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Manex and UC Berkeley Issue Study on Recycled Rubber in Artificial Turf Applications

Review of studies from past 12 years combined with independent analysis yields most comprehensive report to date.

SAN RAMON, CA – April 5, 2010 -- The Corporation for Manufacturing Excellence (Manex) and the Laboratory for Manufacturing and Sustainability (LMAS) at the University of California, Berkeley, have released the results of their study on the impact, effectiveness, and safety of recycled tire crumb in artificial turf applications.

The Manex/UC Berkeley study reviews the benefits of recycled crumb rubber in artificial turf applications, providing insight for the material's growth in popularity and addressing common issues surrounding its efficacy and safety. The research also analyzes the primary features, economic benefits and other advantages that have led to the widespread expansion and adoption of artificial turf using recycled crumb rubber infill.

The research conducted by Manex and Berkeley is among the most comprehensive reports to date, reviewing and assessing existing studies from the past 12 years, as well as containing independent analysis. The conclusions of this study validate key findings from other recent studies, demonstrating the materials are both cost-effective and safe. Reasons for the dramatic growth in popularity of this material include excellent playability, all-weather availability, increased playing hours, significantly reduced maintenance, cost-effective investment, safe application, fewer injuries and positive environmental impacts, through the creative re-use of materials.

Jonathan Lee, Vice President at Manex adds perspective to misconceptions about crumb rubber. "Prior studies have been limited in scope, often assessing artificial turf and crumb rubber in and of themselves rather than in comparison to their real-world substitutes. Instead of focusing entirely on the potential hazards, these materials should be compared against the popular alternative, such as natural turf, for a balanced perspective. For example, even natural turf is not necessarily a benign or sterile material, and may contain chemicals, pesticides, chemical and organic fertilizer (such as manure) and other potential hazards. Grass fields are almost always maintained using equipment that generates pollution. In other words, artificial turf containing recycled crumb rubber is quite safe and cost-effective when compared to natural turf alternatives."

According to Rachel Simon of UC Berkeley who led the study for LMAS, "People tend to think that products more closely derived from nature are safer and better for the environment than those that are synthetic based. However, in many cases synthetic materials perform better than their 'more natural' counterparts across the various metrics used in evaluations. This has been shown to be the case with artificial turf, which offers several distinct advantages over grass, while using materials that are already prevalent in peoples' lives, such as recycled tires."

As part of this study, independent product test results were obtained and reviewed for crumb rubber produced by BAS Recycling of Moreno Valley, CA, a high-volume producer of cryogenic crumb rubber for synthetic turf. The test results confirmed that crumb rubber is safe for use in sports and athletic field environments.

About Manex

Founded in 1995, The Corporation for Manufacturing Excellence (Manex) provides a broad array of proven advisory and implementation solutions exclusively to manufacturers, distributors and their supply chains, enabling them to increase growth, productivity, quality and profitability. Manex delivers high-impact solutions in four key areas: strategy, people, process and performance. Meaningful, rapid impact and ROI are achieved through a modular-yet-holistic approach encompassing corporate strategy and planning, marketing strategy, training and development, Lean Manufacturing, supply chain and logistics, Six Sigma, ISO, and performance management systems. Manex is the Northern California affiliate of the NIST Manufacturing Extension Partnership.

For more information about Manex, visit www.manexconsulting.com.

About UC Berkeley's Laboratory for Manufacturing and Sustainability (LMAS)

Research at LMAS is concerned with the analysis and improvement of manufacturing processes, systems and enterprises and the development of tools to analyze their sustainability. Research is focused on: metrics and analytical tools for assessing the impact of processes, systems and enterprises, modeling sustainable, environmentally-conscious

manufacturing processes and systems, green supply chains, manufacturing technology for reduced impact manufacturing, technology for producing advanced energy sources or storage, cleantech and sustainable products and systems. Specific projects include: design for sustainability, green machine tools, sustainable packaging, impact and life cycle assessment tools for manufacturing (including embedded energy, materials, water, consumables), metrics for assessing green technology ROI (e.g. GHG ROI, Energy payback time, etc.), risk assessment for energy and resource use and enterprise carbon accounting.

For more information about UC Berkeley and LMAS, visit <http://lma.berkeley.edu>.

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