Material and Texture

Content

Factors to Consider When Choosing a Playground Surface

- Initial purchasing cost
- Installation requirements and costs
- Ongoing maintenance needs and cost
- Long-term durability
- Lifespan of surface
- Visual appearance
- Degree of safety
- ADA (Americans with Disabilities) compliance

Specific Material and Usage

ProGuard™ Finish

- Usage: swing
- ProGuard is a super-resistant finish applied standard to all Landscape Structures swing chains that’s at least two times more corrosion resistant than galvanized steel chains.

Galvanized Steel

- Usage: Monkey Bar
- We use galvanized steel for maximum durability. All galvanized steel parts are ProShield® finished for optimum corrosion resistance, UV stability and gloss retention.

Water Play Surfacing

- Usage: kids water fountain
- AquaFlex®, a Landscape Structures product provided by Surface America, is a durable, chlorine-resistant, UV light stable choice for a water play environment. This bond-in-place surfacing is the only water play surfacing choice available in a porous and non-porous option that can be used indoors or out.

Thermochromic coating

- Usage: Touchable playing pieces
- In the pandemic, people want less exposure to touch the common areas. We coat the external surfaces with thermochromic paints to remind the next round of people, kids and parents, that the frequency of touching in places in a short time.

Synthetic Rubber

- Reusable tire

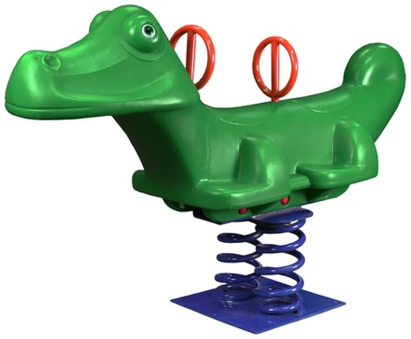
Pressure-treated Lumber

plexiglass

Punched steel deck

- for lifted base
- used inside for support

Rotomolded plastic



Comparing Playground Surfacing Chart

Unitary Surfacing

Surfacing Type	Advantages	Disadvantages
Bond-in-Place Rubber	• Extremely durable • High longevity • UV resistance • Many design options • Low maintenance requirements • Meets accessibility and safety standards • Made from 100% post-consumer recycled material; pebbles are made of 20% post-industrial recycled material, and are all recyclable	• Requires certified installers • Weather-dependent installation • Higher initial investment • More challenging to repair or add/change playground elements

Poured-In-Place Rubber	• Attractive and aesthetically pleasing • Many design options • Low maintenance requirements • High longevity • Low lifetime costs • Meets accessibility and safety standards • Environmentally friendly using recycled rubber tires	• Require certified installers • Weather-dependent installation • Site preparation requirements • More challenging to repair or add/change playground elements • Higher initial investment • Must be regularly swept of debris or vacuum-cleaned to prevent compaction
Synthetic Turf	• Looks natural and clean • Cooler surface temperatures • Available in a wide variety of colors and densities • Meets accessibility and safety standards • Moderate maintenance requirements • Moderate longevity • Low lifetime costs • Durable and able to withstand heavy traffic	• Require certified installers • Higher initial investment • Site preparation requirements

Resilient Tiles	● Low lifetime costs ● Meets accessibility and safety standards ● Moderate maintenance requirements ● High longevity ● Easy to clean ● Stays in place ● Easy to repair ● Very durable ● Many color and design options	● Require certified installers ● Higher initial investment ● Site preparation requirements ● Corners and edges may curl over time

Loose Fill

Surfacing Type	Advantages	Disadvantages
Loose Rubber	● Meets accessibility and safety standards ● Great impact absorption qualities	● Limiting access for those in wheelchairs ● More maintenance required to meet CPSC guidelines ● Potential fire hazard
Sand	● Less upfront cost ● Low site preparation required ● Natural ● Great impact absorption qualities	● Very limiting access for those in wheelchairs ● More maintenance required to meet CPSC guidelines ● Can hide sharp objects, insects and animal excrements. ● Impacted by high humidity and freezing temperatures

Pea Gravel	● Less upfront cost ● Low site preparation required ● Easy to install ● Natural and non-toxic	● Limiting access for those in wheelchairs and difficult to walk on ● More maintenance required to meet CPSC guidelines ● Potential choking hazard for young playground visitors ● Can be thrown, scattered and tracked ● Can hide sharp objects
Wood Chip	● Low lifetime costs ● Less upfront cost ● Easy to install ● Natural aesthetically pleasing look ● Low site preparation required ● Good shock absorbency	● More maintenance required to meet CPSC guidelines ● Biodegrades, compacts and decomposes over time ● Can hide sharp objects, insects and animal waste
Engineered Wood Fiber (EWF) or rubber mulch	● Eco-friendly ● Economical with low initial costs ● Meets accessibility and safety standards ● Low site preparation required ● Stays in place better than other loose-fill material ● Fairly durable	● High level of regular maintenance ● High lifetime costs ● Microbial growth when wet ● Proper drainage system needed to prevent decay rate and keep the surface more resilient during colder weather ● Design limiting

Massachusetts State Policy on Playground safety

Playgrounds are the setting for most of the injuries sustained by children aged 5 to 14 in the school environment. A special study of playground injuries and deaths conducted in 2001 for the U.S. Consumer Product Safety Commission found that each year emergency departments treat more than 200,000 children, ages 14 and younger, for playground-related injuries. Approximately 45% of those injuries are severe. Falls from playground equipment result in a higher proportion of severe injuries than either bicycle or motor vehicle crashes (Phelan, 2001).

The most critical areas to address are:

- Surface: Make sure surfaces around playground equipment have at least 12 inches of impact-absorbing material such as wood chips, mulch or safety-tested rubber. Protective ground surfacing should span 6 feet in all directions.
- Maintenance: Follow manufacturer's instructions and recommended inspection schedule. Make sure spaces that could trap children, such as openings in guardrails or between ladder rungs, measure less than 3.5 inches or more than 9 inches.
- Supervision: Remove visual barriers, position adults for optimum view, consider rules and policies regarding clothing, restrictions and safe play to be shared with students and parents.
- Spacing: Children should be able to move safely from one activity to another through proper spacing between equipment and other structures.
- Schools, parents and other organizations (e.g.; town's Parks and Recreation Department) should work collaboratively to address playground improvements utilizing U.S. Consumer Product Safety Commission (CPSC) guidelines.

Source Link

- Landscape materials
  https://www.playlsi.com/en/our-story/materials-matter/materials-matter/
- Playground ground cover materials
  https://www.zeager.com/planning-resources/playground-ground-cover-materials/
- Surface and Policy

https://cehn.org/our-work/eco-healthy-child-care/ehcc-faqs/playground-surfaces/

- Mass.gov - Playground Safety Fact Sheet
- https://www.mass.gov/service-details/playground-safety-fact-sheet
- National Program for Playground Safety
- https://www.playgroundsafety.org/
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