

KeyPrint® KeySplint Hard™

Technical Data Sheet

Indications for Use: The KeyPrint® KeySplint Hard™ device is indicated for the fabrication of orthodontic and dental appliances such as bite planes, mouthguards, nightguards, snoring appliances*, splints and repositioners.

Product Description: KeyPrint® KeySplint Hard™ is a light-curing resin for the 3D printing of flexible biocompatible dental devices for use with DLP printers (385-405nm).

CHARACTERISTICS	
Color	Light Violet, Translucent
Density	1.0–1.15 g/cm ³
Viscosity	400–500 cP

	TESTED PROPERTY	STANDARD/METHOD	PASSING CRITERIA	RESULT
ASTM	Flexural Strength	ASTM D790	> 50 MPa**	100-110 MPa
	Flexural Modulus	ASTM D790	> 1500 MPa**	2300-2400 MPa
	Elongation at Break	ASTM D638	> 8-20%**	9%
	Shore D Hardness	ASTM D2240	> 80D	89D
	IZOD Impact (Notched)	ASTM D256	N/A	29 J/m
ISO	Ultimate Flexural Strength	ISO 20795-2	> 50 MPa**	60-65 MPa
	Flexural Modulus	ISO 20795-2	> 1500 MPa**	1510-1600 MPa
	Sorption	ISO 20795-2	< 32 ug/mm ³	18 ug/mm ³
	Solubility	ISO 20795-2	< 5 ug/mm ³	0.1 ug/mm ³
	Free Monomer Extraction	ISO 20795-2	< 2.2%	PASS
BIOCOMPATIBILITY	Cytotoxicity	ISO 10993	PASS	
	Irritation	ISO 10993	PASS	
	Sensitization	ISO 10993	PASS	

* Not indicated for snoring appliances in the United States

**Denotes Keystone determined passing criteria based on design requirements

These data are typical values and were determined through testing on DLP printers which are validated for use with Keyprint® products. Mechanical properties will vary based on machine, part orientation, machine type, machine power, post curing of the printed parts, and cleaning. See product guide for post-processing procedure and best practices. Improper use or failure to adhere to the product guide may result in variations of color and mechanical properties. This product is suitable for the manufacturing of flexible dental appliances such as splints, mouthguards, and nightguards. Keystone Industries reserves the right to change material characteristics, and formulation without prior notification.

Composition: methacrylate, photo-initiator, inhibitor, and pigment

These data were determined in accordance with ISO and ASTM standards and are pursuant to Keystone Industries Quality System. This document is valid without signature.