sand, Gravel

ADVANTAGES	DISADVANTAGES
Low initial cost.	The following conditions may reduce cushioning potential: rainy weather, high humidity, freezing temperatures.
Ease of installation.	With normal use, combines with dirt and other foreign materials.
Does not pulverize.	Depth may be reduced due to displacement by children's activities and sand may be blown by wind.
Not ideal for microbial growth.	May be blown or thrown into children's eyes.
Nonflammable.	May be swallowed.
Materials are readily available.	Conceals animal excrement and trash (e.g. broken glass, nails, pencils, and other sharp objects that can cause cut and puncture wounds).
Not susceptible to vandalism except by contamination.	**Sand -** spreads easily outside of containment area.
Gravel is less attractive to animals than sand	**Sand -** small particles bind together and become less cushioning when wet; when thoroughly wet, sand reacts as a rigid material.
	Sand - may be tracked out of play area on shoes; abrasive to floor surfaces when tracked indoors; abrasive to plastic materials.
	Sand - adheres to clothing.
	Sand - susceptible to fouling by animals.
	Gravel - difficult to walk on.
	Gravel - if displaced onto nearby hard surface pathways, could present a fall hazard.
	Gravel - hard pan may form under heavily traveled areas.

Synthetic Loose Materials-Shredded Tires

ADVANTAGES	**DISADVANTAGES**
Ease of installation.	Is flammable.
Has superior shock absorbing capability.	Unless treated, may cause soiling of clothing.
Is not abrasive.	May contain steel wires from steel belted tires. Note: some manufacturers provide a wire-free guarantee.
Less likely to compact than other loose-fill materials.	Depth may be reduced due to displacement by children's activities.
Discourages microbial growth.	May be swallowed.
Does not deteriorate over time.	

Fixed Synthetic Material - Shredded Tires, Rubber Tiles, Poured-in-Place

ADVANTAGES	**DISADVANTAGES**
Low maintenance.	Initial cost relatively high.
Easy to clean.	Undersurfacing may be critical for thinner materials.
Consistent shock absorbency.	Often must be used on almost level uniform surfaces.
Material not displaced by children during play activities.	May be flammable.
Generally low life cycle costs.	Subject to vandalism (e.g. ignited, defaced, cut).
Good footing (depends on surface texture).	Full rubber tiles may curl up and cause tripping.
	Some designs susceptible to frost damage.
Harbors few foreign objects.	
Generally no retaining edges needed.	
Is accessible to the handicapped.	