IS 1077 : 1992

Common Burnt Clay Building Bricks - Specification

Ask about IS 1077… e.g. "min cover for severe exposure"

IS 1077:1992 is the Indian Standard (BIS) for common burnt clay building bricks - specification. This standard specifies the dimensions, quality, classification, and physical requirements (such as compressive strength, water absorption, and efflorescence) for common burnt clay building bricks. It is universally used by engineers and contractors for quality control of bricks on construction sites.

> *Specifies dimensions, quality, and physical requirements for common burnt clay building bricks.*

Quick Reference — Top IS 1077:1992 Values

Key values for brick classification, dimensional tolerances, strength, water absorption, efflorescence, and sampling criteria.

✓ Verified 2026-04-27

REFERENCE	VALUE	CLAUSE
Standard Brick Size	**190 x 90 x 90 mm**	Cl. 7.1
Standard Thin Brick Size	**190 x 90 x 40 mm**	Cl. 7.1
Dim. Tolerance (Length of 20 bricks) — *On a total specified length of 3800 mm*	**±40 mm**	Cl. 7.2 (Table 1)
Dim. Tolerance (Width of 20 bricks) — *On a total specified width of 1800 mm*	**±20 mm**	Cl. 7.2 (Table 1)
Dim. Tolerance (Height of 20 bricks) — *For 90 mm high bricks; on a total specified height of 1800 mm*	**±20 mm**	Cl. 7.2 (Table 1)
Warpage (Max Concavity / Convexity)	**3 mm**	Cl. 7.3
Frog Depth (Max)	**20 mm**	Cl. 7.4

REFERENCE	VALUE	CLAUSE
Compressive Strength Class Range *— Value indicates min. average strength in N/mm² (MPa)*	**3.5 to 35**	Cl. 4.1 (Table 2)
Min. Avg. Compressive Strength (Class 10)	**10.0 N/mm²**	Cl. 8.1 (Table 2)
Min. Avg. Compressive Strength (Class 7.5)	**7.5 N/mm²**	Cl. 8.1 (Table 2)
Min. Avg. Compressive Strength (Class 5)	**5.0 N/mm²**	Cl. 8.1 (Table 2)
Individual Brick Strength Limit *— Strength of any brick shall not be < 80% of the class average*	**≥ (0.80 x Class Avg. Strength)**	Cl. 8.1.1 (Amd. 4)
Max Water Absorption (Class ≤ 12.5) *— After 24-hour cold water immersion*	**20 % by mass**	Cl. 8.2
Max Water Absorption (Class > 12.5) *— After 24-hour cold water immersion*	**15 % by mass**	Cl. 8.2
Max Efflorescence (Class ≤ 12.5) *— Deposit covers >10% but ≤50% of brick face area*	**Moderate**	Cl. 8.3.2
Max Efflorescence (Class > 12.5) *— Deposit covers ≤10% of brick face area*	**Slight**	Cl. 8.3.2
Lime Blowing Check *— After immersion in water for 24 h*	**No signs of disintegration**	Cl. 6.1.1
Sample Size (Lot: 2,001-10,000)	**10 bricks**	Cl. 9.2.1 (Table 3)
Sample Size (Lot: 10,001-35,000)	**15 bricks**	Cl. 9.2.1 (Table 3)
Sample Size (Lot: 35,001-50,000)	**20 bricks**	Cl. 9.2.1 (Table 3)

⚠ Verify against the latest BIS/IRC publication and project specifications. Amendment Slips may modify values.