

Federal Government Study on the Use of Recycled Tire Crumbs in Synthetic Turf Fields

Background

Concerns have been raised by the public about the safety of recycled tire crumb rubber used in synthetic turf fields and playgrounds in the United States. In response, the Environmental Protection Agency (EPA), the Centers for Disease Control and Prevention/Agency for Toxic Substances and Disease Registry (ATSDR), and the Consumer Product Safety Commission (CPSC) launched a Federal Research Action Plan to study key environmental human health questions associated with using crumb rubber on synthetic turf fields.

Studies

EPA and ATSDR are conducting two activities that are part of the Federal Research Action Plan:

1. The tire crumb rubber characterization activity to gather information about synthetic turf field facilities and operations, collect tire crumb rubber infill samples from recycling plants and fields, and analyze the tire crumb samples.
2. The exposure characterization activity to gather data from synthetic turf field users to understand how they use the synthetic turf fields, with a subset of these field users providing personal monitoring samples for analysis.

EPA and ATSDR need help from synthetic turf field facilities to conduct both activities.

Your Role as a Synthetic Turf Field Facility

The purpose of the tire crumb rubber characterization activity is to see what chemicals and microbes are present in crumb infill used in synthetic turf fields. The purpose of the exposure characterization study is to determine how people might be exposed to chemicals in the crumbs on synthetic turf fields. To help with both of these activities, we need synthetic field turf facility owners and/or managers to:

- Respond to a questionnaire to provide information about how the facility is used, the types of synthetic turf fields, and the standard operating procedures for the synthetic turf fields.
- Provide permission for collection and testing of tire crumb infill samples from the synthetic turf fields and to store any leftover samples to possibly test for other chemicals in the future. Tire crumb rubber samples will be collected from seven different locations on one field. The total amount collected will be about six pounds.
- Provide permission for EPA CDC/ATSDR to recruit people who play on the synthetic turf fields at your facility. If people agree, we would return to the facility and collect additional measurements while they are using the facility, including air samples, surface wipe samples, and dust samples from the field they use.

EPA and ATSDR hope to recruit 10 facilities in each of the 4 US regions to participate.

Crumb Rubber Testing

Tire crumb rubber from synthetic turf fields will be analyzed for the following chemicals and characteristics

- Metals
- Volatile Organic Compounds
- Semi-Volatile Organic Compounds
- Microbial activity
- Particle size and composition

In addition to direct analysis, measurements of chemical emissions from tire crumb rubber and tests of chemical bioaccessibility from crumb rubber will be performed.

Study Results

EPA and ATSDR will evaluate responses to the questionnaire and measurement results.

- Only EPA and ATSDR staff working on the study will be allowed to look at the paper and electronic records.
- EPA and ATSDR will give facility users/managers access to the data collected from their facility.
- Federal policy requires making the data collected publicly available. Facility and respondent names or other identifying information will not be publicly released. Results may be linked to other data gathered for the Research Action Plan.

Next Steps

EPA and ATSDR will release a draft status report at the end of 2016 that will summarize the agencies' progress in these activities. The report will also outline any additional research needs and next steps.

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