

## Accessibility in Playgrounds

Work on accessibility in playgrounds has been ongoing for more than 8 years with the major push coming from the enactment of the Americans with Disabilities Act and the move to include playgrounds in the rules in the year 2000 and beyond. Most play structure manufacturers have created play features that are functional for persons that meet the definition of disabled. Playground surfacing on the other hand has caused significant problems and recently there has been considerable complaint to Standards writing bodies such as ASTM (American Society for Testing Materials) that the standards that currently exist (ASTM F1951) do not adequately address the issues and needs of persons with disabilities.

The ADA is a universal law that applies to all playgrounds equally, and there was a need to provide owner/operators of playgrounds a minimum performance without the closing of playgrounds on mass. Therefore surfaces that are deemed to be accessible according to the test in ASTM F1951, in many cases do not meet the needs of the users. There is an effort at ASTM to change the F1951 to provide for a portable test to determine firmness and stability of the surface as it is in place. Even when this test is passed, it must be remembered that the performance criteria will be minimums to again prevent the wholesale closing of playgrounds in the United States. One aspect of this Standard that will remain is that the playground surface must always provide for the protection of children from falls using the test in ASTM F1292.

As a result of the above, shredded wood (engineered wood fibre) has become popular for use in public and child care playgrounds. Shredded rubber has also been suggested for this purpose. Discovering that these surfaces are not accessible in the way people expect in other hard surfaced facilities they attend, has led to significant frustration, especially in the Day Care community. There are also issues of mould and other problems that are associated with poor drainage and lack of sunshine. The close proximity of Day Care playgrounds to the building also causes problems with the carrying of materials out of the playground and into the building. Shredded and loose rubber has proven to have some of these problems as well as blowing and floating away in storms. There is also data that vandals have been able to start fires with this material without the assistance of an accelerant. This can pose a problem in any playground, with special consideration being given to schools, child cares and housing complexes. As a result loose rubber is not a good alternative, especially in Day Care settings.

Although the poured rubber surface does carry a higher initial capital cost, it can provide the accessibility that most users of the playground expect. A critical aspect of this type of surface is to ensure that it provides for the protection of the children and is tested at the time of installation and during its life for impact absorption.

From the owner/operators perspective it is also important to have a warranty that ensures compliance with a specification that requires the Gmax to be less than 150 and HIC to be less than 850 from the tops of all horizontal railings at the time of installation and these values shall never exceed 200 and 1000 respectively during the warranty period and that warranty period should be at least 3 years. Failure in this respect will, under the Ontario Day Nursery Act and various other Standards, require the replacement of the surface and have potential licensing implications until this is done. As a result selection of suppliers and specifications becomes critical to success. A strategy that can be used to ensure selection of a competent supplier/installer is to require that they provide a copy of the ASTM F1292 laboratory test results that indicates a critical height of at least 3 meters or 10' for all 3 temperatures of the test.

One advantage of the poured rubber surface is that the surface can be shaped with hills or rumble strips. This provides additional play value, especially for those not able to take advantage of some of the features of the play structure.

The reality of accessible playgrounds is the degree to which this is to be achieved. Where engineered wood fibre is utilized some people would debate whether this type of surface is accessible, however budgets may dictate a compromise. As a minimum the areas of high use and traffic must have a rubber mat installed to minimize the disruption of the surface and provide a firm and stable surface under swings, the ends of slides, fire poles etc. An area of poured in place rubber can be provided from the entrance of the playground up to and around all of the entrance and egress portions of the play structures. This must be done always keeping in mind that the surface must meet or exceed the owners stipulated requirements for impact absorption. Any area that has a poured rubber surface should also be able to provide use during and after weather conditions that would otherwise shutdown a playground. This includes some winter conditions, where snow can be removed from the surface and de-icing utilized to ensure use. Only in temperatures below -10C would the playground be out of service and in this case children would not be likely to utilize the playground. The manufacturer should be consulted as to cold weather use.

Ultimately the provision of a poured rubber surface could well be the solution to the playground surfacing issues. A poured rubber surface that is installed to the requirements of a stringent specification should provide the following benefits;

- Provide ongoing impact absorption from the tops of railings and guardrails at least to the requirement of the existing playground standards.
- Provide for an easily traversable surface to children and adults of all mental and physical abilities.
- Reduce the need for regular and expensive maintenance associated with loose fill surfaces.

- Through shaping and texturing, provide play value that would not be possible with a loose fill surface.
- Provide for long term compliance with playground impact testing as required by the Ontario Day Nurseries Act.
- The poured rubber surface being water permeable will allow play shortly after a rainfall or during a drizzle.

There are no perfect surfaces, however when one considers the needs of the Day Care community to provide for children of all abilities today and over time without discrimination, the requirement for daily and intensive use and that the playground is always close to the building, the alternatives tend to quickly limit themselves to the poured in place surface.

Since this is a specialized area of expertise, we would suggest that specifications, testing protocols, and warranty requirements be developed by a consultant experienced in Standards and surfacing.

I trust this is of assistance.

Yours truly,  
Canadian Playground Advisory Inc.,

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