amalgamated precast

PRESTRESSED LINTEL SPECIFICATION
(INFORMATION USED FROM SABS STANDARD SANS 1504:2015)

1.1 SURFACE TEXTURE AND CONCRETE STRENGTH

1.1.1 Surface texture

The surface characteristics of a lintel intended for use with plaster or other types of surface finish shall be such that the surface will provide acceptable adhesion for the plaster or other finish.
The top surface of the lintel, which receives the mortar for the first course of masonry, shall be intentionally roughened to improve bonding. The minimum roughness shall be 3 mm, and shall not exceed 6 mm. The roughness undulations shall be orientated across the width of the lintel.

1.1.2 Concrete strength

The characteristic compression strength at 28 d shall be not less than 40 MPa, and the transfer fixed at 25 MPa.

1.2 DIMENSIONS

1.2.1 Length

A lintel shall be of nominal length 900 mm to 6 000 mm (in increments of 300 mm), as required.

1.2.2 Width and height

The width and height of a lintel shall be as required

1.2.3 Tolerances on dimensions of lintels

1	2
Dimensions	Tolerance (mm)
Length	+- 10
Width	+- 3
Height	+- 6

1.2.4 Cover to reinforcement

The thickness of cover over all the reinforcement shall be at least 15 mm.

1.2.5 Straightness

The deviation from straightness of a lintel shall not exceed 2 mm/m of length of the lintel.

1.2.6 Camber

The camber of a lintel shall not exceed 2 mm/m of length of the lintel.

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1.3 LOAD TESTING

1.3.1 All lintels shall be able to withstand a construction load
Determined using the following equation:

$$P = \frac{Y_i W L^3 b}{6l}$$

Where:

P is the applied test load, in kilonewton (kN)

Y_i is the partial factor for premanent self weight load, equal to 1,1

W the self-weight of the masonry, in kilonewton per cubic meter (kN/m^3)

L^3 is the unsupported effective length of the intel, or the distance between props, in meters (m)

b is the width of the lintel, in meters (m)

l is the span length of the test beams, equal to 0,8m

NOTE The total length of the test specimen should be 1,0m