

Fire Resistance Checklist for Building Construction (Australia)

1. Residential Buildings (Class 1 & 2)

- **Exterior Walls:**
 - **Class 1 (Single Dwellings):** Typically, there are no specific fire resistance requirements for exterior walls, but bushfire-prone areas must comply with AS 3959.
 - **Class 2 (Apartments):** 60 minutes fire resistance rating for walls less than 1.5 meters from the boundary.
- **Interior Walls:**
 - **Class 1:** 60 minutes for walls separating a dwelling from a garage.
 - **Class 2:** 60 minutes for walls separating units.
- **Floor/Ceiling Assemblies:**
 - **Class 2:** 60 minutes fire resistance rating between units.
- **Doors:**
 - **Class 2:** 30 minutes fire resistance rating for doors leading to common corridors.

2. Commercial Buildings (Class 5, 6 & 7)

- **Exterior Walls:**
 - **Class 5 (Offices), Class 6 (Retail), and Class 7 (Storage):** 120 minutes fire resistance rating depending on proximity to the property boundary.
- **Interior Partitions:**
 - **Class 5 & 6:** 60 minutes fire resistance rating for walls separating different tenancies.
- **Structural Elements:**
 - **Class 5, 6 & 7:** 120 minutes fire resistance rating for columns, beams, and girders.
- **Floor/Ceiling Assemblies:**
 - **Class 5 & 6:** 120 minutes fire resistance rating between different floors.
- **Doors:**
 - **Class 5 & 6:** 120 minutes fire resistance rating for stairwell and exit doors.

3. Industrial Buildings (Class 8)

- **Exterior Walls:**
 - **Class 8 (Factories):** 120 minutes fire resistance rating for walls near property boundaries.
- **Interior Walls:**
 - **Class 8:** 120 minutes fire resistance rating for walls separating different fire areas.
- **Structural Elements:**
 - **Class 8:** 180 minutes fire resistance rating for primary structural frame elements.
- **Floor/Ceiling Assemblies:**
 - **Class 8:** 180 minutes fire resistance rating for areas storing hazardous materials.
- **Doors:**
 - **Class 8:** 120 minutes fire resistance rating for fire barriers.

4. Public Buildings (Class 9)

- **Exterior Walls:**
 - **Class 9 (Public Buildings, e.g., Schools, Hospitals):** 120 minutes fire resistance rating depending on the building height and use.
- **Interior Walls:**
 - **Class 9:** 60 minutes fire resistance rating for corridor walls and walls separating different occupancies.
- **Structural Elements:**
 - **Class 9:** 180 minutes fire resistance rating for structural members.
- **Floor/Ceiling Assemblies:**

- **Class 9:** 180 minutes fire resistance rating for separating different floors.
- **Doors:**
 - **Class 9:** 120 minutes fire resistance rating for doors in exit corridors and stairwells.

5. Mixed-Use Buildings (Class 2, 5, 6 & 7)

- **Exterior Walls:**
 - **Mixed-Use:** 120 minutes fire resistance rating depending on use and proximity to property line.
- **Interior Walls:**
 - **Mixed-Use:** 120 minutes fire resistance rating for walls separating different occupancies.
- **Structural Elements:**
 - **Mixed-Use:** 180 minutes fire resistance rating for primary structural frame elements.
- **Floor/Ceiling Assemblies:**
 - **Mixed-Use:** 180 minutes fire resistance rating for assemblies between different occupancies.
- **Doors:**
 - **Mixed-Use:** 60 minutes fire resistance rating for common areas; 30 minutes for residential unit doors.

6. High-Rise Buildings (Over 25 meters)

- **Exterior Walls:**
 - **High-Rise:** 120 minutes fire resistance rating.
- **Interior Walls:**
 - **High-Rise:** 60 minutes fire resistance rating for corridor walls.
- **Structural Elements:**
 - **High-Rise:** 180 minutes fire resistance rating for columns and girders.
- **Floor/Ceiling Assemblies:**
 - **High-Rise:** 180 minutes fire resistance rating for floors.
- **Doors:**
 - **High-Rise:** 120 minutes fire resistance rating for stairwell and exit doors.

Additional Considerations

- **Sprinkler Systems:** Buildings with automatic sprinkler systems may have reduced fire resistance requirements.
- **Fire Barriers:** Used to compartmentalise buildings and prevent the spread of fire.
- **Fire Dampers:** Installed in ducts to maintain the integrity of fire-resistance-rated walls and floors.
- **Firestopping:** Sealing of penetrations in fire-resistance-rated assemblies to prevent fire and smoke spread.

Notes

- Fire resistance ratings are typically measured in minutes (e.g., 60, 120, 180).
- Local building codes and regulations, including state variations, should be consulted.
- Refer to the latest version of the NCC/BCA for detailed and accurate requirements.
- Consultation with fire safety engineers and local authorities is essential for compliance.