

UMA 20

UMA 20 is a production-grade material that offers a long shelf life and is suitable for high-volume manufacturing of clear aligner models with high accuracy.

Tensile Properties	Test Standard	Metric	US
Tensile Modulus	ASTM D638 Type V 10 mm/min	1600 MPa	230 ksi
Ultimate Tensile Strength		33 MPa	5 ksi
Elongation at Break		7%	7%

Flexural Properties	Test Standard	Metric	US
Flexural Stress at 5% strain	ASTM D790-B	70 MPa	10 ksi
Flexural Modulus (Chord, 0.5-1%)		2000 MPa	290 ksi

Impact Properties	Test Standard	Metric	US
Notched Izod (Machined)	ASTM D256	15 J/m	0.3 ft-lb/in
Notched Charpy (Machined)	ISO 179-1/1eA	1.7 kJ/m ²	0.8 ft-lb/in ²

Thermal Properties	Test Standard	Metric	US
Heat Deflection Temperature at 0.455 MPa/66 psi	ASTM D648	40 °C	104 °F
Heat Deflection Temperature at 1.82 MPa/264 psi		36 °C	97 °F

Liquid Properties	
Liquid Density	1.11 g/mL
25 °C Viscosity	395 cP

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Parts were processed using an M series printer and a Smart Part Washer with VF 1 as the solvent. Sample were post-cured with a Dreve PCU LED or Dreve PCU 90 models.