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Discussion/Review regarding the use of Engineered Wood Fiber (EWF) Protective Surfacing

First and foremost, it is well documented within the play industry that 75-80% of all playground injuries are the results of falls. As such, the provision of adequate impact fall protection for any elevated playstructure or play component is an essential aspect of any owner's risk-management plan. Further to that, providing such a surface is a fundamental requirement (since 1998) of the CAN/CSA-Z614, National Playground Standard of Canada for Children's Playspaces and Equipment. Failure to provide such a surface and/or failure to ensure that the surface is compliant with that Standard's impact-attenuation requirements is considered life-threatening to a child user, and directly exposes the playspace Owner to the associated Liability risk accordingly.

Engineered Wood Fiber (EWF) surfacing

It should first be noted that this material is NOT your average wood-chip!
EWF surfacing is a very specific "purpose-built" material for the playground industry. In Canada there is no recognized "standard" for this material however it is common for suppliers of EWF to reference compliance to the American Standard, namely ASTM F2075. That Standard includes minimum characteristics for; "*those factors that determine particle size, consistency, purity, and ability to drain*", as well as a direct connection to ASTM F1292 for the impact-attenuation properties required within a playspace environment.
(*Note: I've impact tested a 12" depth of EWF surface to a fall height of 20 feet with exceptional impact test scores*)
Essentially if a manufacturer/supplier recognizes either of those U.S. Standards in the sale of their material, you can be assured that there is a much higher level of quality control than others that do not.
Furthermore the EWF surface material is actually purpose-selected (*re: wood species and particle shape-size*) from semi-processed and/or post-processed lumber or furniture grade stock (Re: production cut-offs), for durability, consistency, and positive drainage properties.

Versus Wood-Chip or Wood-Mulch surfacing

Yes, this material is often much more readily available as it is typically chipped-up landscape waste from felled trees, and or the remnants of the lumber production process. As such, it generally contains (and often purposely contains) notable amounts of sap-wood, bark, and twigs in its processing. The reason they do this is that it then becomes purpose-built to hold moisture within planting beds, or tree-bases. Not only is it designed to hold moisture (re: stay damp longer), it provides natural nutrients to the area's soil by it's notably quicker decay. Hence, making it the ideal material for Landscape Contractors and Gardeners.

Note 1: This fundamental purpose-selection of the two types of material during production, makes a dramatic difference within a playspace environment, as you may be expecting wood-mulch to last longer than it does, or be cleaner than it is compared to the uniformity of EWF.

Note 2: Although in my position I try hard to avoid any referencing of costs comparisons, I have been told by playspace Owners that for reasons of packaging and distribution of bagged-mulch in small quantities is significantly less than that of EWF in similar quantities, however once the amount needed is increased they become similar in costing.

As such, if wood surfacing is being considered for a playspace's impact attenuating surface and/or clean ground-cover my recommendation would be to only consider those manufacturers or suppliers that recognize and/or promote their product for playground-use and label their product as Engineered Wood Fiber.

Please note, that ALL surfacing materials require a high degree of maintenance to be effective and last more than just a "few-years". There are good and bad properties to all. Unitary rubber surfacing requires regular cleaning and may need repairs that can be quite expensive as it ages. Peastone surfaces have a relatively short life span and require regular maintenance (*re: raking-level as it is easily displaced at high use areas*), annual loosening (*re: roto-tilling*) and/or frequent topping-up as it ages. Wood Fiber surfaces require frequent (est. at 2 years) topping-up and/or raking-level to maintain an even depth and consistent impact performance, and if not well drained (*re: good drainage is essential!*) it often decays very quickly and may present a very significant risk through bacteria growth (re: fungus, mold, mushrooms).

In conclusion, providing protective surfacing for a playspace is, in my opinion, the most challenging and frustrating aspect of a playground. Careful selection of the material, the supplier, and the installation method is essential and cannot be understated! As such, the use of references and past experiences, both positive and negative, in this regard is encouraged.

Regards,

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