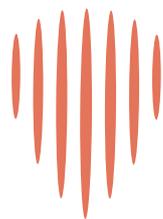


Not all security screens are created equal

A GUIDE TO SECURITY DOORS & WINDOWS



**SECURITY
SCREEN**
ASSOCIATION

Types of Mesh

What is 316 Marine Grade Stainless Steel Mesh?

Stainless steel is a generic term for a family of corrosion resistant alloy steels containing 10.5% or more chromium. Grade **316** has excellent corrosion resistance, its main advantage over grade **304** is its increased ability to resist the pitting and hiding in the crevices resulting in corrosion. This is due to the naturally occurring chromium-rich oxide film that is formed on the surface of the steel, although extremely thin and mostly invisible, the film is tightly adherent to the metal and extremely protective.

The Benefits of 316 Stainless Steel

Most stainless steel ordered around the world is Grade 304. It offers the standard corrosion resistance, formability, strength, and easy maintenance for which stainless is known.

While **316** comes in second in terms of quantities sold, it offers vastly **superior corrosion resistance** to chlorides and acids.

This makes it popular for a wide range of environments, including:

- Medical equipment and implants
- Food service, processing, and preparation environments
- Coastal environments
- Areas with high salt levels (such as roadways)
- Brewing facilities
- Environments with increased exposure to alkalis and acids

304 vs 316

The most basic difference between the grades of steel is the presence of **molybdenum** in stainless **316**. Molybdenum is a chemical element used for the strengthening and hardening of steel. Its main function in stainless 316 is to help **fight off corrosion from chlorides**.

Stainless 304 is made of 18% chromium and 8% nickel.

Stainless **316** is made up of 16% chromium, 10% nickel and **2% molybdenum**.

Stainless 316 is more expensive because it provides a higher corrosion resistance, especially against chlorides and chlorinated solutions. This makes stainless 316 more desirable in applications where salt exposure is an issue. In such applications, 316 stainless will last longer than 304, providing you with extra years of life and usage.

Testing

All security screen products should have extensive safety testing, such as the below.

Dynamic Impact Test: AS5039-2008

The test is performed with a sand and lead filled bag and weighing around 40kg. At impact, the bag gives 100 joules of energy to the panel being tested. The test is repeated 5 times to simulate repeated kicking.

Jemmy Test: AS5039-2008

The effects of a jemmy attack against a security screen door or window grille are simulated by allowing a standardised narrow-bladed lever (large screw driver) to be inserted against the locking, fastening and hinging points and a turning force is applied to those points via the lever.

Knife Shear Test: AS5039-2008

This Australian Standard test simulates a knife attack on security screen doors as a burglar tries to cut through the screen. The test aims to recreate the effect of someone attacking your doors with a utility knife or similar. During this test, a specially designed machine draws a knife blade along a line down a panel three times. After each draw, the used blade is replaced with a new one.

Corrosion Test: AS2331.3.1

Tested to withstand over 2,000 hours of exposure in an accelerated corrosion test in a salt spray chamber without any sign of corrosion.

Fall Prevention of Openable Windows: AS5203-2016

Security window screens also provide the added benefit of a fall prevention screen which enables glass windows to be opened more than 125mm, enhancing air flow and natural ventilation.



Fire Attenuation AS1530.4-2014

Provided only that the screen has been installed by a licensed dealer and deemed a fire attenuation screen by a fire engineer.

The average percentage of heat blocked by the screen during the duration of the test is measured. This applies to fixed windows only.

Bushfire Test: AS3959-2009

This test is designed to simulate an ember attack with a build-up of debris by using a furnace that emits 400°C at its peak. The products were tested for 10 minutes in this simulation. The following doors tested include sliding, hinge and bifold options as well as security screen doors. At the completion of the test, all products passed and maintained the integrity and functionality of the system.

Energy Efficiency

Fitting security screens over the outside of your 3mm glass window has been tested to improve the energy efficiency of your window.



Security Doors

Sliding security door

offer a practical solution to add security and protection to wider door openings or situations where there might be insufficient space for the swing required by a hinged door. Commonly used to complement glazed sliding doors, security sliding door screens are also popular for providing securable entry points to screened-in outdoor living spaces such as enclosed patios or decks. Using 316 mesh means the security screen doors do not compromise light or views, while allowing natural air movements through the home and protection from insects.

Hinged security door

on the front of a home, a hinged door screen can enhance the overall appearance of the entrance while providing security benefits. Screen doors can be colour-matched, and powder coated to blend with the existing frame and style. For wooden front doors, a timber-grain finish can be applied to complement the natural wood behind. To coordinate with the chosen frame finish, hinges and door closers are available in a range of standard powder coated colours. hinged door can allow an exterior door to be left open to promote natural ventilation while, for example, the clothes dryer is in use

French security door

are popular for connecting indoor areas to outdoor terraces as they are great for maintaining light and views. French screen doors can be mounted internally or externally and custom coloured to the finish required.

Pet door

Once a pet door is installed into any security window or door, it can no longer be classified as a security product. This is because the opening created for your pet to pass in and out of, exceeds the maximum allowable aperture in the infill material (stainless mesh) nominated under AS1539-2008. It is now classified as a barrier door.

Security Window Screens

Fixed Window Security Screens

Combine the strength and security of 316 Marine Grade Stainless Steel Mesh with extruded aluminium perimeter framing to create a security window screen that looks great whilst providing excellent security.

Fixed Windows Security Screens can be custom manufactured to fit many brands and styles of window and can be ordered with or without midrails.

Hinged Window Security Screens

Top or side hanging, this outward opening security screen allows you to clean window with ease.

Emergency Escape Screens

The quick release mechanism allows you to exit in the event of fire or emergency.

Fall Prevention

Security window screens also provide the added benefit of a fall prevention screen which enables windows to be open more than 125mm enhancing air flow and natural ventilation. Ensure that fall prevention screens are tested and complies with the National Construction Code for the Protection of Openable Windows.



Are security screens energy efficient?

Not only can permanent security screens provide features to help in all the above areas (security etc.), but they can also have a positive impact on the energy efficiency performance of your windows.



For a screen product to be rated under WERS it must meet all the following criteria:

- The screen must be permanently fixed to the glazing system.
- The screen must be of a woven screen or perforated screen type.
- The screen must not be detachable, openable or removable, (egress security screens used to provide escape paths during fire are considered permanent screen systems).
- The screen must be on the exterior of the window system.
- The screen energy ratings can only be applied to an existing WERS rating.

Fire Attenuation Screens

The purpose of a fire attenuation screen is to reduce radiant heat transmitted from one area to another, helping to prevent the spread of fire between buildings.

Generally, fire attenuation screens are typically required for houses that are within 1 metre of the property boundary. A fire engineer will need to be organised by the customer to determine if an attenuation screen is necessary. There are two ways these screens can be installed both are great options. Depending on the premise will determent what option is most suitable.



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