

Playing outside is an important part of children's development and a healthy lifestyle to encourage. In Australia, our climate can cause our outdoor playspace surfaces and equipment to become very hot, which can result in contact burns to users, especially young children.

Contact Burns

Contact, or thermal burns, are a result of the skin coming into contact with hot or extremely cold materials or environments.

Even in mild weather, these burns can occur due to inadequately shaded playspaces, when children make contact with heated playground surfaces and/or playground equipment, particularly slides and swings.

Contact burns and the degree of burn sustained depends on 3 factors: *The contact time, materiality of the product and the temperature of the surface at the time of burn.*

ISO Standard 13732-1:2006 Ergonomics of the thermal environment — Methods for the assessment of human responses to contact with surfaces lists materials which are commonly used in playground equipment show significant burn thresholds. Table 2 below shows contact times between touching the surface and skin burns are brief and threshold temperatures, particularly for metals and plastics are relatively low.

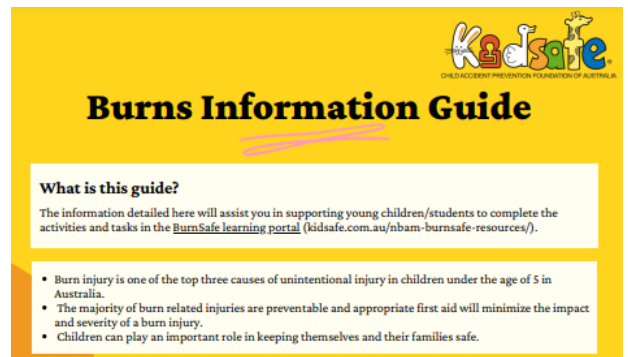
TABLE 2: Burn thresholds of skin (modified from ISO 13732).

MATERIAL	MATERIAL CHARACTERISTICS	BURN THRESHOLD (°C)		
		Contact time: 3 seconds	Contact time: 5 seconds	Contact time: 1 minute
Metal	uncoated	60	57	51
Coated metal	Powder: 90 µm	65	60	51
Stone material	Concrete, granite, asphalt	73	60	56
Plastic	Polyamide, acrylic, duroplastic	77	74	60
Wood	Bare, low moisture	99	93	60

Some materials transfer heat more slowly than others, these materials may not feel hot with a quick touch.

A child of any age can be burned by a hot surface.

Young children in particular are more vulnerable to burns due to their skin being thinner and more delicate, they also can have slower reaction times when experiencing a burn. E.g. Young children have not yet learned to react by removing themselves from the hot surface. They may vocalize their pain or discomfort from the burning, but they may not know to move from the location that is burning them.



Burns Information Guide

What is this guide?

The information detailed here will assist you in supporting young children/students to complete the activities and tasks in the [BurnSafe learning portal](https://kidsafesa.com.au/nbam-burnsafe-resources/) (kidsafe.com.au/nbam-burnsafe-resources/).

- Burn injury is one of the top three causes of unintentional injury in children under the age of 5 in Australia.
- The majority of burn related injuries are preventable and appropriate first aid will minimize the impact and severity of a burn injury.
- Children can play an important role in keeping themselves and their families safe.

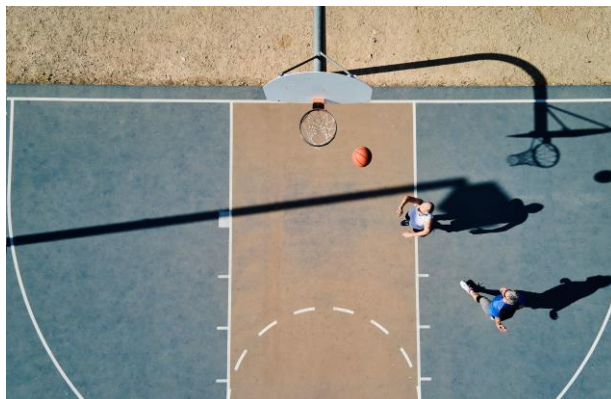
Burn Type

Burns can be classified into three severities (Superficial, partial and full thickness burn) based on the depth of injury to the skin.

Burn injuries continue to burn the skin for up to 2-3 hours after the cause of the burn has been removed. It is vital that the area is cooled effectively to prevent further damage.

If a child in your care is impacted by a burn injury in a playground, seek medical attention immediately.

For more information on Burn Injury, please refer to our **Kidsafe SA Burns Information Guide:** <https://kidsafesa.com.au/burns-information-guide.pdf> or **St John's First Aid Factsheet:** <http://stjohn.org.au/first-aid-factsheet-burn-or-scald.pdf>



HOW CAN WE HELP KEEP KIDS SAFE?

- Wet down playground surfaces e.g. artificial turf or wet pour rubber to reduce heat retention
- If installing unitary surfacing (wet pour rubber/tiles), consider light coloured options
- Conduct a shade audit - make sure your shade is in the correct position and consider whether trees or a built structure will give you the best result to shade the playspace ground surfaces and equipment
- Ensure children wear appropriate clothing for the playground e.g. shoes, long pants, long sleeve shirts
- Always check playground equipment surfaces before children play
- Before children enter the playspace, use an infrared thermometer to check the temperatures of the surfaces
- Check the surface temperature by holding your hand just above the surface. If the surface feels too hot, consider if its appropriate to play, alternatively an infrared thermometer can be used for specific results.

Common Burn Situations

- Uncoated metal equipment, or metal equipment where the heat-reducing coating has worn off
- Slides, swings, or other equipment that a child may sit on
- Dark-colored plastics and rubbers, especially the surfacing under and around the playground equipment
- Large expanses of asphalt, concrete and artificial surfaces near playgrounds

The weather outside does not have to be excessively hot for equipment or playspace surfacing to heat up resulting in contact burns!

CONTACT KIDSAFE SA

Phone: (08) 7089 8554

Email: play@kidsafesa.com.au

Need more help? Kidsafe SA provides a playground inspection service. Contact us for a quote to organise an inspector to visit your playspace and provide specific advice.