

Damp Patch Datasheet

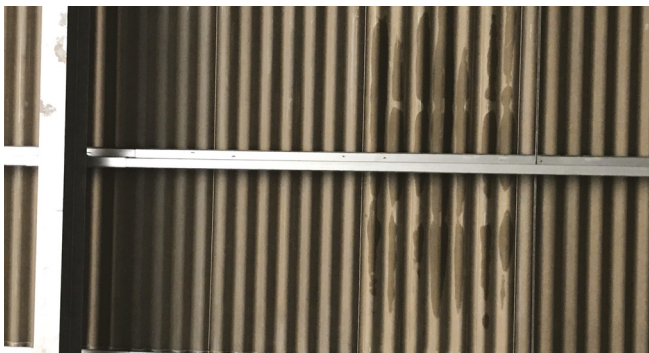
EUROSIX fibre cement sheeting is produced to the highest of standards in accordance to BS EN 494 with an expected lifespan of 50 years and guaranteed for 30 years.

When the sheeting has been installed, it is possible that 'damp patches' may appear on the underside of the sheet - particularly on low pitch applications. The phenomenon is known to occur when the dew point has been met. The fibre cement is working as it should because the sheeting has absorbed condensation. This can be reduced by providing the structure with adequate ventilation.

BS EN 494 TESTING STANDARDS

As part of the BS EN 494 testing standards (section 7.3.3), impermeability tests involve sealing a frame to the top surface of the fibre cement sheet and filling it with water to a depth of 60 mm for 24 hours. Occasionally, damp patches may appear on the underside, but no drips will form, ensuring our EUROSIX fibre cement sheets meet the BS EN 494 standard. The standard states: "when tested in accordance with 7.3.3, traces of moisture may appear on the under surface of the sheets."

When atmospheric conditions and air temperature are below the dew point (e.g., freezing rainstorms or winter nights), most moisture is absorbed into the fibre cement. If moisture levels are higher than normal, condensation may drip from the underside of the sheet.



DEW POINT

Dew point is the temperature at which water vapour condenses into liquid at a given humidity level. In simpler terms, it's determined by the amount of water vapour in the air and the air temperature.

Imagine a cattle shed at 9am on a dry day with an outside temperature of 12°C and 80% humidity—the dew point is 9.6°C. The previous day had heavy rain and a nighttime low of 3°C. Overnight, the sheets absorbed 25% of their dry weight in moisture, which hasn't evaporated. Inside, the temperature is 9.6°C with 100% humidity, reaching the dew point. The sheets and air are fully saturated, causing moisture to condense on the coldest parts of the building, like galvanised zed purlins and steel frames. Concrete walls may also feel wet. As the day warms up, humidity decreases, lowering the dew point. The air absorbs moisture from the building and the fibre cement sheets, making damp patches disappear.

IMPORTANT PRODUCT INFORMATION

All buildings require efficient ventilation, especially Grain Stores, Stables & Equestrian Buildings along with all Livestock buildings.

All fibre cement sheeting is vapour permeable and expected to absorb and retain a certain amount of moisture which reduces the chances of condensation forming, but fresh airflow and efficient ventilation is required in any building to allow this moisture to disperse. If insufficient airflow is seen in any building then all fibre cement sheets will absorb moisture and it will stay within the laminations and be seen as dark or even damp patches.

Common causes of damp seen in fibre cement sheeting.

- Minimal ventilation or airflow
- Incorrect laps and mitre details
- Long slopes or shallow pitch roofs
- Poor storage of sheets prior to fixing
- New concrete floor laid under sheets
- Moisture retained within the sheets before fixed
- Moisture content within the building

Fixings, mitres and other details that involve penetrations through the fibre cement must be closely thought about. If the gaps around the penetrations are not sealed correctly, then the internal air is able to quickly rise through the fibre cement sheet. If buildings in or being classed as situated in, moderate to severe exposure zones; this may lead to significant build-up of condensation around the penetrated areas.

Wind-driven rain and capillary action will draw moisture into endlaps and exposed sidelaps if not correctly sealed for the buildings position.

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