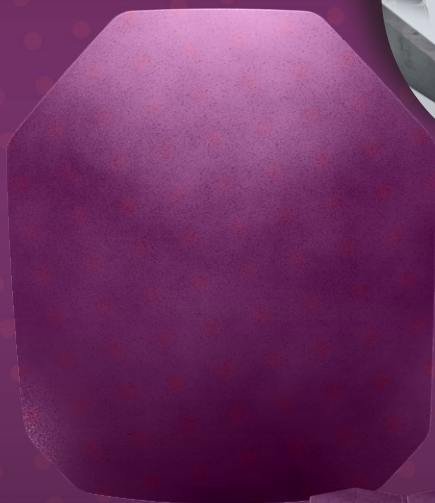




SOLCERA

Advanced Materials



CERA4PROTECT®

CERA4RESIST®

LIGHTWEIGHT HIGH-PERFORMANCE
BALLISTIC PROTECTION

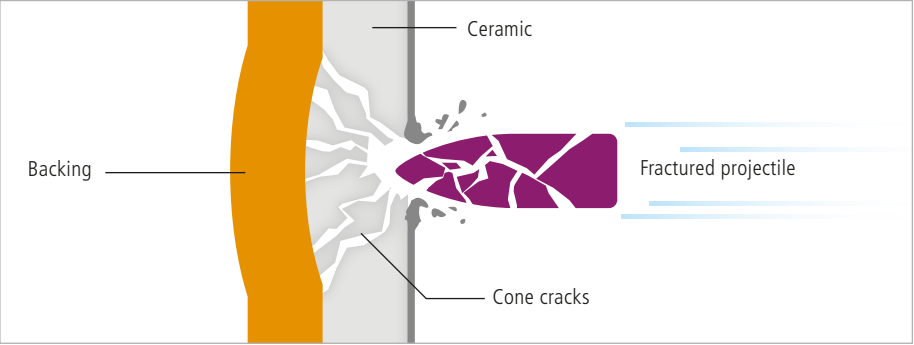
WHY CHOOSING SOLCERA



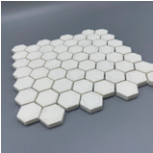
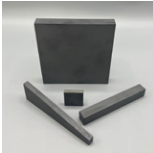
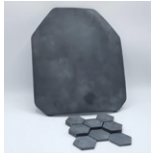
- Advanced ceramics, ceramic-metal and glass-metal assemblies
- Approved supplier of French and European military programs for more than 50 years
- Innovation and production for armor and optronic systems
- ISO 9001, 14001 and 45001 certified
- ITAR-free
- Vertical production integration: opaque and transparent ceramics



- Extreme lightweight, high-performance ballistic solutions
- Customized ceramic panels allowing complex shapes (mosaics, holes, cut-outs)
- Lowest density boron carbide panels
- Supplier of major programs (NH90, A400M, etc.)



The ceramic breaks and slows down the projectile, limiting its perforating force. The integration of the ceramic into a metallic or composite structure (backing) absorbs the energy of the impact and retains the fragments.

		CERACRESIST [®] WHITE	CERACRESIST [®] BLACK	CERACRESIST [®] ARMOR	CERA4PROTECT [®]
	Units				
Composition		Alumina 98% to 99,99%	Carbides	Carbides	Magnesium Aluminate Spinel
Density	g/cm ³	3.80 to 3.98	2.50 to 2.80	2.60 to 2.80	3.58
Hardness - Vickers	GPa	12 to 21	15 to 30	10.8	14
Flexural Strength	MPa	200 to 600	300 to 450	140	350
Typical size	mm	A wide range of dimensions and specific shapes can be manufactured on demand			
		50 x 50, K20 or K30	400 x 400	SAPI 250 x 300, K20, K30, complex geometry	50 x 50, 150 x 150, 100 x 200
Applications					
Benefits		• Cost effective solution • High production capacity at our different facilities • Flexible design and dimensions	• The most lightweight ceramic armor materials (B₄C, SiC / B₄C) • Best ballistic performance • Large capacity (hot pressing, sintering, silicon infiltration)	• Best weight/performance ratio • Multi-impact solutions • Mass production • Cost effective process	• Weight savings up to 50% compared to glass • Resistance to extreme conditions • Flexible assembly solutions adaptable to various protection levels • User comfort and clear vision



SOLCERA
Group

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