TRINIA®

The ***REVOLUTIONARY METAL-FREE***
CAD/CAM Material

WHY TRINIA?

Dentists and technicians are seeking alternatives to metal substructures with improved clinical capabilities. TRINIA® is today's CAD/CAM solution for metal-free restorations.

ONLY TRINIA®

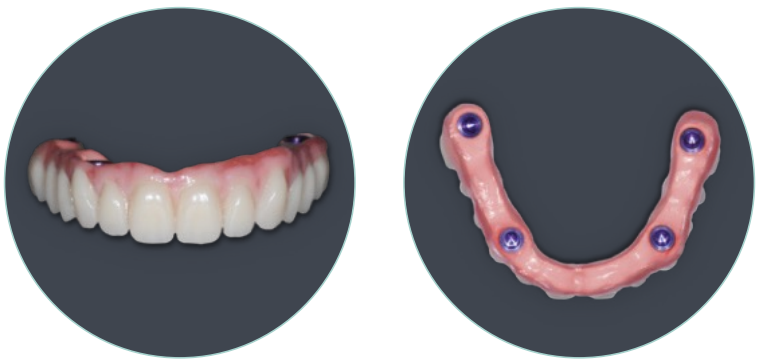
- Biocompatible and metal-free
- Modifiable and repairable
- Lightweight and flexible
- By definition, cannot be a cantilever due to its flexibility
- Provides for longer distal extensions
- No firing required

CLINICAL USE AND APPLICATIONS

TRINIA® CAD/CAM discs and blocks are composed of a multi-directional interlacing of fiberglass and resin in several layers. TRINIA® is intended to be used by dental technicians and dentists for making copings, substructures or frameworks for permanent and transitional anterior or posterior crowns, bridgework, and substructures that can be either cemented or uncemented restorations, such as telescopic restorations.

Prosthetic Frameworks

Removable Prosthetics



Fixed Prostheses

TECHNICAL DATA

In order to meet the broad indications of clinical use, TRINIA® was designed with the appropriate mechanical suitability as well as appropriate aesthetic characteristics. The resulting product has high flexural and compressive strength.

DURABLE AND RESILIENT

Flexural Strength	393 MPa
Flexural Strain at Max Stress	2.7 %
Flexural Modulus of Elasticity	18.8 GPa
Tensile Strength	169 MPa
Compression Strength (Parallel)	347 MPa
Compression Strength (Perpendicular)	339 MPa
Charpy Impact	26 KJ/m^2
Rockwell Hardness (R-Scale)	125 HRR
Barcol Hardness	63
Shore Hardness	92.5
Density / Specific Gravity	1.68 g/cm^3
Water Absorption	.03%
Fracture Toughness	9.7 MPa $m^{1/2}$
Short Beam Shear	49 N/mm^2
Shear Bond Strength to Enamel*	18 MPa
Shear Bond Strength to Dentin*	10 MPa

*With thermocycling using 3M™ RelyX™ Unicem Automix 2.

BIOCOMPATIBLE

ISO 10993-3	Non-mutagenic
ISO 10993-5	Does not induce cytotoxicity
ISO 10993-6	Non-irritant
ISO 10993-10	Non-sensitizer
ISO 10993-11	No adverse physical symptoms after injection

SELECTED RESEARCH

A. C. Magee, P. Perpetuini, E. A. Bonfante, J. C. Mitchell, *Photoelastic Analysis of Fiber-Reinforced Composite Implant Supported Dentures*, Midwestern University Poster Presentation, Dec. 2022

Cheng, Y-C., Bergamo, E., Murcko, L., Hirayama, M., Perpetuini, P., Speratti, D., Bonfante, E., *Fiber-reinforced composite partial fixed dental prostheses supported by short or extra-short implants: A 10 year retrospective study*, Clin Implant Dent Relat Res. 2022; 1-8. doi:10.1111/cid.13133

Bergamo, E., Yamaguchi, S., Lopesa, A., Coelho, P., Araújo-Júniora, E., Benalcázar Jalkha, E., Zahouia, A., Bonfantea E., *Performance of crowns cemented on a fiber-reinforced composite framework 5-unit implant-supported prostheses: in silico and fatigue analyses*, Dental Materials, September 2021

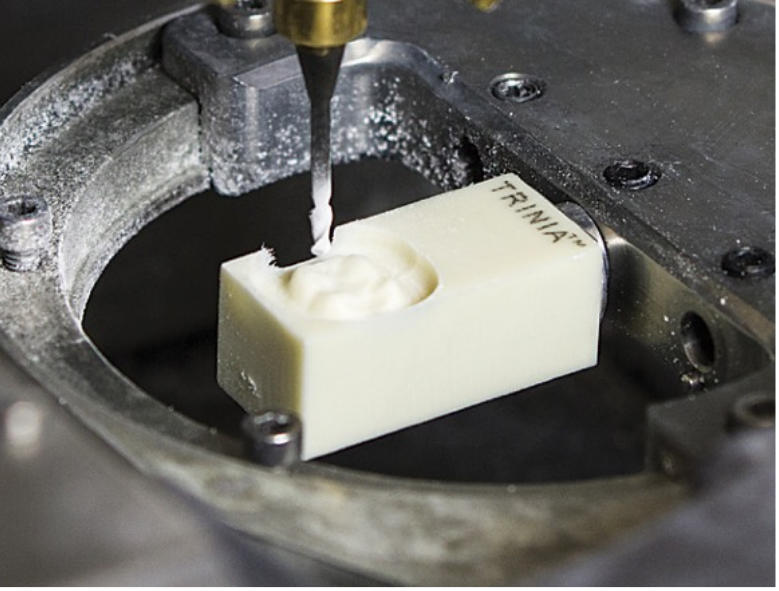
Ewers, R., Marincola, M., Perpetuini, P., Bergamo, E., Chen, YC., Bonfante, E., *Severely Atrophic Mandibles restored with Fiber-Reinforced Composite Prostheses Supported by 5.0mm Ultra-short Implants present high survival rates up to Eight Years*, Journal of Oral and Maxillofacial Surgery, September 2021

Salgado-Peralvo, A., Salgado-García, A., Peña-Cardelles, J., Kewalramani, N., Gómez-Polo, M., *Metal-Free, Implant-Supported Full-Arch Rehabilitation*, Dentistry Today Vol. 40 No. 5, January 2021, Pages 46-51

Magee, A. C., Perpetuini, P., Bonfante, E. A., Mitchell, J. C., *Photoelastic Analysis of Fiber-Reinforced Composite Implant Supported Dentures*, Midwestern University Research Day, April 22, 2021

Bergamo, E., Yamaguchi, Y., Coelho, P., Lopes, A., Lee, C., Bonfante, G., Jalkh, E., Araujo-Júnior, E., Bonfante, E., *Survival of implant-supported resin-matrix ceramic crowns: In silico and fatigue analyses*, Dental Materials, January 2021

Wagner, F., Seemann,, R., Marincola, M., Ewers, R., *Fiber-reinforced resin fixed prostheses on four short implants in severely atrophic maxillae: 1-year results of a prospective cohort study*, J Oral Maxillofac Surg. 2018



CAD/CAM RECOMMENDATIONS

TRINIA® is available in 98mm circular discs, 89mm D-shaped discs, and 40mm and 55mm blocks. TRINIA® can be milled on most leading wet or dry milling systems following appropriate milling strategies. The usage of nano-diamond burs is essential for successful milling.

- Eclipse design for bars
- Minimum 0.7mm wall thickness
- Minimum 7.0mm^2 connector
- Maximum 18mm extension

REVOLUTIONARY
METAL-FREE
CAD/CAM MATERIAL

- Metal-Free
- Biocompatible
- Durable
- Lightweight

Part No.	Description		
612-115	TRINIA® Disc	Ivory	98mm x 15mm
612-125	TRINIA® Disc	Ivory	98mm x 25mm
615-115	TRINIA® D-Shape	Ivory	89mm x 71mm x 15mm
613-115	TRINIA® Block (2)	Ivory	55mm x 19mm x 15mm
614-115	TRINIA® Block (2)	Ivory	40mm x 19mm x 15mm
612-215	TRINIA® Disc	Pink	98mm x 15mm
612-225	TRINIA® Disc	Pink	98mm x 25mm
615-215	TRINIA® D-Shape	Pink	89mm x 71mm x 15mm

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