



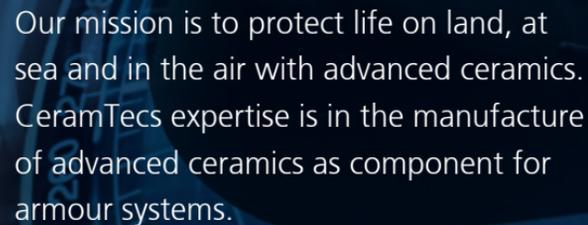
**CeramTec**



DEFENCE



## Armour Applications Material



Our mission is to protect life on land, at sea and in the air with advanced ceramics. CeramTecs expertise is in the manufacture of advanced ceramics as component for armour systems.

# Ceramic materials and material properties for armor applications

## Al<sub>2</sub>O<sub>3</sub>

Standards	Dimensions		Thickness
Tiles	100 x 100 mm <sup>2</sup>		4-40 mm
Tiles	50 x 50 mm <sup>2</sup>		3-25 mm
Hexagons	Key 20, 25, 30		3-25 mm
Hexagons	Key 40		3-25 mm
Hexagons	Key 60		6-45 mm
Pellets			
	Other/different sizes on request.		
Services	customized layouts		
Material	96	98	99
Hardness HV1	12.5 GPa	14.3 GPa	15 GPa
Density	3.75 g/cm <sup>3</sup>	3.8 g/cm <sup>3</sup>	3.87 g/cm <sup>3</sup>
Sound velocity	10.000 m/s	10.400 m/s	10.300 m/s

## SiC

Standards	Dimensions	Thickness
Tiles	50 x 50 mm <sup>2</sup>	3-25 mm
Hexagons	Key 20, 30	3-17 mm
Hexagons	Key 40	3-25 mm
Pellets		
	Other/different sizes on request.	
Services	customized layouts	
Material:	FC	FC II
Hardness HV1	23.0 GPa	23.0 GPa
Density	3.10 g/cm <sup>3</sup>	3.15 g/cm <sup>3</sup>
Sound velocity	11.800 m/s	12.000 m/s

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Ballistic materials are characterized by specific parameters, some of which are summarized in the adjacent table. The values of these parameters are determined on standardized specimen according to international standards or CeramTec internal specifications. Properties of series parts can deviate. Therefore these parameters are intended to be used as design guidelines for ballistic applications.