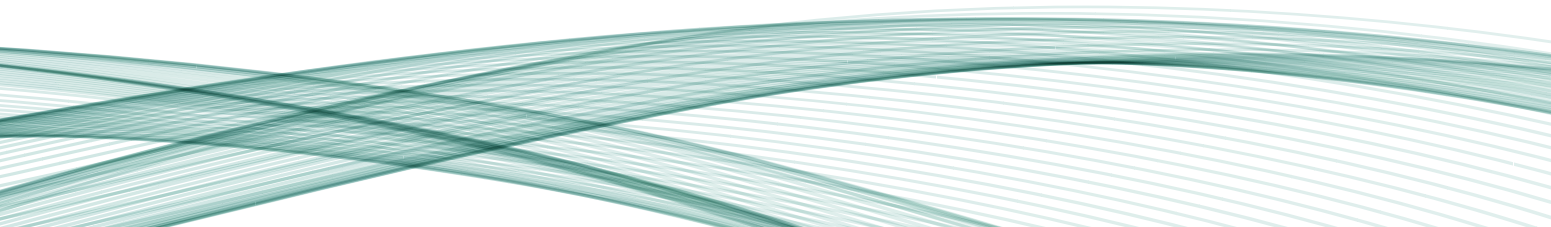




The **REVOLUTIONARY METAL-FREE**
CAD/CAM Material





WHY TRINIA?

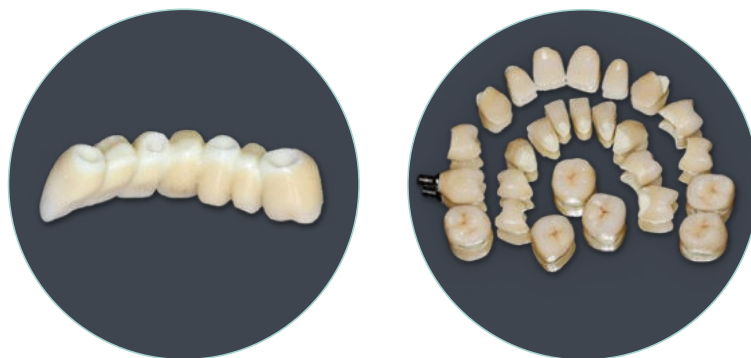
Dentists and technicians are seeking alternatives to metal substructures with improved clinical capabilities. TRINIA® is today's CAD/CAM solution for metal-free restorations.

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

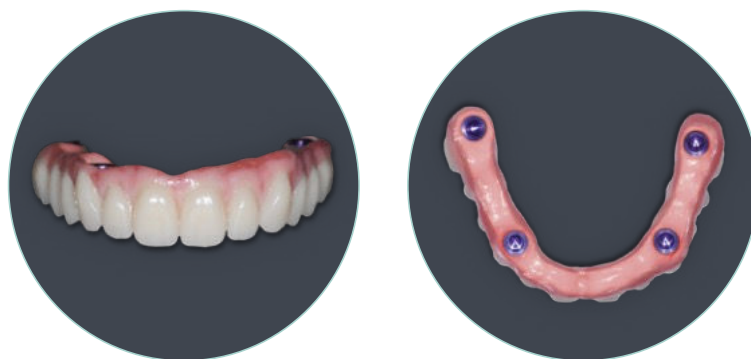
TRINIA® CAD/CAM discs and blocks are composed of a multi-directional interlacing of fiberglass and resin in several layers. TRINIA® is intended to be used by dental technicians and dentists for making copings, substructures or frameworks for permanent and transitional anterior or posterior crowns, bridgework,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

BIOCOMPATIBLE

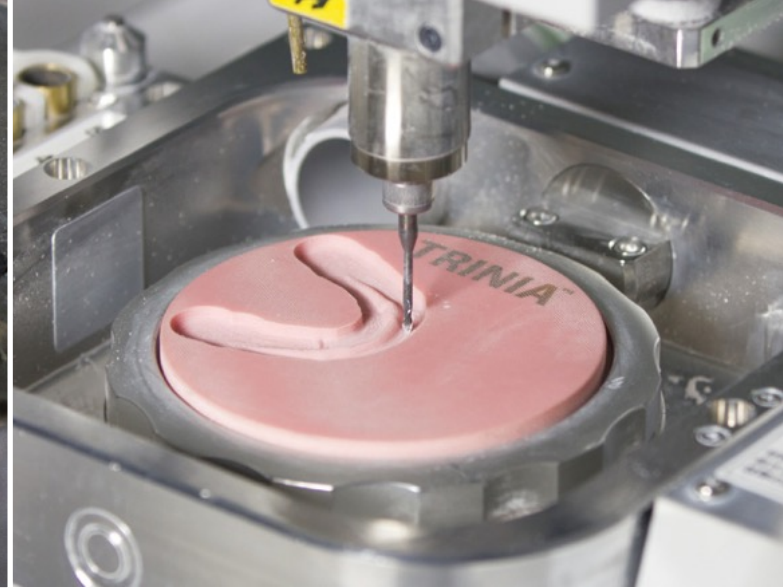
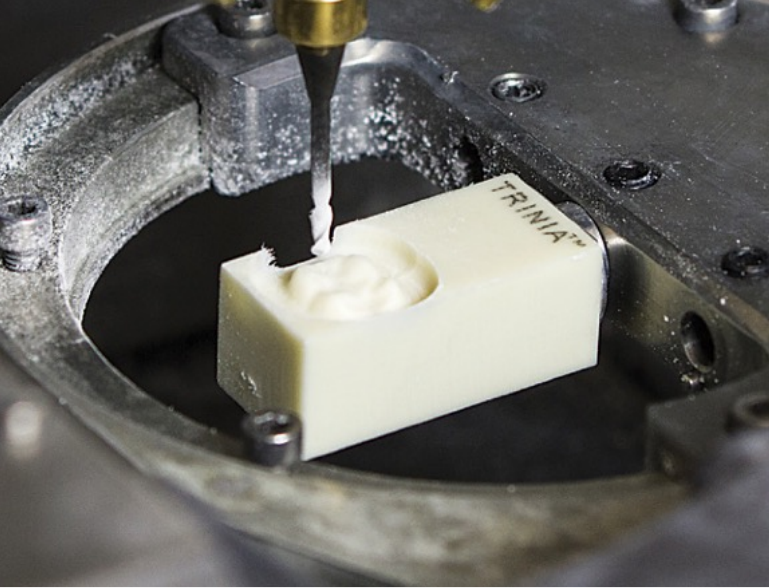
| | |
|--------------|--|
| ISO 10993-3 | Non-mutagenic |
| ISO 10993-5 | Does not induce cytotoxicity |
| ISO 10993-6 | Non-irritant |
| ISO 10993-10 | Non-sensitizer |
| ISO 10993-11 | No adverse physical symptoms after injection |



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

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., Lopes, A., Coelho, P., Araújo-Júnior, E., Benalcázar Jalkha, E., Zahouia, A., Bonfante 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., Maricola, 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., Maricola, 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 7.0mm² 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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