



Counting the Cost of Concrete Cube Failure

Concrete cube failure costs contractors a phenomenal amount of money every year. It can be shown that with a large proportion of cube



test failures, some deviation from BS:EN12390 has occurred in the on-site sampling, compaction and curing procedures. Our trained technicians, who can be mobilised at short notice to visit sites, will carry out the sampling and making of concrete test cubes, which are cured and tested in strict accordance with BS:EN12390 at our UKAS accredited laboratory.

Cube failure costs money due to losses:

- Caused by delay;
- Due to penalties imposed by promoters under the terms of contract;
- Due to extra costs incurred by further investigation upon cube test failure;
- Due to costs incurred through litigation;
- Due to costs incurred through the possible removal and replacement of defective concrete.



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quality testing



How can we help?

Did You Know?

Full compaction of a test cube is vital: For each 1% loss of compaction, 5-10% of potential strength is lost.

Correct and early curing is critical: As much as 50% of a 7 day strength and 10% of 28 day strength may be lost by incorrect procedure.

Concrete Cubes cured at 4°C will only achieve 75% of the correctly cured 28 day equivalent.

Wet Concrete: If samples are taken from collapse slump concrete, the additional water content over 50mm slump can cause a loss in strength proportional to 30% voids, where as its effect upon density is to cause a reduction of only 1.7%.

Damage to Cubes: Loss in strength due to physical damage can be quite substantial and is dependent on the nature and degree of damage. Losses of up to 20% are not unusual for apparent minimal damage.

Shape: Misshapen cubes are the result of distorted or incorrect cube moulds, failure to tighten bolts etc, and can only result in a strength of loss of up to 15%.



Other Services:

As an inspection, testing and investigation company with over 35 years of service to the construction, civil engineering, environmental and associated industries, Kiwa CMT Testing provides our clients with a comprehensive scope of laboratory and site testing and investigative operations, under the following headings:

- Contaminated Land
- Offsite Disposal
- Chemical Analysis
- Concrete & Mortar
- Building Products
- Geotechnical Investigations
- Lighting Column Testing
- Structural Investigations
- Sports Stadia Barrier Testing

We provide key on-site and off-site investigative, consultative and testing services. For our clients we are 'The Obvious Choice'.

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How to contact us

Please call us on +44 (0)1332 383333 or email: cmtenquiries@kiwa.co.uk and we will get straight back to you. Why? Because we like to help.

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