

PROPOSITION 65

An overview of Proposition 65 and its relation to synthetic turf and infills

A decorative graphic consisting of several parallel white lines of varying lengths, slanted upwards from left to right, located in the bottom right corner of the slide.

In this presentation:



- What is Prop. 65 and what are its requirements?
- Safety of artificial turf and Prop. 65 conditions?
- What testing has been performed on crumb rubber and alternative infills?

What is Proposition 65?

- 1986: Proposition 65 approved by CA voters to address chemical exposure concerns
- Annual State published list of over 800 chemicals linked to cancer, birth defects or other reproductive harm
- Businesses must notify consumers of significant chemical levels in products, homes, workplaces or environment
- Proposition 65 measures concentration levels of known Cancer causing chemicals in the body

What does Proposition 65 require of businesses?

Proposition 65 requires “persons in the course of doing business” to provide clear and reasonable warnings about exposures to any one of the 800+ chemicals on the Proposition 65 list

A warning can be:

- Consumer product label
- Signs posted at the workplace
- Publish notice in a newspaper

Proposition 65 warning is not required if:

1. Chemical levels pose no significant cancer risk
 - After 70 years exposure, risk does not exceed "1 in 100,000"
2. Chemical exposure below the warning level significantly below those observed to cause birth defects or other reproductive harm.
 - Exposure level does not exceed a "1 in 1,000" risk

*A plaintiff is not required to prove that a warning is required; rather, it is the defendant's burden to prove that a warning is not required.

Dosage vs. Content

- Dosage- the exposure to chemicals when contacting the product (inhalation, ingestion, dermal contact)
- Content- when having a product tested for Prop. 65 the independent 3rd party labs measure the overall totals of chemicals found in a product
- **Prop. 65 is quantified in dosage NOT content.** Each individual's exposure to chemicals varies by genetics, diet, and other pre-existing factors.

Proposition 65 is a Right-To-Know Law

“ [W]hat is at issue [in the law] is not the ‘safety’ of the product causing the exposure, but rather whether the exposure is one thousand times below the ‘no observable effect’ level [i.e., the warning levels for the chemical]. Thus, even products, whose use is sanctioned by the state and federal regulatory agencies, may require a Proposition 65 warning.” (*Consumer Cause v. SmileCare* (2001) 91 Cal.App.4th 454)

Synthetic Turf and Proposition 65



Synthetic Turf and Prop 65

Synthetic turf itself is tested and proven safe and free of harmful toxic chemical levels

- Buying from a reputable US-based manufacturer with independent testing should ensure highest adherence to Proposition 65

Synthetic Turf Safety

Essential to players, field owners, parents, community


- Skin comfort/less abrasion
- Impact safety
- Traction
- Durability
- Sports performance
- Aesthetics



Infills and Proposition 65



Role of Performance Infills in Synthetic Turf

- Greatly improves shock absorption
 - Playgrounds – 75% of injuries are due to falls
 - Sports Fields - over 160,000 youth concussions diagnosed via emergency room visits in 2012 (surface-related unknown)
 - Traction – cleat interaction with infill enhances grip while allowing foot release
 - Surface stability – may add to durability, leveling and protection of the grass fibers
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Infill Types

- SBR crumb rubber – Crushed recycled tires
- Sand – primarily used as surface stabilizer to limit vertical deformation of shock absorbing components
- EPDM and TPE – Elastomer based shock absorbing polymers – highest cost
- Organic infills – Rice husks, coconut fibers and/or cork – can be 5x SBR crumb costs



Infill Considerations

- Player safety and sport performance impact
- Consistency in all-weather conditions
- Granule changes over time – UV, oxidation and wear resistance
- Cost
- Availability
- Proposition 65

... Not all infills perform the same, last the same or adhere to Prop 65 the same.

Crumb Rubber Discussion

- SBR ground tire rubber
- To date diverted 175 million tires from landfills
- Most durable shock-absorbing infill on the market
- 12 lbs of crumb rubber derived from one passenger tire
- Each 80,000 sq/ft sports field uses about 225,000 lbs of crumb rubber infill



Is crumb rubber safe?

- Synthetic Turf Council has identified up to 60 independent studies performed over two decades
 - Concluded zero evidence of negative health effects associated with crumb rubber
- STC studies
 - Government, university, independent research firms
 - Reviewed leaching, air/water quality impact, digestion, inhalation and skin contact
- STC attempted to collaborate research findings with NBC stories but was unsuccessful – however the “news” reports continued

Crumb rubber independent studies

"Assuming ingestion of the above five chemicals (zinc and four PAHs) via chronic hand-to-mouth contact, exposures were below the corresponding chronic screening values, suggesting a low risk of adverse noncancerous health effects."

- California Integrated Waste Management Board, Evaluation of Health Effects of Recycled Waste Tires in Playground and Track Products. 2007, Integrated Waste Management Board: Sacramento, CA.

"A screening-level assessment of health risks was performed by comparing the estimated exposures to health-based screening levels. All exposures were lower than the screening levels, indicating that adverse health effects were unlikely in athletes using these fields."

- Office of Environmental Health and Hazard Assessment, Safety Study of Artificial Turf Containing Crumb Rubber Infill Made from Recycled Tires: Measurements of Chemicals and Particulates in the Air, Bacteria in the Turf, and Skin Abrasions Caused by Contact with the Surface, Department of Resources Recycling and Recovery, Editor. 2010, State of California.

Crumb rubber independent studies

“OEHHA then compared the levels of released chemicals to their health-based screening values, assuming a young child ingested ten grams of tire shreds; all exposures were at or below the screening values suggesting a low risk of noncancerous acute health effects.”

- California Integrated Waste Management Board, Evaluation of Health Effects of Recycled Waste Tires in Playground and Track Products. 2007, Integrated Waste Management Board: Sacramento, CA.

“Ingestion of a significant quantity of tire shred did not elevate a child’s risk of developing cancer, relative to the overall cancer rate of the population.”

- Rachel Simon, University of California, Berkeley, Review of the Impacts of Crumb Rubber in Artificial Turf Applications, February 2010

Further crumb rubber testing

Nov. 2014 - Infill at Lower Canada College tested to EN 71-3 child toy safety standards

- Measured migration of heavy metals from crumb rubber when ingested
- Compared to levels considered acceptable in toys for babies

Results:

- Passed for all 18 heavy metals
- Levels so low in some cases they were immeasurable (PPM's)



Alternative Infill Concerns

- EPDM, TPE and Organic infills have not been proven long-term in the marketplace.
- There have been no safety studies done in regards to play on the field, lower extremity injuries, etc.
- Alternate infills tend to separate and migrate
- Higher Maintenance
- Some require frequent watering to keep the infill and dust down and from migrating.
- Lower durability over the course of time
- G-Max tests done on competitor's fields with TPE and Organic infills that show G-Max readings well above the consumer product safety commission's allowable limit of 160 for catastrophic head injuries.

Summary

- Proposition 65 is an ongoing piece of legislation that changes annually.
- Synthetic turf itself from a reputable US-based manufacturer is proven safe by independent 3rd party testing in accordance with Proposition 65.
- The infill is a critical component of the synthetic turf system that may or may not meet Proposition 65 guidelines. Careful consideration to all purchasing factors should be reviewed.
- There are a variety of synthetic turf infills tested by independent 3rd party laboratories that can verify Proposition 65 compliance.
- Visit www.syntheticurfCouncil.org for information.

Thank you!

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