

PLAYSET SAFETY GUIDE

What Should I Put Underneath a Backyard Playset?

A practical guide to protective playground surfacing

The short answer

Use an impact-absorbing playground surface—not grass, packed soil, concrete or asphalt. Common options include playground-rated wood fiber, rubber mulch, safety-tested rubber mats, poured rubber, sand or pea gravel. The correct material, depth and coverage depend on the playset's fall height and the surfacing manufacturer's specifications.

What Should I Put Underneath a Backyard Playset?

The surface underneath a playset is more than a finishing touch. It is an important part of the overall play area and can help reduce the severity of injuries when a child falls.

Grass may look soft, but it can wear away, become compacted and provide very little impact protection. Packed soil, concrete and asphalt are also unsuitable beneath playground equipment.

A properly installed, impact-absorbing playground surface is the safer choice.

The short answer

Common residential playground-surfacing options include:

- Engineered wood fiber or playground-rated wood mulch
- Shredded rubber or rubber mulch
- Safety-tested rubber mats or tiles
- Poured-in-place rubber surfacing
- Sand
- Pea gravel
- Playground turf installed over an appropriate impact-absorbing base

The best option depends on the playset's fall height, your budget, the ages of the children, accessibility needs and how much maintenance you are willing to perform.

Follow the specifications

Always follow the playset manufacturer's instructions and the specifications provided by the surfacing manufacturer.

Why isn't grass enough?

Grass and ordinary soil do not consistently absorb impact. Even a healthy lawn can become hard during dry weather, compacted from regular use or bare beneath swings, ladders and slide exits.

Adding a thin layer of decorative mulch over the grass is not enough. Protective surfacing must be designed for playground use and installed at the appropriate depth for the equipment's potential fall height.

The American Academy of Pediatrics recommends safety-tested mats or an appropriate loose-fill material beneath home playground equipment.

Playground-rated wood fiber or wood mulch

Engineered wood fiber is one of the most common and economical playground surfaces. It provides a natural appearance and generally blends well with residential landscaping.

Advantages

- Usually costs less than rubber or unitary surfaces.
- Provides a traditional, natural appearance.
- Offers impact protection when installed and maintained correctly.
- Is readily available in many areas.

What to consider

Wood fiber compresses, decomposes and gets displaced through normal play. It requires periodic raking and replenishment, especially beneath swings, at the bottom of slides and around climbing areas.

Ask specifically for a product intended for playground use. Decorative landscaping mulch may contain oversized pieces, sharp debris or inconsistent material and should not automatically be treated as protective playground surfacing.

Rubber mulch

Rubber mulch is made from shredded or processed rubber and can provide effective impact absorption when it is manufactured for playground use and installed at the specified depth.

Advantages

- Does not decompose like wood mulch.
- Generally requires less frequent replenishment.
- Is available in several colors.
- Provides a clean, finished appearance.

What to consider

Rubber pieces can still migrate outside the play area and may require raking. A proper border or containment system is normally needed. Rubber surfaces can also become warm in direct sunlight. Confirm that the product is intended for playground use and review its tested fall-height rating before purchasing it.

Unitary playground surfaces

Rubber mats and tiles

Safety-tested rubber mats or interlocking playground tiles provide a more permanent, uniform surface. They do not shift in the same way loose-fill materials do.

Advantages

- Provides consistent coverage when properly installed.
- Requires less raking and replenishment.
- Can create a cleaner, more accessible play area.
- Works well in high-use areas such as beneath swings and slide exits.

What to consider

Rubber mats and tiles generally cost more than loose-fill materials. They require appropriate base preparation, drainage and careful installation so gaps, raised edges or trip hazards do not develop. Not every rubber mat is designed for playground use. Choose a product tested and rated for the playset's fall height.

Poured-in-place rubber

Poured-in-place rubber creates a continuous, cushioned surface frequently seen at schools and public playgrounds. It can also be used in premium residential installations.

Advantages

- Creates a smooth, finished appearance.
- Can offer excellent accessibility.
- Does not scatter around the yard.
- Can be designed in custom colors and patterns.

What to consider

This is typically one of the most expensive options. It generally requires professional installation and a properly prepared base. The surface may eventually require repair because of wear, separation or damage. Its performance depends on the thickness and construction specified for the equipment's fall height.

Sand or pea gravel

Sand and pea gravel may provide impact absorption when installed and maintained at the appropriate depth.

Advantages

- May be economical and locally available.
- Provides drainage in a properly prepared play area.
- Can create an informal, natural-looking play zone.

What to consider

Both materials move easily and can be tracked throughout the yard. They require containment, regular raking and periodic replenishment. Sand may attract animals or conceal debris. Pea gravel may not be appropriate for very young children who could place small stones in their mouths. Accessibility can also be more difficult than with a unitary surface.

What about artificial turf?

Artificial playground turf can create an attractive, low-maintenance appearance, but turf alone does not provide adequate fall protection. A playground-turf system should include an impact-absorbing pad or base designed for the playset's fall height. The entire system—not simply the turf surface—should be specified and installed for playground use.

Depth, coverage and site preparation

How deep should the surface be?

There is no single depth that is correct for every playset and material. The required depth depends on:

- The type of surfacing material.
- The height of the playset's platforms and components.
- The material's tested fall-height rating.
- Expected compression and displacement.
- The manufacturer's installation requirements.

The U.S. Consumer Product Safety Commission and the American Academy of Pediatrics commonly reference maintaining approximately nine inches of appropriate loose-fill material for home playground applications. However, some materials, fall heights and installations may require a different initial or maintained depth.

Use the product-specific requirement

Use the instructions for your specific playset and surfacing product rather than relying on a general depth rule alone.

How far should the surfacing extend?

Protective surfacing should cover the complete playset use zone, not merely the ground directly beneath the platform. General residential guidance recommends extending the surface at least six feet around play equipment, with additional space required around swings and certain slides.

Swing areas require particular attention. The protective zone generally needs to extend farther in front of and behind the swings because children can fall or jump while the swing is moving. CPSC guidance uses twice the height of the swing's suspending bar as a general reference for the front and rear swing-use zones.

Confirm the exact use-zone dimensions supplied with your playset.

Don't forget the border and drainage

Loose-fill materials normally need a border to keep the surface contained. The border should be positioned so it does not create a tripping or impact hazard within the play area.

The site should also drain properly. Standing water can damage the play area, encourage mold or insects, wash away loose-fill material and affect the stability of the playset. Site preparation may include grading, drainage material, geotextile fabric and a properly designed border.

Playground surfacing requires maintenance

Even the best surface will not perform as intended if it is neglected. Regularly:

- Rake displaced material back beneath swings and slide exits.
- Check the maintained depth of loose-fill surfacing.
- Remove sticks, rocks, weeds, animal waste and other debris.
- Look for exposed borders, anchors or concrete footings.
- Inspect mats, tiles and poured surfaces for gaps or damage.
- Replenish or repair the surface when needed.
- Check drainage after heavy rain.

Place depth markers on playset posts or inside the border if recommended. They make it easier to see when loose-fill material has settled below the required level.

Which surface do we recommend?

For many residential yards, playground-rated wood fiber provides a practical balance of cost, appearance and impact absorption. It does, however, require routine raking and replenishment.

Rubber mulch may be a good choice for families seeking less frequent replacement. Rubber tiles, poured rubber and properly designed playground turf are attractive premium options when accessibility, appearance and lower routine maintenance are priorities.

The best choice is the surface that:

- Is rated for the playset's fall height.
- Covers the entire required use zone.
- Fits the family's maintenance expectations.
- Drains properly.
- Is installed according to the manufacturer's specifications.

Plan your complete play area with Riehl Structures

Riehl Structures can help you understand the space required for your selected playset, including swing clearances, site preparation and surfacing considerations.

Visit our West Chester or King of Prussia showroom to compare wood and vinyl playsets and discuss what will work best for your family and backyard.

Ready to begin planning?

Explore our playsets and request a consultation at riehlstructures.com/playsets/.

Safety resources

U.S. Consumer Product Safety Commission: Outdoor Home Playground Safety Handbook and playground safety guidance — [cpsc.gov](https://www.cpsc.gov)

American Academy of Pediatrics: Safety Tips for Home Playground Equipment — [healthychildren.org](https://www.healthychildren.org)

This article provides general educational information. Always follow the instructions and requirements supplied by the playset and surfacing manufacturers.

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