



MALAYSIAN STANDARD

MS EN 206:2016

**Concrete - Specification, performance,
production and conformity
(Third revision)**

ICS: 91.100.30

Descriptors: concrete, specification, delivery, production, conformity

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Committee representation

The Industry Standards Committee on Building, Construction and Civil Engineering (ISC D) under whose authority this Malaysian Standard was adopted, comprises representatives from the following organisations:

Association of Consulting Engineers Malaysia
 Construction Industry Development Board Malaysia
 Department of Irrigation and Drainage Malaysia
 Department of Standards Malaysia
 Dewan Bandaraya Kuala Lumpur
 Federation of Malaysian Manufacturers
 Jabatan Bomba dan Penyelamat Malaysia
 Jabatan Kerajaan Tempatan
 Jabatan Kerja Raya Malaysia
 Malaysian Plastics Manufacturers Association
 Malaysian Timber Council
 Malaysian Timber Industry Board
 Master Builders Association Malaysia
 Pertubuhan Akitek Malaysia
 Pertubuhan Perancang Malaysia
 Projek Lebuhraya Utara-Selatan Berhad
 Real Estate and Housing Developers' Association Malaysia
 SIRIM Berhad (Secretariat)
 Suruhanjaya Perkhidmatan Air Negara
 The Cement and Concrete Association of Malaysia
 The Institution of Engineers, Malaysia
 Universiti Sains Malaysia
 Universiti Teknologi Malaysia

The Technical Committee on Concrete and Concrete Products which recommended the adoption of the EN Standard as Malaysian Standard consists of representatives from the following organisations:

Association of Consulting Engineers Malaysia
 Construction Industry Development Board Malaysia
 Department of Irrigation and Drainage Malaysia
 IKRAM QA Services Sdn Bhd
 Jabatan Kerja Raya Malaysia
 Jabatan Kerja Raya Malaysia (Cawangan Pangkalan Udara dan Maritim)
 Master Builders Association Malaysia
 National Ready Mixed Concrete Association
 Pertubuhan Akitek Malaysia
 SIRIM Berhad (Secretariat)
 SIRIM QAS International Sdn Bhd (Product Certification and Inspection Department)
 SIRIM QAS International Sdn Bhd (Testing Services Department)
 The Cement and Concrete Association of Malaysia
 The Institution of Engineers, Malaysia
 Universiti Teknologi Malaysia
 Universiti Teknologi MARA

Co-opted member:

IQRAMXPRT Sdn Bhd

National foreword

The adoption of the EN Standard as a Malaysian Standard was recommended by the Technical Committee on Concrete and Concrete Products under the authority of the Industry Standards Committee on Building, Construction and Civil Engineering.

This Malaysian Standard is identical with EN 206:2013, *Concrete - Specification, performance, production and conformity*, published by the European Committee for Standardization (CEN). However, for the purposes of this Malaysian Standard, the following apply:

- a) in the source text, "this European Standard" should read "this Malaysian Standard"; and
- b) the comma which is used as a decimal sign (if any), to read as a point.
- c) reference to European/International Standards should be replaced by equivalent Malaysian Standards as follows:

<u>Referenced European/International Standards</u>	<u>Corresponding Malaysian Standards</u>
ISO 2859-1, <i>Sampling procedures for inspection by attributes - Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection</i>	MS ISO 2859-1:2001, <i>Sampling procedures for inspection by attributes - Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection (ISO 2859-1 : 1999, IDT)</i>
ISO 3951-1, <i>Sampling procedures for inspection by variables - Part 1: Specification for single sampling plans indexed by acceptance quality limit (AQL) for lot-by-lot inspection for a single quality characteristic and a single AQL</i>	MS ISO 3951-1:2007, <i>Sampling procedures for inspection by variables - Part 1: Specification for single sampling plans indexed by acceptance quality limit (AQL) for lot-by-lot inspection for a single quality characteristic and a single AQL (First revision) (ISO 3951-1:2005, IDT)</i>
ISO 9001, <i>Quality management systems - Requirements</i>	MS ISO 9001:2015, <i>Quality management systems - Requirements (Second revision) (ISO 9001:2015, IDT)</i>
EN 196-2, <i>Methods of testing cement - Part 2: Chemical analysis of cement</i>	MS EN 196-2: 2007, <i>Methods of testing cement - Part 2: Chemical analysis of cement</i>
EN 197-1, <i>Cement - Part 1- Compositions, specifications and conformity criteria for common cement</i>	MS EN 197-1:2014, <i>Cement - Part 1- Compositions, specifications and conformity criteria for common cement (First revision)</i>
EN 450-1, <i>Fly ash for concrete - Part 1: Definition, specifications and conformity criteria</i>	MS EN 450-1:2014, <i>Fly ash for concrete - Part 1: Definition, specifications and conformity criteria (First revision)</i>

National foreword (continued)

<u>Referenced European/International Standards</u>	<u>Corresponding Malaysian Standards</u>
EN 934-1, <i>Admixtures for concrete, mortar and grout - Part 1: Common requirements</i>	MS EN 934-1:2012, <i>Admixtures for concrete, mortar and grout - Part 1: Common requirements (First revision)</i>
EN 934-2, <i>Admixtures for concrete, mortar and grout - Part 2: Concrete admixtures - Definitions, requirements, conformity, marking and labelling</i>	MS EN 934-2:2012, <i>Admixtures for concrete, mortar and grout - Part 2: Concrete admixtures - Definitions, requirements, conformity, marking and labelling (First revision)</i>
EN 1008, <i>Mixing water for concrete - Specification for sampling, testing and assessing the suitability of water, including water recovered from processes in the concrete industry, as mixing water for concrete</i>	MS EN 1008:2010, <i>Mixing water for concrete - Specification for sampling, testing and assessing the suitability of water, including water recovered from processes in the concrete industry, as mixing water for concrete (Second revision)</i>
EN 1097-3, <i>Tests for mechanical and physical properties of aggregates - Part 3: Determination of loose bulk density and voids</i>	MS EN 1097-3:2011, <i>Tests for mechanical and physical properties of aggregates - Part 3: Determination of loose bulk density and voids</i>
EN 1097-6, <i>Tests for mechanical and physical properties of aggregates - Part 6: Determination of particle density and water absorption</i>	MS EN 1097-6:2011, <i>Tests for mechanical and physical properties of aggregates - Part 6: Determination of particle density and water absorption</i>
EN 12350-1, <i>Testing fresh concrete - Part 1: Sampling</i>	MS 26-1-1:2009, <i>Testing of concrete - Part 1: Fresh concrete - Section 1: Sampling (Second revision)</i>
EN 12350-2, <i>Testing fresh concrete - Part 2: Slump-test</i>	MS 26-1-2:2009, <i>Testing of concrete - Part 1: Fresh concrete - Section 2: Slump test (Second revision)</i>
EN 12350-4, <i>Testing fresh concrete - Part 4: Degree of compactability</i>	MS 26-1-4:2009, <i>Testing of concrete - Part 1: Fresh concrete - Section 4: Degree of compactability (Second revision)</i>
EN 12350-5, <i>Testing fresh concrete - Part 5: Flow table test</i>	MS 26-1-5:2009, <i>Testing of concrete - Part 1: Fresh concrete - Section 5: Flow table test (Second revision)</i>
EN 12350-6, <i>Testing fresh concrete - Part 6: Density</i>	MS 26-1-6:2009, <i>Testing of concrete - Part 1: Fresh concrete - Section 6: Density (Second revision)</i>

National foreword (continued)

<u>Referenced European/International Standards</u>	<u>Corresponding Malaysian Standards</u>
EN 12350-7, <i>Testing fresh concrete - Part 7: Air content - Pressure methods</i>	MS 26-1-7:2009, <i>Testing of concrete - Part 1: Fresh concrete - Section 7: Air-content - Pressure methods (Second revision)</i>
EN 12350-8, <i>Testing fresh concrete - Part 8: Air content - Self-compacting concrete - Slump-flow test</i>	MS 26-1-8:2010, <i>Testing of concrete - Part 1: Fresh concrete - Section 8: Compacting factor test (Second revision)</i>
EN 12390-1, <i>Testing hardened concrete - Part 1: Shape, dimensions and other requirements for specimens and moulds</i>	MS EN 12390-1:2012, <i>Testing hardened concrete - Part 1: Shape, dimensions and other requirements for specimens and moulds (Second Revision)</i>
EN 12390-2, <i>Testing hardened concrete - Part 2: Making and curing specimens for strength tests</i>	MS EN 12390-2:2012, <i>Testing hardened concrete - Part 2: Making and curing specimens for strength tests</i>
EN 12390-3, <i>Testing hardened concrete - Part 3: Compressive strength of test specimens</i>	MS EN 12390-3:2012, <i>Testing hardened concrete - Part 3: Compressive strength of test specimens</i>
EN 12390-5, <i>Testing hardened concrete - Part 5: Flexural strength of test specimens</i>	MS EN 12390-5:2012, <i>Testing hardened concrete - Part 5: Flexural strength of test specimens (Second revision)</i>
EN 12390-6, <i>Testing hardened concrete - Part 6: Tensile splitting strength of test specimens</i>	MS EN 12390-6:2012, <i>Testing hardened concrete - Part 6: Tensile splitting strength of test specimens</i>
EN 12390-7, <i>Testing hardened concrete - Part 7: Density of hardened concrete</i>	MS EN 12390-7:2012, <i>Testing hardened concrete - Part 7: Density of hardened concrete</i>
EN 12390-8, <i>Testing hardened concrete - Part 8: Depth of penetration of water under pressure</i>	MS EN 12390-8:2012, <i>Testing hardened concrete - Part 8: Depth of penetration of water under pressure (Second revision)</i>
EN 12504-1, <i>Testing concrete in structures - Part 1: Cored specimens - Taking, examining and testing in compression</i>	MS EN 12504-1:2013, <i>Testing concrete in structures - Part 1: Cored specimens - Taking, examining and testing in compression (Second revision)</i>
EN 12504-2, <i>Testing concrete in structures - Part 2: Non-destructive testing Determination of rebound number</i>	MS EN 12504-2:2013, <i>Testing concrete in structures - Part 2: Non-destructive testing - Determination of rebound number (Second revision)</i>

National foreword *(concluded)*

<u>Referenced European/International Standards</u>	<u>Corresponding Malaysian Standards</u>
EN 12504-4, <i>Testing concrete in structures - Part 4: Determination of ultrasonic pulse velocity</i>	MS EN 12504-4:2013, <i>Testing concrete in structures - Part 4: Determination of ultrasonic pulse velocity (Second revision)</i>
EN 12620, <i>Aggregates for concrete</i>	MS EN 12620:2010, <i>Aggregates for concrete (Second revision)</i>
EN 13791, <i>Assessment of in-situ compressive strength in structures and precast concrete components</i>	MS EN 13791:2014, <i>Assessment of in-situ compressive strength in structures and precast concrete components</i>
EN 15167-1, <i>Ground granulated blast furnace slag for use in concrete, mortar and grout - Part 1: Definitions, specifications and conformity criteria</i>	MS EN 15167-1:2010, <i>Ground granulated blast furnace slag for use in concrete, mortar and grout - Part 1: Definitions, specifications and conformity criteria</i>
EN 1992-1-1, <i>Eurocode 2: Design of concrete structures - Part 1-1: General rules and rules for buildings</i>	MS EN 1992-1-1:2010, <i>Eurocode 2: Design of concrete structures - Part 1-1: General rules and rules for buildings</i>

This Malaysian Standard cancels and replaces MS 523-1:2005, *Concrete - Part 1: Specification, performance, production and conformity (Second revision)*.

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