Ceramic Wear Solutions
Vulcabrix® Product Range

Our Innovation. Your Advantage.

BRADKEN®

Vulcabrix® Product Range

Developed using unrivalled technical expertise and experience, Bradken is excited to present our Vulcabrix® range of ceramic-rubber composite liners. Vulcabrix® combines wear resistant ceramic tiles, an impact absorbing rubber matrix and a steel backing to create a lightweight high-performance wear liner for bulk materials handling application.

Vulcabrix® Origin 92

Quality Alumina ceramic liners providing cost-effective performance. Suitable for high wear areas with low to moderate impact.

Vulcabrix® Advanced 92

High Quality Alumina ceramic liners providing market leading performance. Suitable for extreme wear areas with low to moderate impact.

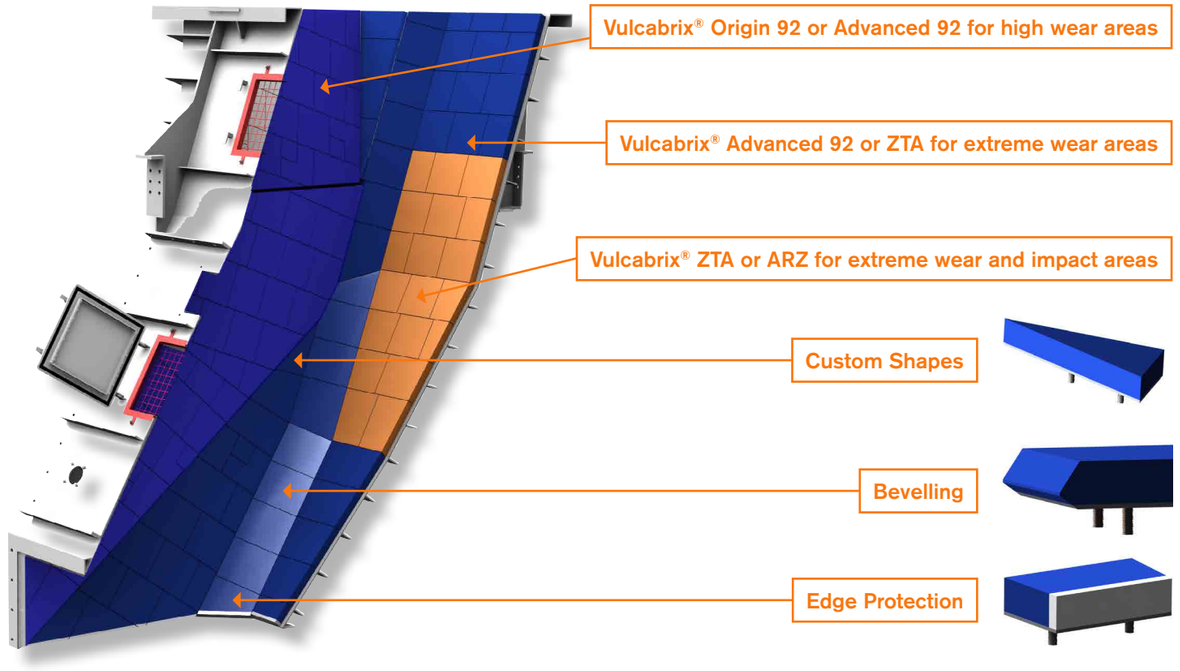
Vulcabrix® ZTA

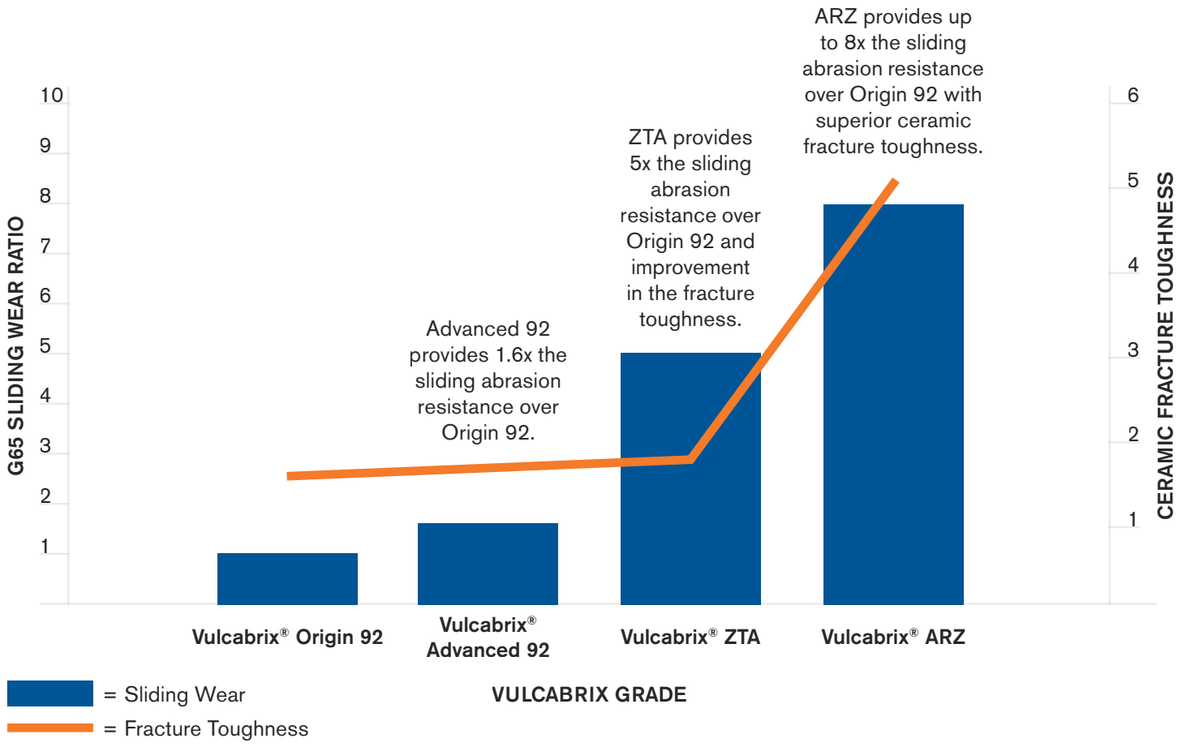
High Performance Zirconia Toughened Alumina ceramic for higher impact applications. Suitable for extreme wear areas with moderate impact.

Vulcabrix® ARZ

Alumina Reinforced Zirconia, the ultimate choice when only the best will do. Suitable for extreme wear and greatly enhanced impact resistance.

Vulcabrix® Range





*NB: Based on ASTM G65 sliding abrasion loss testing.
**NB: Ceramic Fracture Toughness determined by ISO 14705-2016.

BRADKEN

Vulcabrix®

The Vulcabrix® Production

The production of our Vulcabrix liners starts with the ceramic tile. Our ceramic tiles are produced using high-purity feedstock and blended in precise ratio's to obtain the required composition. The tiles are Isostatic pressed into precise shapes before sintering at high temperature in controlled heat treatment ovens to create the solid tile. Quality Assurance is paramount, with all batches produced tested against Bradken strict material specification.

The tiles are then bonded to a steel backing plate via a rubber matrix, using a controlled vulcanization process to create a high strength bond. In addition to binding the ceramic and steel together, the rubber provides a cushioning effect, whilst the steel backing plate allows flexibility in the selection of attachment methods for the final liner.

The liner is then ready for post-processing, where it can be cut to shape and the selected attachment method, such as stud welding, added. After final Quality Assurance checks, the liner is then ready to be fitted to protect your assets in abrasive operating conditions.

Technical Properties

Property	Origin 92	Advanced 92	ZTA	ARZ
Ceramic Material	Alumina	Alumina	Zirconia Toughened Alumina	Alumina Reinforced Zirconia
Typ. Ceramic Hardness (HV20)	>1050	>1100	>1200	>1200
Rubber Type	Natural Rubber			
Typ. Rubber Hardness	60 Shore A			
Typ. Bulk Density* (kg/m³)	3800	3800	4280	5150

Based on a standard 63 mm thick liner.

Standard Thickness Availability

Standard Thickness*	Origin 92	Advanced 92	ZTA	ARZ
32/25	Yes**	Yes	Yes	Yes**
37/25	Yes	Yes	Yes	Yes
63/50	Yes	Yes	Yes	Yes
77/65	No	Yes**	Yes**	Yes**
90/77	No	Yes**	Yes**	Yes**
112/99	Yes**	Yes	Yes	Yes

The first number represents the total thickness, the second number represents the ceramic thickness or usable wear thickness.
***Product made to order, not held in stock.*

Standard Liner Size

300x300 300x150
452x300 452x150

Contact your local Bradken representative for a quote and find out how your operation can benefit from the next generation of ceramic wear products.

Performance

The right grade can be selected to maximise performance in the application. Exceptional bond strength between tile and backing plate.

Range

Full range of products to suit all applications and budgets. Custom sizes, shapes, optional edge protection and bevelling.

Quality Assurance

Continuously batch tested for abrasion resistance and mechanical properties.

Availability

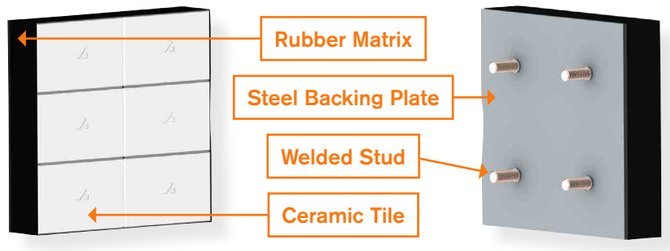
Short lead times with global manufacturing options.

The Vulcabrix® Benefits

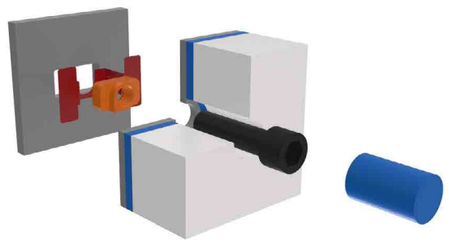
Along with their great abrasion resistance, Vulcabrix composite liners are less than half the density of conventional metallic lining materials, allowing thicker, and longer lasting liner materials to be used in weight critical applications. The low-density material also aids in minimising liner mass, improving liner manual handling safety during installation.

With the integrated steel backing plate, Vulcabrix can use welded studs or one-sided Bradken ChuteSafe® fasteners for quick and secure attachment to assets. All Vulcabrix grades can be customised with, unique shapes, bevels and edge protection.

Ceramic Liner Features



Liner front view *Liner rear view*



Ceramic Liners and ChuteSafe® Bolt

Contact Bradken globally to find a solution for your business.

Our Innovation. Your Advantage.

bradken.com

BRADKEN®