makertechLabs®
3D Solutions

Shaping the future of
3D PRINTING

As a pioneer in Latin America, Makertech Labs leads the 3D printer resin market, delivering innovative solutions that have reached over 40 countries.

Our biocompatible line, crafted with premium raw materials from Germany and the United States, meets the highest demands in dentistry and prototyping, always prioritizing safety and quality. With FDA (Food and Drug Administration) approval and rigorous certification tests, we ensure reliability in every product.

Stand out in your market with the excellence and innovation that only Makertech Labs can offer.

Learn more at:
www.makertechlabs.com

BIO **CROWN DIAMOND**

Just like a diamond, this resin stands out for its strength, ensuring precision and quality in every print.

Diamond is a state-of-the-art 3D resin, biocompatible and radiopaque, developed to meet the highest aesthetic and functional standards for printed prosthesis.It offers superior mechanical resistance and a gloss that faithfully replicates the natural appearance of teeth.

With Diamond, we have reached a new level in durability and aesthetics, providing a highly precise translucent finish that raises the quality of results in 3D-printed prosthesis.

Indications For Use:

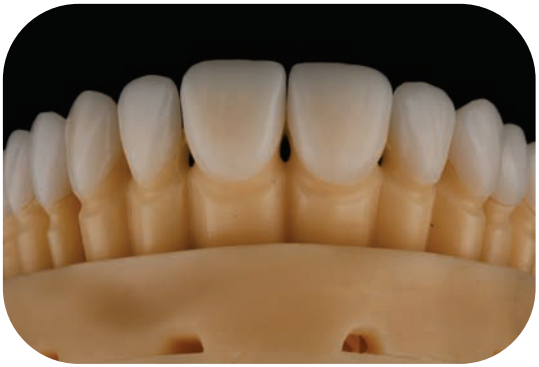
- Definitive unit crowns
- Inlays, onlays and veneers
- Bar-reinforced protocols
- Artificial teeth for permanent removable partial and full dentures.

Features:

- Natural fluorescence
- Flexural strength
- High hardness
- Radiopaque

Colors:

Low translucency: **DBL, DA1**
Medium translucency: **BL, A1 and A2**
High translucency: **PE (Pearl Enamel)**



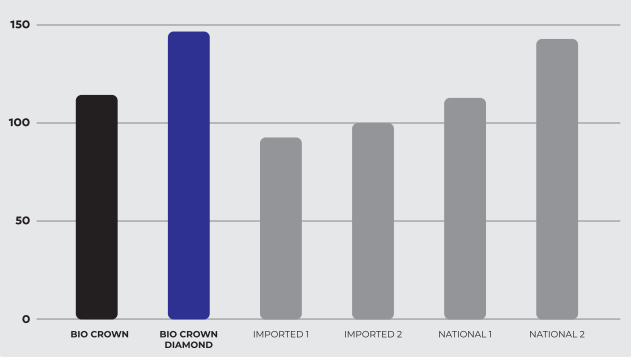
Comparative Table:

	Flexural Strength	Tensile Strength	Shore D hardness	Radiopacity (%)	Amount of Load	QTY	Investiment
BIO CROWN DIAMOND	143 MPa	101,51 MPa	92,5	≥150%	52%	300g	$$$$
BIO CROWN	111,20 MPa	61,87 MPa	85	≥20%	14%	250g	$$
BRAND 1	110 MPa	71,88 MPa	90,5	≥135%	33%	250g	$$$$
BRAND 2	139 MPa	59,96 MPa	92	≥120%	57,80%	250g	$$$$$
BRAND 3	101 MPa	72 MPa	80,9	≥190%	> 30%	500g	$$$$$$$$
BRAND 4	90 MPa	86,77 MPa	83,3	≥100%	31%	500g	$$$$$$$$

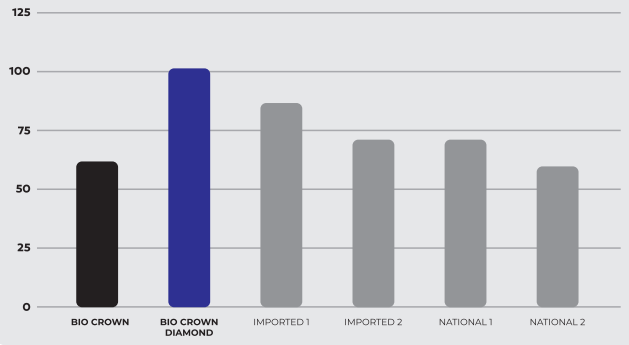
COMPARATIVE DATA

BIO **CROWN DIAMOND**
X
COMPETITORS

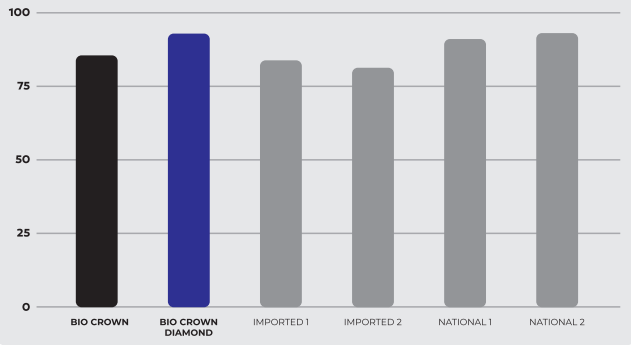
Flexural Strength (Mpa)



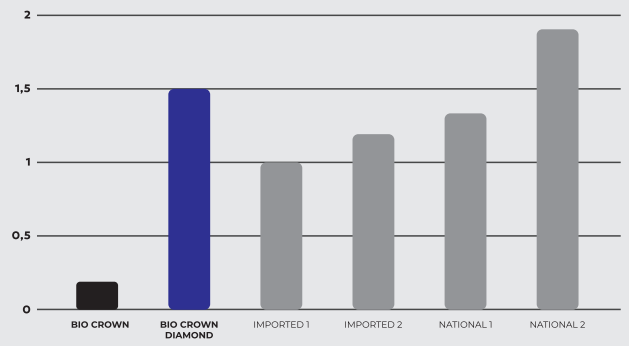
Tensile Strength (Mpa)



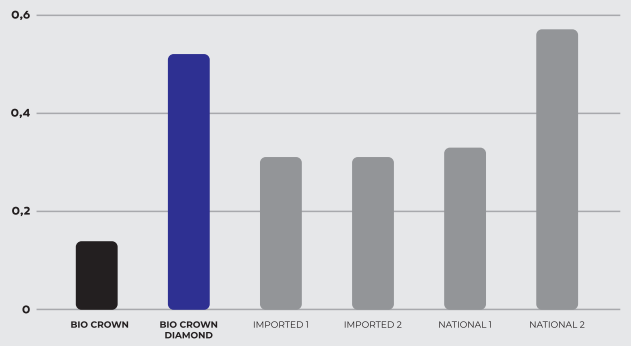
Shore D Hardness



Radiopacity (1mm of Al)



Load Quantity ≃ (MEV)



BIO **CROWN**

PriZma 3D Bio Crown is a Class II **biocompatible nanohybrid composite resin**, which contains silanized ceramic and zirconia, elements that provide the superior quality required for the development of work with crowns, bridges, inlays and onlays. Indicated for long-term temporary work. DOES NOT PRESENT RADIOPACITY.

IDEAL VISCOSITY:
Fluid resin keeps the loads in suspension for longer during printing, in addition to facilitating the cleaning of your 3D printer tank.

HIGH RESISTANCE AND STABILITY:
Its formula with silanized ceramic and zirconia offers exceptional resistance to breakage, bending, abrasion and even greater longevity to the printed elements.

EXCELLENT AESTHETIC RESULTS:
The availability of BL, A1, A2 colors, easy polishing and the perfect balance between opacity, translucency and fluorescence of priZma 3D Bio Crown, allow the aesthetic results of 3D printing to be extremely harmonious in relation to natural teeth. Can be characterized with any type of composite coloring kit.

BIOCOMPATIBILITY:
PriZma 3D Bio Crown resin, like other biocompatible resins from Makertech Labs, undergoes 4 toxicity tests, being tested and approved by ANVISA and FDA, ensuring the safety of the parts developed for use in the mouth.

Differentials of the PriZma 3D Bio Crown resin:

The fillers that are part of the inorganic matrix of Bio Crown resin are silanized, which enhances the bonds between organic and inorganic matrix, bringing greater strength to the composite. Moreover, the silanization of inorganic components contributes for a good cementation with resin agents, reducing infiltrations and loosening.

The lower viscosity compared to competing resins of the same application provides a lower amount of failures during impression taking, less resin waste, and easier cleaning.

Fluorescence that mimics the natural tooth is an important feature of PriZma 3D Bio Crown resin, ensuring that a tooth does not look artificial in both light and dark environments.

Compatibility with open system LCD and DLP printers without loss of quality. Makertech Labs has developed the Bio Crown resin thinking in printing excellence for different systems, for this purpose, it has developed a resin with acceptable curing times per layer in all systems without losing productivity. In other words, an LCD printer will carry a longer layer time than a DLP printer, but with an average that favors both equipments, without loss of quality.

Photo by Diógenes Holanda

BIO **SPLINT**

PriZma 3D Bio Splint is a biocompatible resin suitable for 3D printing of all types of retainers (splints) and muscle relaxant plates with high durability, hardness and mechanical resistance.

HIGH RESOLUTION
With priZma 3D Bio Splint resin, you can make transparent 3D prints with high precision that provide a perfect fit and excellent cost-benefit.

HIGH DURABILITY
Its mechanical properties and printing fidelity guarantee excellent durability when used within the recommended specifications.

SAFETY
We perform 5 toxicity tests on our biocompatible resins, ensuring total safety for use in the mouth.

BIO **GUIDE**

The priZma 3D Bio Guide resin is a Class II biocompatible resin indicated for 3D printing of surgical guides for implants, gingival plasty, splints for orthognathic surgeries and others.

It provides 3D printing with excellent definition, low shrinkage and repeatability, facilitating the insertion of washer directly after printing and post-processing.
It is a translucent yellow resin for 3D printers, and after autoclaving, translucent amber, which facilitates the distinction of sterilized objects, providing greater safety in surgical procedures.

EXCELLENT 3D PRINTING QUALITY
The priZma 3D Bio Guide resin provides a wealth of detail, suitable for professionals seeking high standards in 3D printing.

HIGH RESISTANCE AND AUTOCLAVABLE
In addition to being highly resistant after processing, supporting the placement of washers and screws, it is also autoclavable, providing safety for surgical procedures.

BIO **ORTHO IBT**

MakertechLabs priZma 3D Bio IBT Resin is Class I biocompatible for 3D printing of guides for indirect bracket bonding. The printed guides allow bracket bonding with greater precision and in just one step, reducing chair time by up to 75% and providing more technology and comfort to the patient.

Using dental software, you can plan the exact location of the orthodontic brackets and print the indirect bonding guide, which will allow you to easily bond all the brackets at once, saving chair time.

EASY TO HANDLING

With a semi-rigid consistency, it has ideal flexibility for easy bracket positioning and bonding in just one step and also allows photopolymerization and removal of the guide without detaching the elements. Provide more comfort to your patient and present this differential in your treatments.

MAXIMUM REPRODUCTION OF DETAILS

Its printing fidelity guarantees optimal adaptation of brackets that require a high degree of detail in the parts.

WIDE

Makertech Labs priZma 3D Wide Resin is the perfect choice for printing dental models, dies and prototypes. Compatible with any open system 3D printer, Wide is an affordable solution without compromising quality. In addition, it offers low shrinkage, detailed definition and high precision for your models. Available in gray and beige.

INDICATIONS:

Dental models, dies and prototypes in general.

FLEXURAL PROPERTIES

Elastic Modulus (Gpa): 2.08
Secant Modulus at 1% (Gpa): 2.01
Flexural Strength at 5% (Mpa): 65.44

Tensile Strength at Break (Mpa): 39.01
Elongation at Break (%): 4.71
Maximum Load (N): 675.05

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