



HARZ Labs
MATERIALS FOR 3D PRINTING

HARZ Labs Dental Cast

Material Technical Data Sheet (TDS)

Version 1.1 / EN
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SECTION 1: DESCRIPTION AND APPLICATION

HARZ Labs Cast Resin is excellent for direct casting of dental implants like metal and ceramic crowns and bridges. Almost zero ash content (less than 0.1%) and thermoplastic properties makes the resin suitable for direct casting.

The resin was designed to burn out in a quick cycle at high temperature to reduce electricity costs and the production time of metal and ceramic implants.

SECTION 2: MATERIAL PROPERTIES

2.1 Characteristics of liquid

Tested property	Standard/Method	Result (Metric)	Result (Imperial)
Color	-	Cherry (semitransparent)	
Odor	-	Odorless	
Density	ASTM D1298	1.1 g/cm ³	0.0397 lb/in ³
Viscosity (20 °C)	ASTM D2393	0.9 Pa·s	0.605 lb/ft·s

2.2 Mechanical properties

Tested property	Standard/Method	Result (Metric)	Result (Imperial)
Flexural Strength	ASTM D790	74.1 ± 2.2 MPa	10.7 ± 0.3 ksi
Flexural Modulus	ASTM D790	1990 ± 100 MPa	289 ± 15 ksi
Ultimate Tensile Strength	ASTM D638	45.6 ± 4.4 MPa	6.6 ± 0.6 ksi
Elongation at Break	ASTM D638	7.1 ± 3.1 %	
Hardness	ASTM D2240	79 ± 2, Shore D	
IZOD Impact (Unnotched)	ASTM D4812	4.4 ± 1.2 kJ/m ²	2.1 ± 0.6 ft-lb/in ²

2.3 Special parameters

Tested property	Standard/Method	Result
Solubility (24h)	ASTM D3132	≤ 0.01 %
Sorption (24h)	ASTM D570	≤ 0.47 %
Ash content	ASTM D5630	< 0.1 %

The information above is believed to be accurate and represents the best information currently available to us. The Imperial values are converted from Metric measurements and are for reference only. All test specimens were printed, cleaned, and post-processed per instructions provided by HARZ Labs company. Results provided here are representative of these processes and may vary if these established protocols are not followed. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall HARZ Labs LLC (ООО «ХАРЦ Лабс») be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if HARZ Labs LLC (ООО «ХАРЦ Лабс») has been advised of the possibility of such damages.