

# Structural Requirements

## Steel Structures

- Minimum yield strength: 345 MPa
- Fire resistance rating: 2 hours minimum for residential buildings
- Corrosion protection: Galvanized coating of 550 g/m<sup>2</sup>
- Connection requirements: Grade 8.8 bolts minimum

## Concrete Structures

- 28-day compressive strength: 30 MPa (residential), 40 MPa (commercial)
- Maximum water-cement ratio: 0.45
- Reinforcement cover: 40 mm minimum for exterior elements
- Curing period: Minimum 7 days at 20°C

# Fire Safety Regulations

## General Requirements

- Emergency exits: 1 per 200 m<sup>2</sup> of floor area
- Fire extinguishers: Type ABC every 30 meters
- Smoke detectors: Required in all habitable rooms

## Material Fire Ratings

Material	Fire Rating	Application
Gypsum Board	1 hour	Interior partitions
Sprayed Cement	2 hours	Structural elements
Fire-Rated Glass	90 minutes	Emergency exits

## Material Standards

# Steel Beams

Standard sizes: HE100A to HE1000M

Tolerances: ±2mm on web thickness

Testing: Third-party certification required

# Concrete Mix

Grade	Cement (kg/m³)	Water (L/m³)	Aggregates (kg/m³)
C30	380	190	1850
C40	450	180	1820