

Decking Surface Temperature Test

How does Knotwood's aluminium decking compare to other leading materials in the industry?

Explore our in-house temperature testing of various decking materials to see the difference.



Building Beautiful Forever™

Summary

A comparison test was undertaken to determine the surface temperature of decking of different material types.

Samples of the two leading composite decking brands and the most common timber deck species (Merbau), together with Knotwood interlocking and plank decking were tested side by side. Care was taken to test materials of similar colour to ensure the most accurate comparison. We also tested how darker colours of similar composition compared.

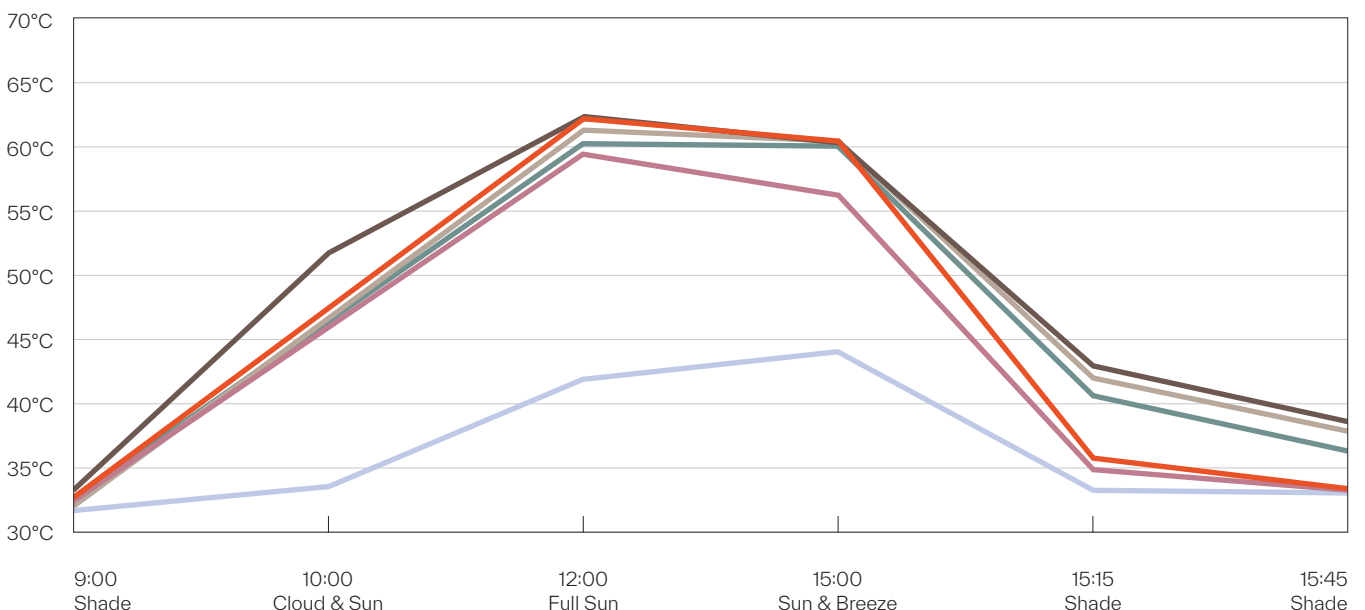
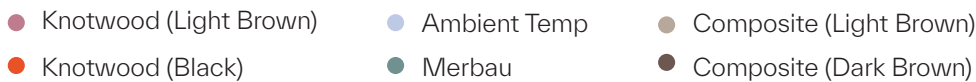
Test Rig

Samples were fixed from behind onto galvanised steel top hat with joist protector tape fitted to ensure a thermal break.

The test rig measured 645mm x 830mm.

Test Results

- Knotwood's aluminium is cooler than timber and composite materials of similar colour.
- Knotwood's aluminium dissipates heat faster than other materials.
- All decking material, no matter it's composition, gets hot when it is exposed to direct sunlight.
- Dark colours get hotter than lighter colours when exposed to direct sunlight.



Test Equipment

The following test equipment was used to determine the surface temperature of the decking material samples and the ambient air temperature and relative humidity:

Laser Infrared Thermometer - Kaemeasu KM-IT550.

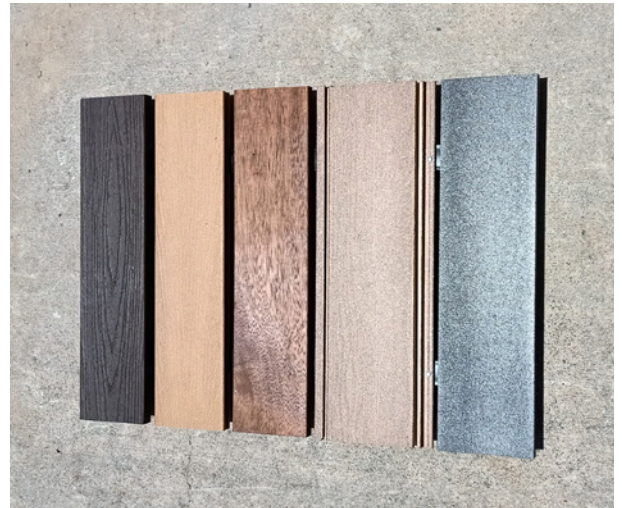
Indoor/Outdoor Thermometer (Air Temperature & Humidity) - ThermoPro TP60C.

Test Methodology

To achieve a base line, the surface temperature of each of the samples was recorded at 9:00 out of direct sunlight (shade).

The surface temperature of each sample was tested in direct sunlight at one/two/three-hour intervals (10:00, 12:00, 15:00).

The test rig was then moved indoors out of direct sunlight and the temperature of each sample was taken 15 minutes and 30 minutes later (15:15, 15:45) to determine which material types retained the most heat and how quickly they cooled.



Test Date: 8/12/2023.

Location: Stapylton, QLD 4207, Australia.

Weather Conditions: Initial patchy cloud that burnt off to full sun. Light breeze in the afternoon.