Concrete cracks: identify and assess

Appearance alone does not establish the cause or structural significance.

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1 Early-age cracking

Plastic shrinkage and settlement can occur before hardening. Review placement, evaporation, compaction and curing records.

2 Later-age movement

Drying, temperature changes and restraint can create cracking after hardening.

3 Loading and support

Structural loading or support movement needs engineering assessment. Do not classify solely from crack direction.

4 Corrosion and deterioration

Rust staining, delamination or spalling may indicate reinforcement problems or other deterioration.

5 Record the evidence

Map position, length and width; note change over time, exposure, leakage and associated distortion.

6 Choose a repair after diagnosis

Specify repair for the cause, activity and required performance. There is no single safe crack-width limit for every structure.

Restrict access and seek prompt engineering advice where distress, instability or falling concrete is suspected.

REFERENCE GUIDANCE

ACI: causes and evaluation of concrete cracking
Concrete Society: repair selection

Use current product instructions and the approved project design. For regulations, confirm the UK nation, applicable edition and transitional arrangements.

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