
Concrete –

**Part 1:
Methods for specifying and guidance for
the specifier**

ICS 91.100.30



Mauritius Standards Bureau
Moka

Gr 11

National foreword

This Mauritian Standard is identical with the International Standard **ISO 22965-1:2007**, *Methods of specifying and guidance for the specifier*. It was adopted by the Mauritius Standards Bureau in 2010 on the recommendation of the **Building and Construction Standards Committee** through its **Subcommittee on Concrete** and approved by the **Standards Council** on 1 September 2010. It was notified in the Government Gazette on 25 September 2010*.

For the purposes of this standard the following changes should be made:

- (i) the words 'International Standard' should be replaced by 'Mauritian Standard';
- (ii) the 'decimal comma' should be replaced by 'decimal point';
- (iii) a national informative annex NA has been included giving guidance to users.

The following Mauritian Standard is identical to the International Standard, which is referenced in the adopted standard:

International Standard	Corresponding Mauritian Standard
ISO 22965-2	MS ISO 22965-2, <i>Concrete – Part 2 Specification of constituent materials, production of concrete and compliance of concrete</i>

* General Notice No 1844 of 2010



COPYRIGHT PROTECTED DOCUMENT

© MSB 2010

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Mauritius Standards Bureau at the address below

Mauritius Standards Bureau
Villa Road
Moka
Mauritius

Telephone + (230) 433 3648
Fax + (230) 433 5051/ 433 5150
E-mail msb@intnet.mu
Website <http://msb.intnet.mu>

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 Symbols and abbreviated terms	5
5 Specification of concrete	6
6 Exchange of information	10
Annex A (informative) Guidance for the specifier of exposure classes, consistence classes and strength classes	12
Annex B (informative) Performance-related design methods with respect to durability	17
Annex C (normative) Identity testing for compressive strength	19
Annex D (informative) Guidance on the national annex	21
Bibliography	22

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 22965-1 was prepared by Technical Committee ISO/TC 71, *Concrete, reinforced concrete and pre-stressed concrete*, Subcommittee SC 3, *Concrete production and execution of concrete structures*.

ISO 22965 consists of the following parts, under the general title *Concrete*:

- *Part 1: Methods of specifying and guidance for the specifier*
- *Part 2: Specification of constituent materials, production of concrete and compliance of concrete*

Introduction

This International Standard is intended for nations that have no national concrete standard and it sets out a framework of principles for nations revising their national standards. To be operable, this International Standard needs a national annex or a reference to the national complementary provisions. This International Standard can also be applied on specific projects where a project specification supplements the standards in lieu of a national annex applicable at the place of use.

This International Standard is applied under various climatic and geographical conditions, various levels of protection and under different established regional traditions and experience. Consequently, this International Standard includes classes for concrete with different properties to cover the most frequent and normal situations. For certain uses of concrete, additional or deviating rules can be necessary. The national provisions, preferably given in a national annex to this International Standard, or the project specification can specify any additional or deviating requirements.

During the development of this International Standard, consideration was given to detailing a performance-related approach to the specification of durability. It was concluded that such an approach is not yet sufficiently developed to be detailed in an International Standard. ISO/TC 71/SC 3 recognizes that some ISO member bodies have developed local tests and criteria for performance-based specifications. This International Standard does not exclude the continuation and development of such practices valid in the place of use of the concrete as an alternative to the prescriptive approach. It is necessary that these requirements be specified in the national annex or national complementary provisions. The Model Code for Service Limit Design (MC-SLD), which was published by *fib* in 2006, is a promising basis for implementation as future International Standards from ISO/TC 71; see Annex B.

This International Standard incorporates rules for the use of constituent materials that are covered by International Standards. For materials for which International Standards have not yet been published, the standards cited in the national annex (often the regional or national standards) apply; see 5.1. In particular, documents in current use for by-products of industrial processes, recycled materials, etc. are based on local experience. Until international specifications for these materials are available, this International Standard does not provide rules for their use, but instead refers to the national annex.

This International Standard defines the two parties involved in the ordering and the supply of concrete, which are hereinafter referred to as specifier and supplier. In practice, there can be several parties specifying requirements at various stages of the design and construction process, e.g. the client, the designer, the quantity surveyor, the constructor and the concreting subcontractor. Each is expected to pass the specified requirements, together with any additional requirements, to the next party in the chain until they reach the supplier. In the terms of this International Standard, this final compilation of requirements is known as the “concrete specification”. In some cases, the specifier and the supplier is the same party (e.g. a constructor doing design, production and execution). In the case of ready-mixed concrete, the purchaser is the specifier.

This part of ISO 22965 also gives rules for the exchange of information between the parties. Contractual matters are not addressed.

This International Standard is intended for use with ISO 22965-2 and with the future ISO 22966, currently under development, which will give the requirements associated with the level of quality specified and the methods to be employed for the execution of concrete structures.

PREVIEW

Concrete —

Part 1: Methods of specifying and guidance for the specifier

1 Scope

This part of ISO 22965 applies to concrete for structures cast *in situ*, pre-cast structures and structural pre-cast products for buildings and civil engineering structures. The concrete can be mixed on site, ready-mixed concrete or produced in a plant for pre-cast concrete products.

This part of ISO 22965 applies to concrete compacted to retain no appreciable amount of entrapped air other than entrained air and to normal-weight, heavy-weight and light-weight concrete.

Other International Standards for specific products, e.g. pre-cast products, or for processes within the field of the scope of this part of ISO 22965, can require or permit deviations from this part of ISO 22965.

This part of ISO 22965 contains requirements for the specification of concrete and guidance for the exchange of information between the specifier and supplier. An informative annex gives general guidance on specification. More specific guidance on specification related to the local conditions can be given in a national annex.

This part of ISO 22965 does not apply to

- concrete with a maximum aggregate size equal to or less than 4 mm or 5 mm (mortar),
- aerated concrete,
- foamed concrete,
- concrete with an open structure ("no-fine aggregate" concrete),
- concrete with a density less than 800 kg/m³,
- refractory concrete.

This part of ISO 22965 does not cover health and safety requirements for the protection of workers during production and delivery of concrete.

2 Normative references

The following referenced documents are indispensable for the application 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 1920-1, *Testing of concrete — Part 1: Sampling of fresh concrete*

ISO 1920-3, *Testing of concrete — Part 3: Making and curing test specimens*