



LOS ANGELES UNIFIED SCHOOL DISTRICT POLICY BULLETIN

TITLE: Guidelines for Preventing Thermal Contact Burns from Play Surfaces

NUMBER: BUL-6862.0

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DATE: May 8, 2017

POLICY: To counteract the risk of burns from contact with hot surfaces, all District personnel must monitor weather conditions and modify activities related to playing or sitting on asphalt, concrete, playground equipment and artificial turf surfaces. During hot weather, use of asphalt, concrete, playground equipment and artificial turf surfaces may have to be limited to mornings or evenings if these surfaces are too hot. This policy applies to all school sponsored activities.

MAJOR CHANGES: This is a new Bulletin.

I. BACKGROUND

A. Thermal contact burns are injuries caused when a body part comes in contact with a hot object or substance. Children may suffer a burn injury when coming into contact with hot surfaces such as asphalt, concrete, playground equipment and artificial turf. Air temperatures do not have to be very hot to raise surface temperatures. Direct sunlight may cause high temperatures on some surfaces even in mild weather. The U.S. Consumer Product Safety Commission recommends using “common sense” when determining whether a surface is too hot to be touched or sat upon by students. This Bulletin provides school site staff with techniques and information to assist them in preventing student injuries resulting from hot surfaces.

II. ASPHALT & CONCRETE SURFACES

A. A study published in the Journal of the American Medical Association cites that air temperatures as low as 77 degrees can correlate to an asphalt temperature of 125 degrees. This is hot enough to damage skin in just 60 seconds. At an air temperature of 87 degrees, the asphalt temperature can reach 143 degrees.

ROUTING

All Schools and
Offices



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- B. Playing on hot asphalt or concrete surfaces can cause skin irritation to the bottoms of feet through shoes if the surface is hot enough and based on the length of time spent on the surface.
- C. In addition to playing on asphalt and concrete play surfaces, school activities often include having students sit on these surfaces. During periods of warm weather, staff must monitor that these surfaces are not too hot before directing students to sit on them. While this may be subjective, staff should err on the side of caution. One way staff can determine if the surface is too hot, is by placing a hand on the surface for 5-10 seconds. If it is too uncomfortable for an adult's hand, it is too hot for students to sit on the surface.

It should be noted that butcher paper is not a protective barrier for heat and should not be used for students to sit upon on asphalt or concrete surfaces. Even through paper, heat can be an issue.

III. PLAYGROUND EQUIPMENT

- A. Playground equipment and/or surfacing in direct sunlight may reach high enough temperatures to cause serious burn injuries within seconds. Staff must check for hot play surfaces before letting children play. A common misperception is that only metal slides or other metal playground equipment can cause burns, but plastic equipment can also reach temperatures high enough to cause harm. One way staff can determine if the surface is too hot is to place a hand on the surface for 5-10 seconds.
- B. Another long-term mitigation is to install shade structures or landscaping to help reduce the amount of direct sunlight on the equipment. Such projects must be done in coordination with the school's Complex Project Manager. Shade should be incorporated, either naturally or through shade structures, into the design of new or in the retrofit of existing playground equipment.

IV. ARTIFICIAL TURF

- A. Artificial turf surfaces can also be susceptible to high heat. Compared to traditional natural grass surfaces, artificial turf is typically 35 to 55 degrees hotter, and in certain conditions could reach nearly 100 degrees over ambient air temperatures.
- B. There is no clear consensus on effective methods to reduce the heat of artificial turf fields. One study showed that watering for 30 minutes dropped the temperature from 174 degrees to 85 degrees, but the effect



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was only short term. After 5 minutes the temperature climbed back up to 120 degrees. After 20 minutes the temperature was 164 degrees.

- C. While there does not appear to be the same risk of thermal contact burns as on asphalt compared to artificial turf surfaces, there is an increased risk of heat-related illness.
- D. When new artificial turf fields are being designed, measures to reduce heat such as the use of light colored infill instead of black infill should be considered. While such measures do not reduce heat greatly, they may be utilized in conjunction with other means to assist with cooling these types of fields.

V. HEAT-RELATED ILLNESS PREVENTION

- A. In addition to the risk of burns, heat-related illness must also be considered. Although they do not change surface temperatures, access to cool water, shade, appropriate rest periods and wearing light-weight, loose-fitting, cotton clothing are good ways to reduce heat-related illness. Additional information related to preventing heat-related illnesses can be found at <http://achieve.lausd.net/advisory>

AUTHORITY: [Board Rule 2351, Safety](#)

**RELATED
RESOURCES:** [Burn Safety Awareness on Playgrounds, U.S. Consumer Product Safety Commission](#)

[BUL-963.2, Guidelines for Preventing Heat Stress](#)

ASSISTANCE: For assistance or further information, contact the Office of Environmental Health and Safety at 213-241-3199 or at <http://achieve.lausd.net/OEHS>.