# EVERPLAY News

Everplay International Inc.

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## Playground Surfacing Pitfalls

You get that sinking feeling in your stomach as you hear or read the words "your playground surface does not pass the requirements of the CSA Z614 Standard". The first question is what do I do and the second is What Went WRONG?

Your playspace and playground surface will eventually get inspected and tested. For a Child Care facility, testing is mandated as a part of annual licensing. Schools, municipalities and public entities have risk managers or insurance carriers that will mandate the inspections. Hopefully the inspection is not the result of a fall to a surface and a severe injury. Ultimately the owner/operator is responsible for the entire playground including the surface to meet the CSA Z614 as a minimum and that includes regular inspections and maintenance.

Municipalities have the added responsibility since they have access to specialist that are directly employed for design and contract administration or outside architects and landscape architects that provide professional services. Once the surface has been installed, it will be maintained by personnel, who have had the opportunity to avail themselves of courses from the Ontario Playground Academy and they will understand the issues involved with Standards compliance and best practices. There is also the work that the Ontario Parks Association has done for the past 15 years with 'Its Time to Stop Playing Around" and other information that has been disseminated at the OPA Explorations and other conventions over the years. As a result the expected level of knowledge and therefore compliance is very high.

The minimum Standard of care is the CSA Z614 which requires that when the surface is tested the Gmax value shall not exceed 200 and the HIC shall not exceed 1000 from the specified drop height. At 1000 HIC everyone will have a head injury; and a 99% risk of it being minor (fractured nose and teeth), 90% risk of it being moderate (non-dislocated fracture and brief loss of consciousness), 4% risk of loosing consciousness for 12 hours and having non-recoverable brain damage. The risk of death begins at 1000 HIC. Therefore being compliant to the CSA Z614 only protects children from a life-threatening or debilitating head injury.

## EVERPLAY maintenance and warranty program

Every playground owner wonders if their protective surfaces will continue to meet the requirements of the CSA Z614 playspace Standard. Depending upon the surface type, failure could be expensive, affect budgets or operations. For Day Cares, a failure of the playground protective surface could impact their license to operate.

Standard 5 year Warranty

EVERPLAY has consistently been the leader in performance and has backed this with a comprehensive 5 year warranty that the maintained EVERPLAY will meet the performance requirements of the CSA Z614 from the tops of guardrails and barriers.

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# Playground Surfacing Pitfalls

To make sure you don't get caught with a failure of your playground surface you can follow a few simple recommendations;

Make sure your supplier has the required laboratory surface testing for the heights from which you think your children will fall;
The ASTM F1292 requires that all surface manufacturers shall provide this certificate. For many organizations that purchase sand or peagravel, they do not seem to understand this and assume that these are not manufactured materials. Ask your supplier if they process the material before delivering or if it is naturally occurring. Why did they spend millions on crushers, screens and washers if not to manufacture? In the case of sand or peagravel, this information will assist the maintenance crews in buying additional materials in the future when there is a need to top up.

Request a list of references that are at least 5 years old and talk with them;
It is important to discuss with other purchasers of similar products about the history of those surfaces and any compliance or warranty issues that have been noted. One would hope that other municipalities and members of OPA would want to provide assistance to their colleagues.

Ask for a certificate of playground product liability insurance (this is not just contractors insurance, it must have the word playground in the certificate)
Since 70% of all injuries in playgrounds are the results of falls, it is important to know whether you are on the liability hook for a non compliant surface or is your supplier joining you in your hour of need. The only way you will know this is to have your surface supplier provide a certificate of product liability insurance, naming the owner and specifically covering playgrounds.

Specify that the surface must provide a Gmax <150 and HIC <850 from the tops of all horizontal railings and climbers and give yourself some manoeuvre margin;
The CSA Z614 and ASTM F1292 stipulate that the Gmax shall not exceed 200 and the HIC shall not exceed 1000 at any time that the playground is in operation. The standards also stipulate that should the values be exceeded, the play structure is to be taken out of service until the surface complies. With a loose fill material corrections and topping up is easy, whereas with a synthetic surfaces you will be dependent upon your supplier. Starting with lower values initially gives the playground years to start to reach the failure point. Measuring from the tops of barriers provides protection from where children fall and gets the owner to where the CSA Z614 is expected to go in its next revision.

Don't pay for the surface until it has been initially tested and passes your requirements;
When a playground surface is purchased there is a commitment on the part of the surfacing supplier to install a surface that meets the CSA Z614 as a minimum and a better performance as a preferably. The obligation on the part of the owner is to pay for the surface, but not until it has been tested on site.

Require that the warranty cover the passing of the impact test for the warranty period;
Since the surface must continue to meet the impact attenuation performance of the CSA Z614, this is the cornerstone of any warranty. Other factors specific to the material would be important. It is also important to have a warranty period that covers the owner for a number of years.

Get the maintenance instructions for the surface and follow them;
Every surface will require maintenance and the supplier of the surface must provide the procedures necessary to keep the surface in service. For loose fill materials there should also be enough description of the original materials to allow for the purchase of the same material in the future when topping up becomes necessary.

Test the surface annually and have your surfacing supplier make corrections immediately;
Since a surface must continue to pass, the only way to know is to test on an annual basis. Although it is never good news to have a failure, it could trigger a warranty claim or remedial action before a problem becomes unmanageable.

A good strategy to avoid surfacing problems is to involve a person that has been trained and has the tools and experience required to perform the playground inspections. They will be able to act as a specialist to help you in the development of your specifications and contract management. The selection, installation and maintenance of playgrounds and surfaces are specialized and technical subjects and need expertise. There are people who have dedicated many years to the issues related to playground standards and compliance. A group of dedicated playground professionals can be found at the web site for the Canadian Association of Playground Practitioners, http://www.capp-online.ca/.

Those interested in the ongoing issues in playgrounds might want to join CAPP and participate in the networking of ideas. The best part is that the membership for associates is free for the first year. You might gain some information, develop contacts and share information that will make playgrounds a better place.

Your playground should be worry free and with a little bit of effort, networking and following the above list, inspections should not be a source of dread.

# EVERPLAY maintenance and warranty program

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3 year Warranty Extension

For 2006 EVERPLAY announces a package that **extends** the 5year warranty to 8 years with the purchase of a maintenance package that will provide the assurance to the owner that their EVERPLAY will continue to perform long into the future. This program kicks in at year 3 after the installation with inspections, evaluations and field testing to ASTM F1292-04.

EVERPLAY Facelift

EVERPLAY has recognized that as time goes by the pigmented surface, although performing, could use a face lift. In response, EVERPLAY offers owners the opportunity to improve the aesthetic appeal of the surface without compromising the performance. The new program provides for a field test to ASTM F1292 and recommendation for cleaning, maintenance and a spray application of a coloured UV resistant lacquer in any of 5 bold colours. This will renew the surface and allow for the application of patterns and designs that may not have been there previously. This will be a fun and inexpensive way to bring new life to the playspace.

EVERPLAY provides these new programs to assist new and existing EVERPLAY owners with options that will carry them into the future.

# Loose Rubber Chips & Shreds

## Do we want this in children's hands, mouths, ears?

A recent addition to the products available in the playground is the shred or chip from recycled tires. They also come in a variety of colours to disguise them from their origin. These particles are similar in size to a french fry or piece of bubble gum.

The rubber shred or chip is also subject to rapid burning due to the void space and oxygen within the depth of the system. This is like a tire fire on steroids, once it is established.

To reduce the risk of fire, some of these shreds and chips are coated with flame-retardant chemicals. There are very few flame-retardants that are not toxic through dermal exposure or ingestion. Others dissolve in water and abrasion and have no affect against future fires. It is important to determine the toxicology of the chemicals and the longevity of the products that are used.

As parents we know that children will put all kinds of things into their mouths. Do we really want a piece of a tire that has travelled a few thousand miles of unknown roads or come from an industrial machine that has been driving around an industrial site? What about the yummy chemicals that are added for colour to make them attractive and prevent fire?

## YUK!!!!!!!

# … It's the sudden stop that hurts

A good playground will provide challenges for children. In some cases a child will fall from the structure and they should not sustain a life-threatening head injury. Protection of the child from the life-threatening head injury is the responsibility of the structure manufacturer/installer, the protective surfacing manufacturer/installer and the owner/operator of the playground. In some cases it is prevention from falling and in others it is providing impact absorption should the child fall. This is a partnership in the prevention of the severity of injuries.

Children will be challenged within the designed use or they will create their own play using their imagination as a resource. For example take the cardboard box that children use far beyond the designed use of the box manufacturer. To this end the play structure manufacturer has the obligation to provide designs that assist the child and prevent falls. Both guardrails

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# Sudden stops hurt

and barriers, **unless designed and stipulated in writing by the manufacturer to be non climbable**, will not prevent children from a fall from, climbing or using them as a climbing and play apparatus.

Up to 70% of the injuries in the playground are falls to the surface and it is the responsibility of the owner/operator to purchase protective surfacing that prevents the life-threatening head injury and reduce the severity of other injuries.

Currently Standards, CSA Z614 and ASTM F1292, allow that the protective surface have a Gmax that does not exceed 200 and HIC that does not exceed 1000 from the drop height stipulated by the owner/operator. The reader must understand that for those fall on their head, at 1000 HIC everyone will have a head injury, with a 99% of it being minor (broken nose or teeth), 90% risk of it being moderate (non-dislocated fracture and brief loss of consciousness), 4% risk of loosing consciousness for more than 12 hours and sustaining non-recoverable brain damage. The risk of a fatal head injury begins at HIC values above 1000, with all head injuries being fatal at 3000 HIC.

Selecting a Gmax and HIC value below the maximums allowed is a prudent injury and risk reduction policy on behalf of the owner/operator. Selecting the drop height for the testing of the surface from a location where the owner/operator would expect a child could fall from will also work to practicality.

EVERPLAY has long provided surfaces that when tested from the tops of barriers and/or a guardrail provides protection from impact that is second to none. EVERPLAY installations have a Gmax <150 and HIC <850 from these heights at the time of installation. This along with field testing to ASTM F1292 and a 5 year warranty provides owner/operator with the assurance that the functional longevity of the EVERPLAY surface is up to that of the play structure.

*State of the art is not a limit, it is a point of departure*

# EPDM — what's so special? — EVERPLAY has it!!

For years EVERPLAY has been dedicated to the protection of the child, with superior performance with regard to Gmax and HIC from heights that no other synthetic surface has matched. Continued quality is ensured through the use of a proprietary chemical binder that EVERPLAY has been using since the mid 1980's.

Many surfacing companies using coloured EPDM rubber have placed their priority on the aesthetics of the surface with colours and custom designs and logos, giving a back seat to low impact values and the protection of children. This practice has been found not to be an effective strategy, as failures have caused the closure of playgrounds until the surfaces are repaired.

EPDM is the chemical acronym for a type of rubber that is able to be coloured and provide excellent stability. The rubber is not responsible for the performance of the surface, it is only contributory. The binder and the method of installation will allow these rubber granules to move in relation to each other and slow down the falling object and reduce the impact values.

For the first time in 2005 EVERPLAY surfaced playgrounds with the use of EPDM rubber in the top coat. This is revolutionary in that not only did this surface provide an aesthetically pleasing surface, one playground provided a Gmax <80 and HIC <510 from 4 meters or 13 feet. This surface also used the proprietary EVERPLAY binder and exclusive installation procedures.

With these installations, clients are now able to have both the excellent performance that they have become used to with EVERPLAY, as well as the attractive aesthetics they have seen from others.

We thank our clients that have stayed with EVERPLAY in favour of excellent performance and look forward to adding this performance with the option of the EPDM coloured rubber.