

Concerns on Firefighting Foam used on “Foam Days” in Lehi, Utah

In August 2011, the Environmental Epidemiology Program (EEP), Utah Department of Health received a phone call from a Lehi, UT resident regarding the potential negative health effects for children playing in fire-fighting foam during Lehi’s yearly “Foam Days”. The EEP contacted the Lehi fire station to identify the type of foam and then obtained the Material Safety Data Sheet (MSDS) from the United States Forest Service (USFS, 2010).

The following information references the MSDS: Buckeye Platinum Class A fire suppressant is a pale yellow water-based liquid solution with a mild sweet odor. Composition includes, water, hexylene glycol, alpha olefin sulfonate, and a mixture of surfactants, foam stabilizers, and inorganic salts. This foam has a Hazardous Materials Identification System (HMIS) health rating of 1, meaning that exposure may cause irritation or minor reversible injury.

A fire suppressant foam human health risk assessment conducted by Labat-Anderson Incorporated determined that all fire-fighting foams tested (several of which were nearly identical in composition to Buckeye Platinum Class A) scored a hazard index less than 0.01 and the risk of cancer as less than 1 in 1 million (Labat-Anderson Incorporated, 2003). In other words, an accidental drenching by these products poses a negligible risk to the public, including children.

To expand on this product’s toxicological information, eye contact will result in mild transient irritation and skin contact may result in mild transient irritation and/or dermatitis. Inhalation may aggravate existing chronic respiratory conditions, e.g., asthma. Ingestion may cause irritation to mucous membranes and large doses could produce extreme fatigue or unconsciousness. Eye protection, gloves, and appropriate skin protection is recommended.

First aid measures for eye exposure are to flush eyes with water for 15 minutes and repeat until pain-free. Washing with soap and water are recommended for skin exposure. Fresh air is advised for inhalation. If ingestion occurs, drinking 2-3 glasses of water and seeking immediate medical attention is recommended.

After researching the issue, it is EEP’s finding that exposure to Buckeye Platinum Class A fire-fighting foam may cause mild eye and skin irritation among children and should be used in accordance to the MSDS. The EEP recommends that Lehi fire department representatives inform parents of the possible health risks, though limited, that the foam may present to their children prior to participation in “Foam Days”.

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References

- Labat-Anderson Incorporated (2003). *Human Health Risk Assessment: Wildland Fire-fighting Chemicals*. Retrieved. from http://www.fs.fed.us/fire/tools_tech/misc/HHRA-Public.pdf.
- United States Forest Service (USFS) (2010). *Material Safety Data Sheet Identity - Buckeye Platinum Class A*. Retrieved. from <http://www.fs.fed.us/rm/fire/wfcs/products/msds/foam/buckeye.pdf>.