FIBRE CEMENT EDGE CRACKING

Edge cracking is a phenomenon that can affect fibre cement corrugated sheets during storage. It occurs when sheets are exposed to prolonged heat and sunlight, leading to fine hairline cracks appearing along the sheet edges. This is most likely to happen to sheets stored in packs where one side is exposed to the sun, as the outer surfaces can dry out faster than the inner core of the stack.

The cracking is caused by expansion and contraction triggered by changes in the sheet's moisture content. When stored in direct sunlight, the drying rate at the exposed edges becomes uneven, creating stress in the material. This effect is often seen in sheets located in the middle of a stack, as they retain heat and moisture differently compared to the top and bottom layers.

Environmental conditions play a major role in edge cracking. Prolonged dry weather followed by intermittent thunderstorms and further dry spells can create repeated expansion–contraction cycles in the sheets. These conditions are especially common in hot climates, but can also occur during unusually warm and dry periods in the UK.

Edge cracking will always be visible before installation, and it does not develop once sheets are fixed in place. For this reason, packs should be inspected carefully before use so any affected sheets can be replaced.

In 2025, the UK experienced record-breaking conditions between February and July, with the lowest rainfall and highest average temperatures since 1976. These unusual conditions increased the likelihood of edge cracking, particularly for sheets stored outdoors in direct sunlight.

To minimise the risk, sheets should be stored in shaded, well-ventilated areas, and kept out of prolonged exposure to strong sunlight. Inspections before installation are recommended to ensure no cracked sheets are fitted.

Main Causes of Edge Cracking

- **Thermal expansion and contraction** – Temperature fluctuations cause movement within the sheet structure.
- **Moisture content changes** – Uneven drying between exposed edges and the stack's core.
- **Storage in direct sunlight** – Prolonged sun exposure increases drying and stress at sheet edges.
- **High temperatures** – Sustained periods of heat make sheets more prone to cracking.
- **Prolonged dry weather** – Extended dryness increases shrinkage and edge stress.
- **Rapid weather changes** – Dry spells followed by thunderstorms and further dry weather cause repeated expansion–contraction cycles.
- **Position in the pack** – Middle sheets dry differently compared to top and bottom sheets, increasing stress.
- **Sun-facing edges** – The side of a pack facing into the sun is most likely to develop cracks.

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