



3SP™ Material

E-Appliance 3SP™

EnvisionTEC's E-Appliance 3SP™ is a new 3D printing material that is ideal for the 3D printing of orthodontic models. E-Appliance is a specially designed nano-filled resin that will work reliably with both polyvinyl alcohol based-separators and tin foil substitute for a "salt and pepper" technique of producing an orthodontic appliance. This method of in-house or lab-based construction of orthodontic removable or fixed appliances provides excellent strength and durability combined with an amazing array of design latitude for individuality of expression for the patient. Models that have been printed with E-Appliance offer the detailed precision and high quality surface finish that EnvisionTEC is known for coupled with a surface that accepts a wide range of separator mediums for the perfect removal of the finished appliance from the model.

Material Properties*		
Description		Value
Tensile Strength	ASTM D638	53 MPa
Tensile Modulus	ASTM D638	3000 MPa
Elongation at Break	ASTM D638	3.3%
Flexural Strength	ASTM D790	93 MPa
Flexural Modulus	ASTM D790	2980 MPa
Heat Deflection Temperature (no heat treatment necessary) at 1,82 MPa loading	ASTM D648	48°C
Impact Izod	ASTM D256	20.4 J/m
Build Speed with Actuator at 75µm voxel depth		2.75 hours per inch for full envelope
Build Speed with Micrometer at 75 µm voxel depth		5.25 hours per inch for full envelope

*All data provided is preliminary data and must be verified by the individual user.

Recommended Machines
ULTRA® Ortho 3SP™ with Actuator

Applications
Dental



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