

Not all pit lids are created equal.

Metal vs Concrete vs Terra Firma Composite Fibreglass – B Class comparison.

	Metal	Concrete	Terra Firma Composite Fibreglass	Upshot
Strength	Class B or higher. Issues surrounding quality of imports	Breaks at approx 39kN	Withholds downward forces of 110kN. AS 3996 Class B compliant	The B Class standard is 80kN. Metal has high rates of fatigue, concrete has a high rate of breakage and fibreglass stays strong.
Durability	Fatigues and rusts	When broken, collapses and crumbles	When broken, flexes and rebounds	Metal covers are prone to fatigue and environmental wear. Broken concrete lids leave drains exposed to rubbish and increase safety risks. Fibreglass lids rebound out to keep the drain secure.
Weight	Upwards of 106kg - infill frames may weigh twice this after adding concrete or paver fill	Weigh from 100kg upwards	Weigh 24kg	Metal lids range in weight which means workers have no idea what they are lifting when installing or maintaining metal pit lids. They are generally the heaviest form of covers available. Concrete has a negative weight to strength ratio, which means higher OH&S risks and maintenance costs. Fibreglass has a positive weight to strength ratio meaning cheaper and easier maintenance costs, plus reduced OH&S costs.
Size	Available in a number of dimensions	Available in a number of dimensions	Available in a number of sizes and frames to suit multiple applications	All products can be ordered to requirements.
Colour	Grey or silver metal colours only	Standard concrete grey	Comes in a variety of colours	Metal can be coloured, however long term maintenance (painting) is required. Concrete has limited flexibility of design. Fibreglass can be customised to any colour requirements meaning pit lids suit the streetscape for visually appealing results.
Origin	Dependent on supplier – mainly imported	Dependent on supplier	Australian made and owned	Use of Terra Firma Pit Lids fibreglass ensures councils meet the ideal of 'Australian made and owned.'
Standard Compliance	A Class B Class C Class D Class	Non compliant	B, C and D Class. Note: Certain non-Terra Firma composite lids do not meet class specifications. Councils should seek standard compliance certificates	Although metal has A-D Class products, they are often don't meet weight requirements. Concrete, the most common pit lid, is a non-compliant product, while Terra Firma Pit Lids fibreglass meets all requirements.
Ergonomic Design	Not applicable	Not applicable	One man lift	Metal and concrete lids are not ergonomically designed. Terra Firma composite pit lids can be easily lifted by one person with a single lifting key.
Installation Cost	Installation requires 4+ workers and a crane truck, depending on the weight of the metal lid	Installation requires 4+ workers and a crane truck, due to the weight of the concrete lid	Installation only requires one worker with a drill and a turning key	Due to the weight of metal and concrete pit lids, the average installation cost is higher than that of fibreglass. A whole team is required, rather than just one man as for composite fibreglass.
Total Cost of Ownership	Metal is this highest initial cost of all the alternatives due to lid price and installation costs	Initial cost is cheaper; however concrete has the highest total cost of ownership of all the alternatives	Slightly more expensive initially but delivers massive long term savings	Councils save hundreds of thousands of dollars per annum by simply specifying composite pit lids.

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A recent survey conducted by the Municipal Works Officers Association (MWOA) found that concrete pit lids are costing local government in Victoria **\$31 million** every year. Notoriously prone to breakages, three major failings of concrete lids have been identified: strength, durability and weight.

While metal can also be used to cover grates, B Class metal structures are designed predominately for pedestrian traffic with light vehicle use only. They certainly have a stronger construction than concrete; however lack of a non-slip surface and the weight of metal makes it unsuitable for many areas. So what is the alternative? The composite fibreglass solution is no longer an expensive, 'hot spot' product. Composite fibreglass pit lid technology now represents value for money in both new and replacement infrastructures.

Terra Firma composite fibreglass is the common-sense solution.

- Fibreglass composite pit lids reduce maintenance and replacement costs by 90% over ten years.
- OH&S related issues and insurance premiums are also significantly reduced.
- Councils with new developments specifying composite fibreglass save over \$500,000 annually.
- Councils specifying Terra Firma composite pit lids replace 65% less concrete lids.

Source: MWOA research

Want a better pit lid solution?

Contact us on (03) 9357 1230, info@tfpl.com.au, or visit our website at www.terrafirmapitlids.com for more information.

