

Thicker wire makes NEW seismic compliant wire mesh for house slabs stronger and easier to install

The new Ductile Plus 500E mesh from trusted Kiwi building supplier Wireplus does more than meet all the requirements of the Department of Building and Housing's new standards that apply from February 2012. The new mesh features thicker wire for dramatically improved weld strength.

In developing the new seismically robust mesh sheets, Wireplus took the opportunity to move away from the dimensions of the traditional 665 mesh with its 5.5mm wire and 150mm spacing, opting for thicker wire and larger spacing.

"Using thicker wire creates some benefits in ease of handling and installation. However, for us the most compelling benefit was how using thicker wire increases the weld strength," says Ryk Kleynhans, Manager of Wireplus Auckland.

"Welds with the 6.1mm wire are 22% stronger than that of 5.5mm wire, while the welds of 7.5mm wire is an amazing 100% stronger. What makes this so important is that the stronger the weld, the less likely the mesh weld will fail in a seismic event."

With the thicker wire, Wireplus has been able to increase the spacings in the mesh, while maintaining the same weight. The larger openings make it easier for builders to step through the mesh sheet during construction and also means there are fewer wires to cut to make sheets fit. The larger openings also gives builders more flexibility with the placing of services such as waste pipes through the slab.

The steel used for Ductile Plus 500E mesh was developed in conjunction with Pacific Steel to be exceptionally ductile, delivering seismic performance that meets the new building standards in every instance. Throughout its development, Ductile Plus 500E was extensively tested, both in-house and by independent testing body's SAI Global and SGS.

Ductile Plus 500E mesh is available in three variants

- **SE62 Plus** features wire of 6.1mm diameter and 200mm bar spacing, in sheets of approximately 5 x 2m.
- **SE 73DE Plus** features wire of 7.5mm diameter and 300mm bar spacing, in sheets of approximately 5 x 2.3m.
- **SE 73LDE Plus** is the same as the above, but comes in longer sheets – approximately 7 x 2.3m.

The new mesh is a further evolution of the Ductile C200 mesh Wireplus had developed and made available to market in June, only three weeks after the Department of Building and Housing announced new interim standards relating to reinforcing steel within house slabs.

"Even after the final standards come into effect on 1 February 2012, Wireplus C200 will remain an option to suit some design criteria," says Alister Sladen, Technical Manager of Wireplus, based in Christchurch. "However, where it's imperative to meet the new code, builders and specifiers will have to use the new Ductile Plus 500E from from that date."





Choice of wire and sheet sizes

	SE62	SE73DE	SE73LDE
Main Wire Diameter	6.1mm	7.5mm	7.5mm
Edge Wire Diameter		5.5mm	5.5mm
Length	5.05m	5.00m	7.10m
Width	2.02m	2.27m	2.27m
Bar Spacing	200mm	300mm	300mm
Sheet Weight	24.8kg	29.1kg	40.5kg
Mass/ m2	2.31kg/m2	2.31kg/m2	2.31kg/m2
Nett Coverage	8.31m2	10.08m2	14.49m2

Wireplus has been supporting the New Zealand building, construction and engineering industry for 20 years, maintaining close relationships across the industry. This gives Wireplus a great understanding of what matters to people in the industry, and the technical experience to deliver to their requirements.

Wireplus continues to invest heavily in manufacturing capability and is currently implementing an upgrade to the mesh manufacturing equipment on its Auckland site. This will ensure manufacturing capability is relevant to the changing market place. Additionally investment continues in R&D and product testing including an onsite testing station. Wireplus is committed to expanding their range of ductile meshes for wider use in the near future.

ABOUT WIREPLUS

Wireplus is a leading New Zealand manufacturer of reinforcing mesh and nails and suppliers of reinforcing rod, steel plates, structural steel as well as a wide range of other steel and wire products for the New Zealand building, engineering and construction industries. Wireplus has manufacturing plants in Auckland and in Christchurch and distribution branches in Wellington, Hastings and New Plymouth. Wireplus is a member of the United Industries Ltd group of companies.

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