

An introduction to glass standards



By [Robert Blackbeard](#)

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Just as your balustrades, staircases and pool enclosures need to comply with a variety of regulations and building codes, the glass that you use in your building projects or property developments need to comply with a variety of codes and regulations to ensure that the facility is safe for all that utilise it.



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When selecting the grade of glass to be used in your building project, it is crucial to consider what the facility will be used for before hand. As each type of facility has a variety of different applications, keeping this in mind will help ensure that the glass that is used is compliant and more importantly safe for all that use it.

If you consider the fact that freestanding glass in a shopping centre cannot be the same thickness as on a balcony inside a house, as it will be exposed to a far higher load on a daily basis. It is easy to realise that each application or classification of building will require a different standard or thickness of glass to accommodate the different loads and environments. If the glass used in your building project does not take this into account, the building inspector will not accept the quality of your project and will deem it unsafe for use.

The SANS building codes are any builder or contractor's bible and set out the standards and regulations that are required to be followed. The SANS building codes state: The loading code SANS 10160 has separated areas in buildings into four categories which can be broadly described as "stadiums", "other areas with crowding", "areas without crowding" and "industrial". Shopping areas have their own category within "areas with crowding".

Competent person must complete calculations

Imagine a shopping centre a couple of days before Christmas, a special draw for a car and crowds pushing against the balustrade overlooking an atrium. A line load, essentially a continuous load along the hand rail, is specified in the loading code (SANS 10160 Part 2 section 9.4.6) for this, which is three times higher than that used for a house. A structural engineer or competent person must complete calculations for this increased line load and this will increase the glass thickness.

As load requirements are just one of the factors that need to be considered when selecting the correct grade of glass for your project (others include deflection, structural strength, water & airtightness and safety glazing). It is highly advisable to ensure that your building contractor is an accredited professional who has a strong track record in the industry.

If your building contractor cuts corners and does not follow the standards set out by the SANS building codes, you could be putting the lives of your loved ones (or your customers) at risk. By investing in the highest quality materials and contracting accredited and experienced professionals to handle your project, you can ensure that everyone who utilises your facility will be safe at all times.

ABOUT ROBERT BLACKBEARD

Robert Blackbeard is the owner of Steel Studio. He specialises in the manufacture and installation of stainless steel and glass balustrades, staircases and pool enclosures in both commercial and residential applications.

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