# US Rubber Mulch

**#1 Safest Playground Surface & Best Landscape Mulch**

***Longest Lasting Colors, ADA & IPEMA Certified***

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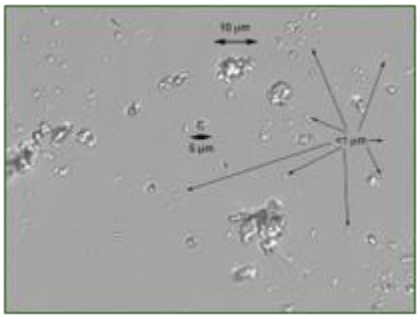
## Important Health Issues on Playground Sand

Many community managers and homeowner associations look at only the bottom-line initial cost of using sand as a safety surface for children's playgrounds. The facts show it is ineffective for safety, as compared to the competitive alternatives, and over ten years costs more than recycled rubber mulch after replacing it every 2 years, as recommended by the NRC.



The State of California requires the warning label to the right on play sand containing crystalline silica. That is because much of the play sand found in today's stores is not natural sand, but actually derived from quarried quartz rocks. Children, who have developing lungs, breathe in crystalline silica dust as they play in the sand. Frequent sandbox play creates continued exposure to this known carcinogen.

Crystalline Silica is a colorless mineral, also called quartz. It is an ingredient in sand and flint, which are used in making glass, cement, and concrete. Exposure to crystalline silica dust can cause lung diseases such as silicosis.

**Health Effects of Inhaled Crystalline and Amorphous Silica** *(abstract from the EPA website)*: Recently, public concern regarding nonoccupational or ambient silica exposure, mainly to crystalline silica, has emerged making it important to evaluate background and ambient concentrations. Ambient emissions of silica rarely are estimated or measured in air pollution studies of particulate matter. Crystalline silica is widely used in industry and has long been recognized as a major occupational hazard, causing disability and deaths among workers in several industries. This is a health risk assessment covering the causes and studies of crystalline silica exposure. *(Note: most insurance companies will not cover claims for silica exposure)*


### Potential Concerns Regarding Sand Contamination

**Yeasts** – fecal contamination indicators (genuses Candida, Cryptococcus, Saccharomyces and Rhodotorula),

**Alergogenic and (potential) Pathogens** – molds of clinical significance (including genuses Aspergillus, Fusarium, Scopulariopsis, Scedosporium, Chrysosporium, Scytalidium, Histoplasma, Coccidioides, Exophiala, Fonsecae, Phialophora)

**Dermatophytes** – indicators of animal and human presence (genuses Microsporum, Epidermophyton and Trichophyton)

### World Health Organization, 2003, in "Guidelines for safe recreational water environments", p118.

"A number of genera and species that may be encountered through contact with sand are potential pathogens. Accordingly concern has been expressed that beach sand may act as reservoir of vectors of infection."

Sand boxes (playgrounds) are non-water related reservoirs, are often contaminated with dermatophytes by wild or domestic animals, and pathogens that can pass through the skin on instant contact may result in serious or life-threatening diseases.

### National Resource Center for Health and Safety in Child Care (NRC) National Health and Safety Performance Standards for Sandboxes/Sand Play Areas:

1. Sand play areas must be distinct from landings areas for any equipment such as slides, swings, etc.
2. All sandboxes shall be kept covered when not under adult surveillance. This covering shall be secured to prevent entry by children or animals, and sufficient to prevent contamination by solids or liquids.
3. Sandboxes shall be equipped with constant and effective drainage systems and be constructed to present no safety hazards.
4. Sand shall not be of the compacting type and should be replaced by fine pea gravel that is smooth surfaced. Any media placed in sandboxes shall present no preventable health or safety hazards by its nature or structure.
5. Sterilized sand or pea gravel should be obtained for sandbox use.
6. Sand that becomes contaminated shall be replaced with sterilized sand or pea gravel or the contaminant removed, where it is possible, to capture and dispose of all the contaminant. Treatment of sand with chemicals to attempt to sterilize it within the sandbox is not recommended.
7. Sandboxes/sand play areas shall be inspected for signs of contamination and safety hazards before each use.
8. Sand in boxes and play areas shall be replaced as needed, and at least every two years.