

## **PRESS RELEASE**

### **All fired up**

*We speak to Elouise Steyn, in-house architect for leading door and window manufacturer, Swartland, about the need for and regulation pertaining to fire doors.*

26 July 2019, Johannesburg: Fire doors are a crucial part of safety design in any building – they serve to separate the fire and the gasses from those trying to escape a blaze, and they limit the fire’s expansion, making it easier to control and extinguish. Says Elouise Steyn, in-house architect for leading door and window manufacturer, Swartland: “When a fire breaks out in a building, it can spread really fast. Fire doors have been designed to slow the spread of a fire, making it easier to combat, giving the occupants more time to escape, and limiting damage to the building.

“They are also a legal requirement in South Africa, and all buildings need to comply with the regulations as set out in the SANS 10400: Part T-Fire Protection Act. A few of the things laid out in these regulations is the fact that any occupants of a building should be protected, that the building must be able to maintain as much of its integrity as possible, and that the fire should not be able to spread to adjoining buildings. As such, cost-cutting and not installing the necessary fire doors could lead to jail time if a fire breaks out.”

### **How a fire door is rated**

A door’s class indicates how well it fares in the following three criteria:

- **Integrity:** The door’s overall ability to stand up against fire, and how much it moves out of the frame – no more than 25mm.
- **Stability:** How well the door itself holds up, and what gaps form on the door’s surface.
- **Insulation:** How well a door can keep the temperature of the fire at bay. The temperature on the unexposed side is measured for a tolerance of below 140°C.

### **Different fire doors classes**

The type of fire door largely depends on the size and function of the building in question. Obviously, the larger, more complex and inhabited a building is, the higher rated the fire door will need to be. Ideally, you want a door that won’t fail too fast, but you also don’t want to waste money on a door that is far too capable. Says Elouise: “You want to balance the right class of door for a specific building – the Fire Regulations provide rules on what class best suit various openings.” She explains that there are six different classes of fire doors to choose from – they are as follows:

**A Class A fire door** is a 1-hour door with a fire resistant core panel and the following ratings:

- Stability: 1 hour
- Integrity: 30 minutes
- Insulation: 30 minutes
- Impact test: none

**A Class B fire door** is a 2-hour door with a fire resistant core panel and the following ratings:

- Stability: 2 hour
- Integrity: 1 hour
- Insulation: 1 hour
- Impact test: none

They help fire from spreading through large chambers in a building, making them ideal for the likes of elevator shafts and stairwells.

**A Class C fire door** is a 2-hour fire door with the following ratings:

- Stability: 2 hour
- Integrity: 2 hour
- Insulation: none
- Impact test: none

These fire doors are most commonly used for room doors or door openings into corridors.

**A Class D fire door** is a 2-hour fire door with a fire resistant core that can withstand an impact test with a mass of 27kg without creating an opening wider than 25mm between the door and the frame:

- Stability: 2 hour
- Integrity: 2 hour
- Insulation: 2 hour
- Impact test: 27kg

These doors have been tested to withstand impacts such as flying debris from explosions and are typically used for external applications.

**A Class E fire door** is a solid door, with no fire resistant core panel, and the following ratings:

- Stability: 30 minutes
- Integrity: 30 minutes
- Insulation: 30 minutes
- Impact test: none

A common use for these fire doors is to provide access to fire escapes, and providing a fire barrier in residential homes between the garage and the rest of the home. Both of Swartland's fire doors are Class E-rated – and comprise internal fire doors, as well as Class 1-rated Full External classification doors, which means that this kind of door is resistant to fire, and it can withstand exposure to the elements and so can be installed outside.

**A Class F fire door** is a solid door, with no fire resistant core panel, and the following ratings:

- Stability: 30 minutes
- Integrity: 30 minutes
- Insulation: none
- Impact test: none

### **Other considerations**

When you purchase a fire door, you purchase just the door itself. However, it is imperative that all the components, without exception, be of a reliable standard that complies with the minimum requirements administered by the South African Bureau of Standards (SABS), says Elouise: “Everything from the fire door frame, to the associated hardware, such as hinges, locks and handles, must be fitted in accordance with the manufacturer’s specifications.”

The door frame is particularly important, notes Elouise: “You cannot fit a fire door into a normal door frame – to be compliant, a fire door needs to be fitted into a purpose-built fire-resistant door frame, which is sold separately to the actual door itself. Swartland for example, offers a 30-minute fire rated timber door frame - designed to complement its range of fire doors. This frame is also a 86mm x 67mm section, similar to Swartland’s Cape Culture frame, but it has a 25mm rebate – not the standard 12mm rebate. Alternatively a 1,6mm steel door frame must be used, also with a 25mm rebate.”

She also notes that in order for the fire door to work, it is important that it is kept closed when it is not in use: “The fire door can only help prevent the spread of fire if it is closed when the fire starts. Any fire door shall be fitted with a self-closing or automatic closing device in accordance with SANS 1253.”

For more information about Swartland’s fire doors, visit [www.swartland.co.za](http://www.swartland.co.za).

**ENDS**

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