



**ACT**  
Government



# FIRE ACTIVATED BOLTS IN FIRE RATED DOOR SETS

FIRE SAFETY GUIDELINE  
FSG – 25



JUSTICE AND COMMUNITY SAFETY DIRECTORATE  
ACT EMERGENCY SERVICES AGENCY  
ACT FIRE & RESCUE  
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*GLOSSARY OF TERMS*

Acronym / Term	Definition
<b>ACTF&amp;R</b>	ACT Fire & Rescue.
<b>NCC</b>	National Construction Code.
<b>SOU</b>	Sole Occupancy Unit.
<b>Fire Activated Bolt</b>	Fire activated bolts are a device used to secure a door leaf to the frame to maintain integrity of the door during fire conditions.
<b>C1P2</b>	NCC Performance Requirement – Spread of fire.
<b>D1P2</b>	NCC Performance Requirement – Safe movement to and within a building.
<b>Door set</b>	All parts of a door assembly, including the frame, leaf and door hardware.
<b>Fire Brigade Intervention</b>	Actions undertaken by the attending fire brigade for the purpose of protecting life and property within the building.

## 1. PURPOSE

This guideline has been developed by ACTF&R to provide advice regarding the use of fire activated bolts in fire rated door sets within buildings in the ACT.

## 2. INTENT

To ensure that fire rated door sets remain functional to allow for occupant egress and fire brigade intervention during a fire event.

## 3. APPLICATION

This guideline applies to all fire rated door sets which utilise fire activated bolts in the ACT.

## 4. BACKGROUND

Fire activated bolts are a device used to secure a door leaf to the frame to maintain integrity of the door set by preventing the door leaf from warping or twisting under fire conditions. Fire activated bolts activate when they reach a sufficient temperature. Activation can be triggered by a fusible disk, intumescent material, or by other means. The fire activated bolts can't be activated manually.

Fire activated bolts are used in some fire rated door sets to assist the door set in meeting the requirements of AS1530.4:2014 Methods for fire tests on building materials, components and structures, Part 4: Fire-resistance tests for elements of construction.

There is no specific requirement or standard dictating what temperature a fire activated bolt should operate at.

As such there is uncertainty as to what the activation time and temperature of the device is.

The activation temperature may vary based on the specific device used, the location within the door, the materials used in the rest of the door set etc.

This creates uncertainty as to whether the door will function correctly which can impact fire compartmentation, occupant egress and fire brigade intervention.

## 5. POLICY POSITION

It is the position of ACTF&R that fire rated door sets should remain functional during a fire incident to allow for occupant egress, fire brigade intervention and required fire separation.

Activation of a fire activated bolt prior or during occupant egress or fire brigade intervention may create a non-compliance to Performance Requirements C1P2 and D1P2 as occupant egress, fire brigade intervention, and fire separation could be impeded.

Compliance with AS 1530.4 does not guarantee compliance with Performance Requirement C1P2 or D1P2 if the fire activated bolt activates prematurely affecting the correct function of the fire rated door.

In determining compliance with C1P2 and D1P2 the certifier should note the following considerations in section 6 below. If the building contains performance-based design the appointed fire safety engineer is to consider the points in section 6 below when assessing compliance of the performance-based design.

## 6. CONSIDERATIONS

Consideration should be given to:

- The specific activation temperature of the fire activated bolt device used in the fire rated door set.
- The expected fire conditions at the time of activation. Will the localised area be survivable at the time of fire activated bolt activation? Will the temperature at the door at the time of fire activated bolt activation be such that the door would be rendered inoperable anyway regardless of the operation of the fire activated bolt.
- Whether the door forms part of a required egress pathway.
- Impact of an activation of the fire activated bolt on fire brigade intervention.
- Impact on compartmentation if the fire activated bolt device is to activate when the door is in the open position preventing the door from closing.
- Whether the specific door in question requires the fire activated bolt to meet the requirements of AS 1530.4:2014.

## 7. FURTHER CLARIFICATION

For further information or clarification please consult the original legislation and referenced documents or contact the ACTF&R Community Safety Section [ACTFRFireSafety@act.gov.au](mailto:ACTFRFireSafety@act.gov.au).

### *RELATED Forms AND DOCUMENTS*

#### Related legislation and documents

Building Act, 2004 (ACT)

Building Regulation, 2008 (ACT)

Emergency Act, 2004 (ACT)

Emergency Regulation, 2004 (ACT)

National Construction Code (NCC)

AS1530.4:2014 Methods for fire tests on building materials, components and structures, Part 4: Fire-resistance tests for elements of construction.



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