



PLAYGROUND SURFACES



WHAT ARE THE DIFFERENT TYPES OF PLAYGROUND SURFACES?

Playgrounds are found everywhere. These areas are designed to support children as they learn, play, and grow. However, much is still unknown about the environmental health hazards associated with different types of surfacing for playgrounds.

The seven most common surface/filler materials for playgrounds are: sand, pea gravel, bark mulch/ wood chips, engineered wood fiber, crumb rubber, tiles and poured in place.



WHAT CAN YOU DO TO PROTECT CHILDREN ON THE PLAYGROUND?

- Make sure to never leave children unattended while playing on a playground.
- Wash children's hands immediately after they spend time on a playground. This will get rid of any chemicals or heavy metals as well as bacteria and foreign objects.
- Make sure that the surface material meets the recommended depth guidelines from the American Society for Testing and Materials for the specified equipment.
- Follow the research about playground surfacing materials. New information is being released every day.

WHAT SHOULD I KNOW ABOUT SAND, PEA GRAVEL & MULCH?

- Sand's Benefits: inexpensive, easy to install, provides good impact absorption, and does not support microbial growth. Disadvantages: hard to use with ADA mobility devices, such as wheelchairs, may contain asbestos or silica, easily consumed by young children, can be tracked inside on clothes, hair and shoes, can hide insects and other pests and requires constant maintenance.
- Pea Gravel's Benefits: inexpensive, easy to install, provides good impact absorption, relatively unattractive to pests, does not support microbial growth and drains more easily than sand. Disadvantages: hard to use with ADA mobility devices, such as wheelchairs, easily consumed by young children, easy to place in open body parts, can hide insects and other pests and requires constant maintenance.
- Bark Mulch/Wood chips' Benefits: inexpensive, easy to install, provides good impact absorption and has a natural feel. Disadvantages: hard to use with ADA mobility devices, such as wheelchairs, easily consumed by young children, easy to place in open body parts, can hide insects and other pests, requires constant maintenance, may contain allergens and toxins, can hide insects, pests, and foreign matter and microbial growth can occur when material is wet.

HEALTH CONCERNS WITH PLAYGROUND SURFACES

- Playground sand may contain asbestos or silica. Silica can cause asthma while asbestos fibers can cause cancer.
- Pea gravel may contain foreign objects such as sharp twigs and stones.
- Wood chips could be treated with Copper Chromated Arsenic (CCA), a wood preservative and insecticide that contains arsenic. The wood preservative was phased out of use in 2004-wood chips treated with CCA may still be present, as many are recycled and used in newer playgrounds.
- Engineered Wood Fiber often contains formaldehyde to adhere the wood fibers together.

HEALTH CONCERNS WITH PLAYGROUND SURFACES CONT.

Tiles and Poured in Place surfaces can be made of recycled tires among other materials like natural tree rubber or other synthetic rubbers. Tires contain black carbon - a known carcinogen - and emit VOCs, especially when subjected to heat.



WHAT SHOULD I KNOW ABOUT ENGINEERED WOOD FIBER, TILES & POURED IN PLACE?

- Engineered Wood Fiber's Benefits: easy to install, provides good impact absorption and stays in place better than loose fill materials. Disadvantages: made from completely new wood, can hide insects and other pests, microbial growth can occur when material is wet, more expensive than wood chips and expensive maintenance costs.
- Tiles' Benefits: easy to use with ADA mobility devices, such as wheelchairs, provides better impact/shock absorption than other materials, provides consistent impact absorption – therefore a good longer term option, animals do not find this material appealing and generally low maintenance costs over time. Disadvantages: expensive to install, must be kept clean and swept regularly and requires professional set up.
- Poured in Place Benefits: easy to use with ADA mobility devices, such as wheelchairs, provides great shock absorption, provides consistent impact absorption – a good longer term option, animals do not find this material appealing and generally low maintenance costs over time and easily repaired. Disadvantages: expensive to install, must be kept clean and swept regularly, and requires professional set up.

****See our Crumb Rubber FAQ for more information on this type of playground material.**

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