

Technical Data Sheet

1. GENERAL PRODUCT INFORMATION

Productname: LithaCon ATZ 980

2. PURPOSE OF USE

LithaCon ATZ 980 is a photocurable ceramic suspension especially developed for the use in Lithographybased Ceramic Manufacturing (LCM)-applications on the CeraFab-systems from Lithoz. The slurry contains ATZ (alumina-toughened zirconia) powder and organic additives.

3. PACKAGING

Black plastic container 0.25 L, or plastic cartridge 0.2 L.

4. PRODUCT PROPERTIES

Powder				
Property	Std. value	Range	Unit	
Material	3YSZ ZrO ₂ , Al ₂ O ₃	>79, <21	wt%	
Purity	Na ₂ O, Fe ₂ O ₃ , SiO ₂ , TiO ₂	<80, <15, <50, <5	ppm	

Slurry					
Property	Std. value	Range	Unit		
Solids loading	40.5		vol %		
Density	2.92		g/cm³		
Viscosity @ 25°C (23 s ⁻¹)	11		Pa∙s		

Sintered ceramic					
Property	Std. value	Range	Unit		
Relative density	>99		%		
Porosity	<1		%		
Theoretical density	5.5		g/cm³		
Characteristic bending strength (3PB, as fired)	750		MPa		

Further Information

Information as provided within this document, is based on cumulated experience and shall serve as a proven guidance for standard use of the LCM technology. We cannot guarantee 100% success rate by applying these standards, but we can guarantee that you will constantly push the limits. This version of the product data sheet supersedes all previous versions. © LITHOZ 2019





Typical Values				
Property	Std. value	Range	Unit	
Theoretical density	5.5		g/cm³	
Hardness HV10	1400		-	
Fracture toughness	6		MPa·m ^{1/2}	
Compressive strength	2100		MPa	
Elastic modulus	220		GPa	
Poisson's ratio	0.27		-	
Thermal conductivity	6		W/(m⋅K)	
Max. working temperature	1200		°C	
Coefficient of thermal expansion	10.5		Ppm/K	
Specific electrical resistivity (20°C)	10 ⁹		Ω·cm	
Specific heat (20°C)	500		J/(kg·K)]	

5. STORAGE

Store tightly closed container in a cool (3 to 10 °C), dry and well-ventilated area. After usage, close container tightly and store upright.

6. **DISPOSAL**

Do not discharge the waste into the drain.

Offer surplus quantities to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

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