



**BUILDING AND CONSTRUCTION
MATERIALS — SPECIFICATION FOR
BLOCKS**

**PART 1:
PRECAST SANDCRETE BLOCKS**

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DATE OF PUBLICATION

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THE GAMBIA STANDARDS BUREAU

The Gambia Standards Bureau is a statutory Government specialized Agency established by The Gambia Standards Bureau Act 2010 to standardize products, methods, systems and for connected matters. Hence, the Bureau is the sole National Standardization Body. As such, it has been a member of International Standardization Bodies such as the International Organization for Standardization (ISO) since 2011, International Electrotechnical Commission (IEC) and the Standards and Metrology Institute for Islamic Countries (SMIIC) from 2012.

The objectives of the Bureau, as specified in its Act, are to: establish and promulgate standards for imported and locally-produced goods; facilitate domestic and international trade; foster and promote standards both for industrial efficiency and advancing economic development; promote the health and safety of consumers; enhance international cooperation in relation to standards and standardization. Thus, the National Quality Policy details the responsibilities of the Bureau in Standardization, Metrology and Conformity Assessment services in Testing, Inspection and Certification.

Therefore, the functions, of the Bureau are to define, prepare, publish, modify or amend Standards Specifications as well information-dissemination of standards. In addition to providing Testing, Inspection and Certification services for goods, systems and processes independently or in relation to conformity with its Standards Mark, the Bureau also conducts training and research. In Metrology, the Bureau serves as the custodian of primary national reference measurement standards through its National Metrology Laboratories and conducts calibration of measurement devices and physical standards.

The development of Gambian Standards (GAMS) is carried out by the Bureau through Technical Committees composed of a balanced representation of stakeholders, as may be appropriate to the subject in question. The Bureau ensures that Standards are developed in accordance with the *ISO/IEC Guide 21-1:2005: Regional or National adoption of International Standards and other International deliverables* and the *World Trade Organization Code of good practice for the preparation, adoption and application of standards*. To the greatest extent possible, Gambian Standards are aligned to or are adoptions of relevant international standards.

For further information on and copies of Gambian Standards, please contact The Gambia Standards Bureau.

TECHNICAL COMMITTEE RESPONSIBLE: BUILDING AND CONSTRUCTION MATERIALS COMMITTEE

The Building and construction materials Committee developed this Standard Specification for **Blocks —Part 1- Precast Sandcrete Blocks**.The Committee was set up by Bureau in 2016 to work on the development of national standards in the building and civil engineering field.

The BCM consists of representatives from the following Institutions/Organizations:

- Ministry of Transport, Works and Infrastructure
- National Road Authority
- Department of Physical Planning
- Association of Gambian construction Contractors (GACCON)
- University of the Gambia
- Gambia Technical Training Institute
- Insight Training Institute
- GACEM
- Social Security and Housing Finance Cooperation
- GAMWORKS
- Association Real Estates Companies
- Gambia Fire and Rescue Services
- Jah Oil Company
- Salam Cement Company
- Gambia Competition and Consumer Protection Commission
- ABSA Consultancy
- Finish Profiles the Gambia

The Gambia Standards Bureau is the Secretary to the Building and Construction Materials Technical Committee.

Foreword

The Gambia Standards Bureau is the National Statutory Body responsible for the development and promulgation of Gambia Standards.

The Gambia Standards Bureau is a member of the African Organization for Standardization (ARSO) and the International Organization for Standardization (ISO). Ghana is an affiliate member of the International Electrotechnical Commission (IEC) of which the Ghana Standards Board holds the Secretariat. Ghana is also a member of the African Electrotechnical Standardization Commission (AFSEC).

This Gambia Standard is for precast sandcrete blocks. It lays down the essential requirements for specification, sampling and testing of sandcrete blocks.

The Gambia Standard GAMS 13: 2017 was reviewed by the Technical Committee GAMS/TC 11, Construction materials, building and civil engineering.

Annexes A and B form the normative part and Annexes C, D and E form the informative part of this Gambia Standard.

Users should note that this standard undergoes revision from time to time and any reference to it statutorily implies its latest edition

1. Scope

1.1 This Gambia Standard specifies requirements for dimensions, materials, marking, test methods and criteria for conformity for solid, hollow and cellular precast sandcrete blocks classified according to their characteristic compressive strengths and intended applications as follows:

Class A - For external use load-bearing wall,

Class B – For:

- (a) internal use load-bearing wall,
- (b) external use load bearing wall if protected in an effective manner.

Class C – For:

- (a) internal use non-load bearing wall,
- (b) external use non- load bearing wall,

1.2 *This standard does not address the safety concerns, if any, associated with the use of precast sandcrete blocks. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory requirements prior to use.*

2. Normative references

The following referenced documents are indispensable for the application of this document. For undated references, the latest edition of the referenced document (including any amendments) applies.

- 2.1 **GS 22** – Building and construction materials—Specification for ordinary and rapid hardening Portland cement
- 2.2 **GS 766** – Building and construction materials – Specification for Portland limestone cement
- 2.3 **GS 803** – Building and construction materials – Specification for Portland pozzolana cement calcined clay based
- 2.4 **GS 964** – Building and construction materials – Specification for calcined clay pozzolana
- 2.5 **ASTM C114** – Standard test methods for chemical analysis of hydraulic cement
- 2.6 **ASTM C136**– Standard test method for sieve analysis of fine and coarse aggregates
- 2.7 **ASTM C 40**– Standard test method for organic impurities in fine aggregates for concrete
- 2.8 **ASTM D 75** – Standard practice for sampling aggregates
- 2.9 **ASTM C 142** – Standard test method for clay lumps and friable particles in aggregates
- 2.10 **ASTM C 88** – Standard test method for soundness of aggregates by use of sodium sulphate or magnesium sulphate
- 2.11 **ASTM C 403/C 403M** – Standard test method for time of setting of concrete mixtures by penetration

- 2.12 ASTM C140** – Standard test methods for sampling and testing concrete masonry units and related units
- 2.13 ASTM C1603** – Standard test method for measurement of solids in water
- 2.14 ASTM C494 / C494M** – Standard specification for chemical admixtures for concrete
- 2.15 ASTM C979** – Standard specification for pigments for integrally colored concrete
- 2.16 ASTM C311** – Standard test methods for sampling and testing fly ash or natural pozzolans for use in Portland-cement concrete
- 2.17 ISO 6780:2003** – Flat pallets for intercontinental materials handling – Principal dimensions and tolerances