



Performance Qualification Certificate

Keystone Industries hereby certifies that the following resin, KeySplint Hard, has been thoroughly tested and meets all validation requirements with the specified workflow(s) below.

Equipment	Make/Model	Cleared Settings
3D Printer	Carbon M2/M3	KeySplint Hard Tinted
Nesting Software	Carbon M2/M3	Carbon SOP
Post Wash	(2) IPA Baths at ~140 RPM	Bath 1: 3 minutes, Bath 2: 2 minutes
Post Cure	Dreve PCU 90	10 minutes per side (under N2)
Post Cure	Dreve PCU LED	10 minutes total (under N2 - 90% intensity)
Post Cure	Otoflash G171	2000 flashes per side (under N2)
Post Cure	Uvitron 400W	90 seconds per side (100% intensity)

Design Specifications:

Design Output/ Specification	Test Method	Design Input Threshold	Dreve PCU 90 Result	Dreve PCU LED Result	Otoflash G171 Result	Uvitron 400W Result
Flexural Strength	ASTM D790	100 MPa	Pass	Pass	Pass	Pass
Flexural Modulus	ASTM D790	2200 MPa	Pass	Pass	Pass	Pass
Elongation at Break	ASTM D638					
Shore D Hardness	ASTM D2240					
IZOD Impact	ASTM D256					
Ultimate Flexural Strength	ISO 20795-2					
Flexural Modulus	ISO 20795-2					
Sorption	ISO 20795-2	32 ug/mm ³	Pass	Pass	Pass	Pass
Solubility	ISO 20795-2	5 ug/mm ³	Pass	Pass	Pass	Pass
Free Monomer Extraction	ISO 20795-2	< 2.2 %	Pass	Pass	Pass	Pass
Cytotoxicity	ISO 10993-5	< 2	Pass	Pass	Pass	Pass
Irritation	ISO 10993-10	Pass	Pass	Pass	Pass	Pass
Sensitization	ISO 10993-10	Pass	Pass	Pass	Pass	Pass

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

Test methods highlighted in grey are not applicable to the specified product and therefore not tested.