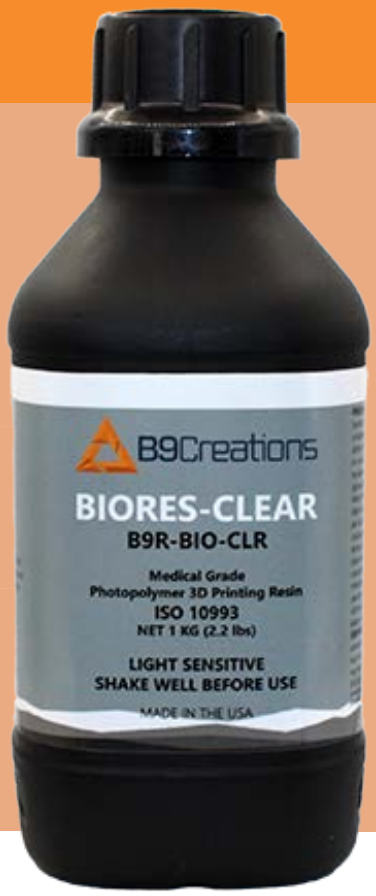
B9Creations

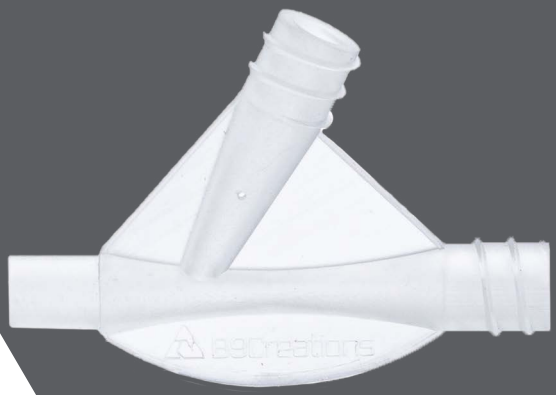
b9c.com/materials

BIORES-CLEAR



Premium, biocompatible 3D printing resin designed for creating high-precision, translucent parts.

Biores - Clear is a premium, biocompatible 3D printing resin designed for creating high-precision, translucent parts. Approved under ISO 10993-5, it meets stringent safety standards for cytotoxicity, ensuring reliability and safety for medical and professional applications.



KEY FEATURES

- Biocompatible
- High-detail
- Translucent
- Versatile

B9Creations

Material Data Sheet

BIORES-CLEAR B9R-BIO-CLR

	METRIC	IMPERIAL	METHOD
TENSILE PROPERTIES			
Tensile Strength	30.1 MPa	4365 psi	ASTM D638-22
Tensile Modulus	1350 MPa	195.8 psi	ASTM D638-22
Elongation	5.18%	5.18%	ASTM D638-22
FLEXURAL PROPERTIES			
Flexural Strength	41.8 MPa	6062.6 psi	ISO 178 (2019)
Flexural Modulus	1430 MPa	207.4 ksi	ISO 178 (2019)
TEMPERATURE PROPERTIES			
Heat Deflection Temp @ 1.80 MPa	41 °C	105.8 °F	ISO 75-1, ISO 75-2 (2020)
Heat Deflection Temp @ 0.45 MPa	50 °C	122 °F	ISO 75-1, ISO 75-2 (2013)

B9Creations

Biocompatibility Results

BIORES-CLEAR B9R-BIO-CLR

BIORES-CLEAR is a monomer based on acrylic esters which may be suitable for a range of 3D printed medical applications. The product has been tested according to ISO 10993-5 guidelines meeting stringent safety standards for cytotoxicity, ensuring reliability and safety for medical and professional applications.

Instructions for Use

PPE: Use nitrile gloves, protective jacket and protective lenses.

Resin Preparation: Prior to printing, shake the bottle of resin for 10 seconds of make sure the liquid is uniform.

3D Printing: Pour liquid resin into the resin vat of your B9Creations 3D printer. Choose your material layer thickness. Print.

Cleaning:

Note: The clean unit should be a designated ultra clean unit with fresh isopropyl alcohol (IPA) and all tools (spatulas tweezers and anything used to handle the print) should be precleaned with fresh IPA.

Sample is printed and prior to curing, cleaned in fresh IPA.

Precure Cleaning

1. Scrape off excess resin from the build table with a clean rubber spatula (print remains on the build table)
2. Clean the printed samples on the build table in the B9Clean unit, using a dedicated "ultra clean" unit for the bio-resin with fresh IPA for the standard clean cycle (10 minutes)
3. Remove samples from build table, place in mesh basket and repeat clean cycle
4. Remove samples from clean unit
5. Place samples in small container and detail clean with fresh IPA in a squirt bottle, swirl samples in container as needed to remove any uncured resin
6. Carefully pat dry and place on clean paper towel then allow to completely dry

Curing:

Cure sample in a UV post-curing unit for 60 minutes in air, flipping the unit over halfway through the curing cycle

Biocompatibility Testing

Samples printed with Biores - Clear Resin have been eveluated in aacordance with the following biocompatibility criteria:

ISO Standard	Description
ISO 10993-5: 2009	Not cytotoxic

Resin printed and processed as outlined in this document has been tested in accordance with ISO 10993-5:2009, Biological evaluation of medical devices - Part 5: Tests for in vitro cytotoxicity, Biores-Clear passed the requirements for biocompatibility according to the above test. If tested according to the procedures above the material does not contain leachable substances that may cause cytotoxicity. B9Creations makes no representation and is not responsible for the results of any biocompatibility tests other than those specified above.

DISCLAIMER

Biocompatibility results may vary if protocols are used other than those outlined in this document Do not use Biores-Clear in medical applications involving implantation in the human body or contact with body fluids or tissues. B9CREATIONS LLC. MAKES NO REPRESENTATION, WARRANTY OR IMPLIED WARRANTY CONCERNING THE SUITABILITY OF THESE MATERIALS FOR USE IN THE IMPLANTATION IN THE HUMAN BODY OR IN CONTACT WITH BODY FLUIDS OR TISSUES. IT IS THE SOLE RESPONSIBILITY OF THE MANUFACTURER OF THE END-USE-PRODUCT TO DETERMINE THE BIOCOMPATIBILITY OF ALL PRINTED PARTS FOR THEIR RESPECTIVE USES.

Please see the product SDS for further regulatory and safety information.