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Aggregates for concrete — Test methods for mechanical and physical properties —

Part 3: Determination of aggregate crushing value (*ACV*)

Granulats pour béton — Méthodes d'essai relatives aux propriétés mécaniques et physiques —

Partie 3: Partie 3: Détermination de la valeur de concassage des granulats (ACV)

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 71, *Concrete, reinforced concrete and pre-stressed concrete*, Subcommittee SC 1, *Test methods for concrete*.

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Aggregates for concrete — Test methods for mechanical and physical properties —

Part 3: Determination of aggregate crushing value (ACV)

1 Scope

This document gives the determination of aggregate crushing value (*ACV*) of aggregates. This gives a relative measure of the resistance of the aggregate crushing under the gradually applied compressive load.

The method is applicable to aggregates passing a 14,0 mm test sieve and retained on a 10,0 mm test sieve. For other size fractions, a recommended method is described in Annex A. The aggregate size fraction taken for this test can also be as per the relevant national standards.

NOTE Minor variations in grading divisions can be allowed in respective national standards.

The method is not suitable for testing aggregates with an aggregate crushing value higher than 30. In such cases, the method described in ISO 20290-4 is applicable.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 565, *Test sieves — Metal wire cloth, perforated metal plate and electroformed sheet — Nominal sizes of openings*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
aggregate crushing value
ACV
percentage to the first decimal place, of the mass of fines formed to the total mass of the test specimen

4 Principle

A test sample of aggregates is compacted in a specified manner into a steel cylinder fitted with a freely moving plunger. The sample is then subjected to a standard loading regime applied through the plunger. This action crushes the aggregate to a degree which is dependent on the crushing resistance of the material, which is assessed by a sieving test on the crushed specimen and is taken as a measure of the *ACV*.

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