

# CRUMB RUBBER:

## Separating the Myths from the Facts

***Professional athletes compete on it. Children are at play on it every day. And, it represents a growing trend in being green.***

Across the nation, discarded rubber tires are being recycled and reused in innovative ways that promote safety and represent ingenuity. In as many as 50 studies conducted in state after state, on the national level, and around the world, researchers have reached the same conclusion... **Crumb rubber used in artificial turf or as a playground surface poses no significant health or environmental risk.**

In December 2009, the United States Environmental Protection Agency (EPA) became the latest regulatory body to draw this conclusion. **Their review of crumb rubber infill used in athletic fields and playground surfaces found that concentrations of materials in tire crumb are below levels considered harmful.** The EPA conducted its field study from August through October 2008 and took samples from multiple locations in different parts of the country.

Moreover, recycling old tires into useful, safe products also prevents hundreds of thousands of scrap tires from littering landfills or the countryside.

### KNOW THE FACTS ABOUT CRUMB RUBBER PRODUCTS.

THE MYTHS	THE FACTS
<i>Exposure to crumb rubber can cause cancer.</i>	A January 2007 study by the California EPA definitely determined that playing on an athletic field made partially of crumb rubber <b>does not pose a significant risk for cancer</b> <sup>i</sup> .
<i>Inhaling the air above artificial turf that contains crumb rubber is harmful to a person's health.</i>	A March 2009 study prepared for the New York City Department of Health and Mental Hygiene found that there is <b>no significant health risk</b> to people who breathe the air above synthetic turf that contains crumb rubber. The study looked at the chemicals found in the air above the turf and the chemicals found in the air upwind from the fields that were analyzed. <b>The conclusion: The chemicals were found in similar concentrations in both samples</b> <sup>ii</sup> .
<i>Athletes are more susceptible to Staph or MRSA infections when playing on synthetic turf athletic fields.</i>	Two different studies from Penn State University found <b>no evidence to suggest that athletes who play on synthetic turf are at greater risk of contracting a bacterial infection</b> <sup>iii</sup> .
<i>Athletic fields made of synthetic turf leach dangerous chemicals into the ground and water supply, causing an environmental and health risk.</i>	A 2008 study of several synthetic athletic fields in Connecticut that used crumb rubber showed that drainage from the fields <b>did not leach materials that would be considered a risk to aquatic life.</b> The study also found that <b>metals that might leach from crumb rubber are within ranges that could be expected to leach from native soil.</b> A 2008 study by the New York City Department of Health and Mental Hygiene came to similar conclusions <sup>iv</sup> .

## THE MYTHS

*Crumb rubber contains an unsafe level of lead that can be hazardous to a person's health.*

*Tires and crumb rubber products are classified as hazardous waste.*

## THE FACTS

Consumer Product Safety Commission (CPSC) regulations that take effect in 2010 set a ceiling for lead content in any consumer product earmarked for children. By August 2011, manufacturers must demonstrate that such products contain lead content that does not exceed 100 parts per million (ppm)<sup>v</sup>. Frequent testing of crumb rubber products by leading producers of crumb rubber has yielded results that have **not exceeded 50 ppm**.

The United States Environmental Protection Agency (EPA) has never **classified rubber tires or crumb rubber as hazardous waste**<sup>vi</sup>.

### Here are some other important facts...

- The process of recycling tires saves millions of used tires from ending up in stockpiles or landfills. According to the Rubber Manufacturers Association, 89.3 percent of the scrap tires generated in the United States are recycled and reused<sup>vii</sup>. This represents more than 265 million tires.
- Recycled rubber that is used as a playground surface promotes safety because it does not decompose or blow away. It is non-toxic and does not harbor insects or mold.
- A six-inch layer of recycled rubber playground mulch can cushion a child's fall from as high as twelve feet.
- Replacing a grass field with a synthetic athletic field utilizing recycled rubber can save as much as 50,000 gallons of water per week during the peak growing season. It also eliminates the need to use toxic pesticides and fertilizers.

### For more information...

Consult these Web sites for information on recycled rubber and related products:

- Institute of Scrap Recycling Industries: [www.isri.org](http://www.isri.org)
- Rubber Manufacturers Association: [www.rma.org](http://www.rma.org)
- Synthetic Turf Council: [www.syntheticurfCouncil.org](http://www.syntheticurfCouncil.org)
- Tire Industry Association: [www.tireindustry.org](http://www.tireindustry.org)

<sup>i</sup> "Evaluation of Health Effects of Recycled Waste Tires in Playground and Track Products," Office of Environmental Health Hazard Assessment of California EPA, January 2007

<sup>ii</sup> "Air Quality Survey of Synthetic Turf Fields Containing Crumb Rubber Infill," New York City Department of Health and Mental Hygiene, New York, NY, March 2009.

<sup>iii</sup> "Survival of Staphylococcus Aureus on Synthetic Turf," by Andy McNitt, Ph.D., Associate Professor of Soil Science, Penn State University, December 2008; "A Survey of Microbial Populations in Infilled Synthetic Turf Fields," by Andy McNitt, Ph.D., Associate of Professor of Soil Science, Penn State University, and Dianne Petrunak, M.S., and Thomas Serensits, M.S., June 2007.

<sup>iv</sup> "Evaluation of the Environmental Effects of Synthetic Turf Athletic Fields," Milone & MacBroom, December 2008; and "A Review of the Potential Health and Safety Risks from Synthetic Turf Fields Containing Crumb Rubber Infill," New York City Department of Health and Mental Hygiene, May 2008.

<sup>v</sup> Source: Consumer Product Safety Commission.

<sup>vi</sup> Source: Environmental Protection Agency

<sup>vii</sup> "Scrap Tire Markets in the United States (9<sup>th</sup> Biennial Report)," by Rubber Manufacturers Association, 2009.

