



University of Queensland Impact Test Results

May 2017

What does 'impact testing' mean for you?

The security screen industry refers to 'Australian Standards' which include testing for the ability to withstand a certain level of impact. This is relevant to the strength of the security screen and the impact it can withstand in the event of a break-in attempt.

While many security screens 'meet' the minimum level of impact required by Australian Standards, Crimsafe has been designed to exceed it.

Independent research conducted by the University of Queensland tested a wide range of security screens.

Crimsafe exceeded the impact level required by Australian Standards and far out-performed competitor products, making Crimsafe the strongest stainless steel security screen system on the market.

Is the 'Australian Standard' enforced?

Security Screens are not covered under the National Construction Code (NCC). A private organisation called Standards Australia assists various industries with the development of product, service or system standards relating to their specific industry.

Standards Australia is a non-Government organisation and has no legal authority or jurisdiction to enforce a Standard.

What is the Australian Standard for security screens?

An Australian Standard is a published document setting out specifications and procedures designed to ensure products, services & systems are safe, reliable and consistently perform the way they are intended to. Standards Australia makes sure that the Standard is developed according to particular guidelines and requirements.

AS5039: 2008 - Security Screen Door and Security Window Grilles is the standard that the Australian security screen industry is based on. It sets out the specifications that define a security door or window grille.

AS5041-2003 sets out the performance standards that security doors and window grilles are tested to.

Is the Australian Standard adequate?

The Australian Standard (AS5041-2003), sets out requirements for a 'Dynamic Impact Test'. This simulates the effect of a human impact against a security screen and is measured in 'Joules' (a unit of energy).

The Australian Standard requires a security screen to withstand five single impacts of 100 Joules each. This is roughly equivalent to the impact of a young child running into a glass door. This was established in the Australian Standards for glass (AS1288) and was adopted by the security industry.

The average Australian male, weighing 86kg, can easily exert more than 100 Joules of force in a single impact.

That's why Crimsafe has been designed to exceed the minimum requirement of Australian Standards.



Fact Sheet

The results

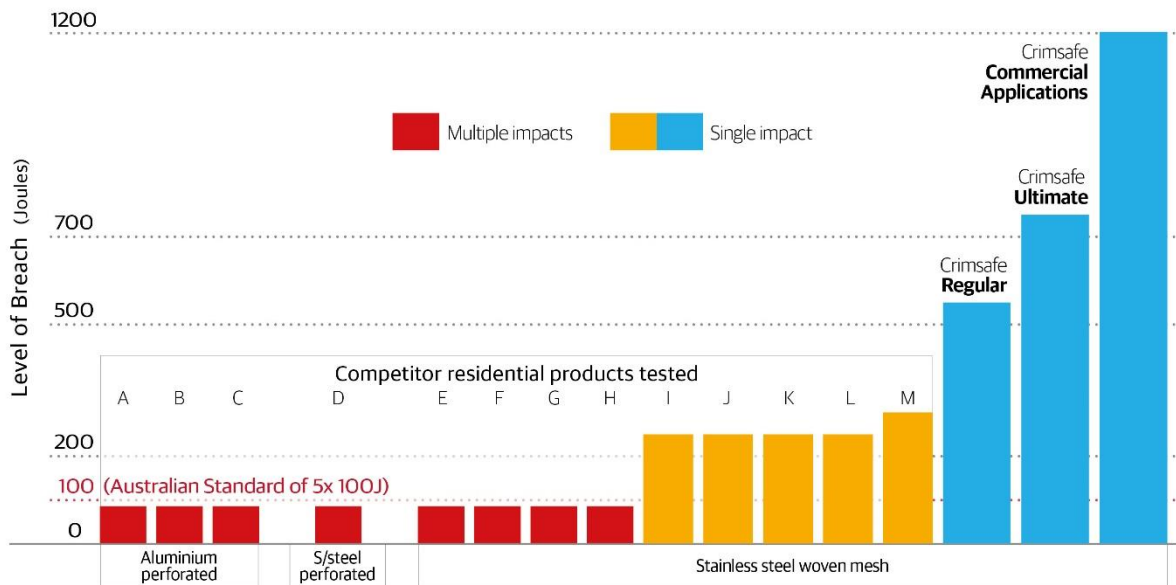
The University of Queensland tested Crimsafe and competitor products for their ability to withstand single and multiple impacts.

The graph below shows that many competitor products could not meet the recommended Australian Standard, failing to withstand five impacts of 100 Joules each.

Crimsafe withstood the multiple impacts required by Australian Standards, and also withstood a single impact of 550 Joules (Crimsafe Regular), 750 Joules (Crimsafe Ultimate) and 1200 Joules (Crimsafe Commercial Applications).

Crimsafe outperforms the rest

When tested by The University of Queensland, our screens stood up not just against an Australian Standard of 5 x 100 Joule (J) impact, but also against singular impact levels up to 550J (Crimsafe Regular), 750J (Crimsafe Ultimate) and 1200J (Crimsafe Commercial Applications).



Graph prepared by Crimsafe based on tests conducted by The University of Queensland, 2017.

Aluminium and stainless steel perforated products use a single sheet of metal with holes punched in it to create the 'screen'. Woven mesh screens (such as Crimsafe) use wires woven together to form a mesh screen.



The Australian Standard

Dynamic impact testing on security doors requires them to withstand an impact of 100 Joules of energy, five times. To put this in perspective, that's about the same as a 10-year-old child running into a door. Many security screens are designed to simply meet this minimum requirement.



Crimsafe Performance

The average adult male weighing 86kg can easily exert more than 100 Joules of energy in a single impact, multiple times. That's why Crimsafe has been developed to exceed the Australian Standard. Crimsafe Ultimate screens are designed to withstand more than seven times the impact level required by Australian Standards.

[†]Approximate equivalent to 45kg weight used for Australian Standard Dynamic Impact Test. ^{*}Average weight of Australian adult male. Australian Bureau of Statistics, 2012