



MAKE THE LIGHT CHOICE

New Breakthrough Technology SENTINEL[®] Coal mine mesh. IT'S LIGHTER, STRONGER, BETTER.

Introducing a major breakthrough from the people who brought you the original Minemesh.

High tensile SENTINEL[®] Coal harnesses ground-breaking steel technology backed by 25 years of experience in strata control and ground support mesh solutions.

Manufactured from quality Australian steel, this new technology is exclusive to SENTINEL[®] Coal. The product is manufactured using a proprietary high tensile process, patented worldwide.

What's the difference?

SENTINEL[®] Coal technology:

- ▶ Increases wire strength by **50%**, which
- ▶ Allows a mass reduction of **25% - 30%**.

The result? High tensile SENTINEL[®] Coal offers equivalent performance and strength to standard Minemesh with significantly reduced mass.

SENTINEL[®] Coal is Australian Made and has key benefits compared with standard Minemesh

- ▶ Smaller wire diameter allowing more sheets per pack, more sheets per truck and more sheets per pod.
- ▶ Better productivity through:
 - Fewer product movements both above and below ground, with a **25% reduction** in transport cycles
 - **25% fewer** truck movements for delivery of mesh
 - More sheets per load of mesh to the mine face, resulting in a faster development rate and reduced delays
 - Reduced storage space above and below ground
 - Improved ergonomics, as a direct result of being **25- 30% lighter**.
- ▶ Environmental sustainability – SENTINEL[®] Coal delivers up to **25% reduction** in carbon emissions in the manufacturing process.



High tensile SENTINEL® Coal brings the benefits of new Australian steel technology to the coal mining industry.

This new process increases strength by **50%** and results in:

- ▶ **25 -30%** reduction in module mass
- ▶ **20 - 25%** reduction in embedded energy
- ▶ **25%** reduction in truck movements, because more product can be carried on each truck.

Benefits

SENTINEL® Coal offers clear advantages in:

- ▶ Freight
- ▶ Storage
- ▶ Transfer underground
- ▶ Manual handling
- ▶ Efficiency during installation.

SENTINEL® Coal modules retain all the design features of the current products, including double wire, optimal bolt spacing and pack balance.

The table below shows the mass and the relative properties of a current product, **RMBMD50**, and the new SENTINEL® Coal product **MH50**.

Product Performance Improvements

| | RELATIVE PROPERTIES | | | | | | LOGISTICS | | |
|----------------|---------------------|----------------------|------------|----------------|----------------|--------------|---------------------------|---------------|---------------|
| | Mass (kg) | Wire Strength* (MPa) | Weld Shear | Force Capacity | Shear Strength | Ductility | Freight (sheets/delivery) | Sheets / pack | |
| | | | | | | | | Equiv. Mass | Equiv. Height |
| RMBMD50 | 24.3 | 500 | 1 | 1 | 1 | 1 | 420 | 20 | 20 |
| MH50 | 17.4 | 750 | 1.2 | 1 | 1 | >3 | 560 | 28 | 24 |

Both Modules – 5 m x 1.15 m

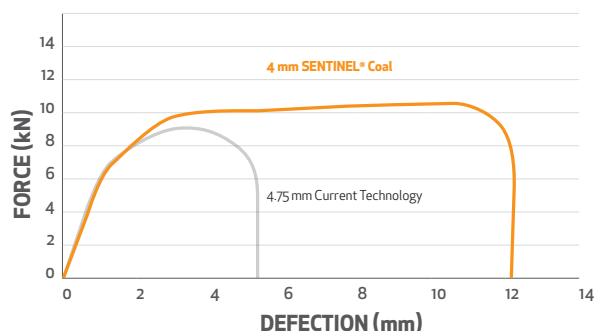
* - Nominal

Sentinel® Coal – Modules for all roof conditions

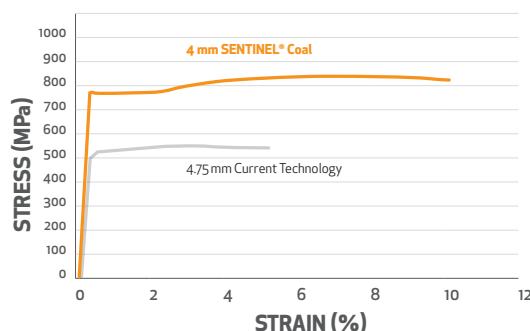
| GRADE | | WIRE DIAMETER (mm) | | SHEET | |
|---------------|----------|--------------------|----------|----------------|----------------|
| | | Double Wire Strap | Mesh | Length (m) | Width (m) |
| Light | L | 4 | 4 | 4 - 5.5 | 0.6 - 2 |
| Medium | M | 4.75 | 4 | | |
| Heavy | H | 5.6 | 4 | | |

eXtra (X) - Mid sheet strap for intermediate bolting available on all of the above

Weld Shear*



Wire*



*Typical values

For more information, contact sentinel@arcreo.com.au

This publication has been prepared as a general guide. Actual results and outcomes from this product will depend on individual circumstances.

