

# Vulcabrix® ZTA Rubber Vulcanised Ceramic



## Overview

Bradken's Vulcabrix ZTA ceramic is ideal for applications where extreme abrasion resistance is required. Vulcabrix ZTA combines extreme abrasion resistance with increased impact resistance to create a wear liner for harsh environments. The zirconia toughened alumina tiles are bonded to a steel backing plate with natural rubber to create the ideal wear liner. Vulcabrix ZTA offers better abrasion and impact resistance when compared to alumina products in the market.

## Features

The zirconia toughened alumina tiles used to create Vulcabrix ZTA give these wear liners increase resistance to cracking when compared to conventional alumina tile based liners. The ZTA liners also offer improvements in weight management due to their lower density than metallic liners.

As well as welded studs for quick and easy attachment, Vulcabrix ZTA offers custom shapes, bevels and edge protection.

## Manufacture

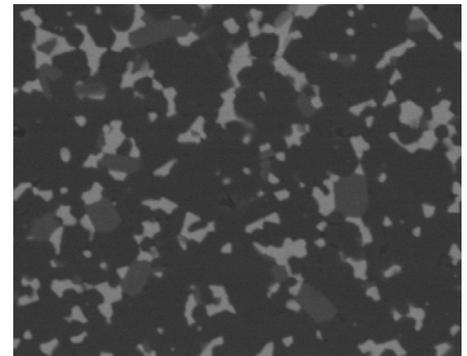
An alumina powder is blended with zirconia powder at a precise ratio before the tile is pressed into the desired shape. The zirconia addition gives the tile increased impact resistance when compared to typical alumina tiles. After pressing the powder into a mould, sintering at 1500-1600°C binds the powder particles together creating a solid tile. The tiles are then attached to a steel backing plate using controlled heating and pressing, rubber vulcanization process cycle. The rubber provides cushioning to the tiles whilst allowing for the flexibility of attachment methods to the backing plate. The liner is then ready for post processing and use in extremely abrasive environments involving moderate to high impact.

## Typical Properties

Hardness	≥1300 HV <sub>20</sub>	
Open Porosity	< 0.1%	
Ceramic Density	4200 kg/m <sup>3</sup>	
Rubber Hardness	60 Shore A	
Tile Thickness	100mm	50mm
Liner Thickness	112mm	63mm



Vulcabrix Liner Press



Vulcabrix ZTA Microstructure



Deflector Application

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 [bradken@bradken.com](mailto:bradken@bradken.com)

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