



Case Study

Thomas Jefferson Park Soccer/Football Field

City of New York Selects FlexSand® Action as Alternative Infill for High-Traffic Playing Field

The 58,000-square-foot athletic field at Manhattan's Thomas Jefferson Park serves nearby East Harlem. Its central location attracts visitors from many other parts of greater New York City, making it one of the busiest of the city's 110 synthetic turf facilities, regularly hosting organized league soccer matches, pickup football games, and a variety of other uses throughout the year. Because of this heavy use, the field at Thomas Jefferson Park has relied on synthetic turf for a considerable time, with the most recent turf sheet having provided roughly seven years of service out of a typical eight- to ten-year useful life.

Part of an ongoing program to provide safe outdoor recreation space for city residents and visitors, the New York City Parks Department in 2008 began testing for contaminants at its synthetic turf fields. Samples of the existing crumb rubber infill at Thomas Jefferson Park showed lead levels averaging 500 parts per million. While there are no applicable standards for synthetic turf fields, these results were higher than the EPA-recommended standard of 400 ppm for bare soil in children's play areas, leading the department to close the field in December 2008.

There exists the possibility that the contamination came from external sources, and not the crumb rubber infill made from recycled tires commonly used in synthetic turf athletic fields, but the department nonetheless made the decision to phase out crumb rubber on its fields in favor of FlexSand® Action, which the department has recently used at another installation, Highland Park, which straddles the boroughs of Queens and Brooklyn.

No heavy metals or harmful chemicals

The New York City Department of Parks and Recreation chose FlexSand Action synthetic infill because of its highly-controlled composition and its freedom from extraneous chemicals and metals.

The fact that FlexSand uses a Food and Drug Administration-approved food grade elastomer was convincing evidence that they would be providing a safe recreation environment for the children who use the field at Thomas Jefferson Park.

FlexSand Action is composed of silica sand that is thermally bonded to two different food grade polyolefin elastomers. It is a composition-controlled infill manufactured with all new raw materials.



"FlexSand® Action spread easily and evenly, and settled into the turf properly. We saw none of the mixing difficulty that can occasionally be encountered with two-component sand and crumb rubber infill systems."

Peter Porter, Forever Green Athletic Fields



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"FlexSand® Action was developed for improved technical performance and enhanced health safety over traditional infill materials," said Maureen Lynn, General Manager of Mineral Visions. "Our intention has been to provide an integrated solution that combines the ballast of quartz with the shock absorption performance of an engineered material developed specifically for synthetic turf applications."

This combination of performance and health safety properties has made FlexSand Action infill a very viable choice for both new synthetic athletic surfaces as well as those undergoing renovation. The material is currently in use at facilities managed by New York City Parks and Recreation, the Los Angeles Unified School District, and the City of Los Angeles.

New York City Parks and Recreation considered both material safety and environmental impact in its review of FlexSand Action infill. The infill material was tested using the EPA 3052/6010 analytical method to show lead and chromium levels well below the conservative 100 ppm limit. They also looked broadly at environmental impact, and found FlexSand infill attractive because it is manufactured in the Midwest, resulting in a lower carbon footprint than some of the other alternative infill options.

Easy to install, with a more natural feel

In April 2009, the existing synthetic turf and crumb rubber infill were removed from the field at Thomas Jefferson Park under the supervision of Forever Green Athletic Fields of Fort Washington, PA. The existing shock pad and drainage system were left in place at the field, with only minor maintenance and adjustment. The new synthetic turf specified for the project is SmartGrass® 50 oz., a heavier-weight, premium polyethylene turf that met the city's specifications for durability.

Although Forever Green had no prior experience with FlexSand Action infill, the company encountered no difficulty working with the material. Peter Porter, Forever Green's Director of Project Management, said that the FlexSand® Action "spread easily and evenly, and settled into the turf properly. We saw none of the mixing difficulty that can occasionally be encountered with two-component sand and crumb rubber infill systems."

Six pounds of FlexSand® Action infill per square foot was installed, a level designed to assure proper ballast and anchoring of the turf while also providing sufficient cushioning to meet the project's specified G-Max rating for surface hardness and shock absorption.

Initial evaluations of the field are positive. The field has a natural feel, with a little less bounce than the typical crumb rubber field. The FlexSand® Action infill has readily met the city's G-Max performance specifications, and will be re-tested at six and 12 months.

FlexSand also solves another concern common among artificial turf fields—the tendency of the field to absorb heat more than natural grass, making the surface occasionally too hot to play on during hot days and contributing to urban heat island effect.



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