

NANOTECH



**G-CAM** 

BIONANOPOLYMER

DOPED WITH GRAPHENE

# Grafene

Characteristic

Graphene is a two-dimensional material in which carbon atoms are joined by SP2bonds to form a flat sheet with a hexagonal honeycomb structure

Graphene has great potential, added to the manufacture of other materials, it amplifies its properties. Its main features include high thermal and electrical conductivity, high tensile strength, low density and low thermal expansion coefficient. Furthermore, being carbon, graphene is completely ecological and recyclable

We currently offer an extensive color catalog: BL2, A1, A2, A3, B2,C2, D2  $\,$ 

PINK and TRASPARENT

It is also possible to characterize it with surface colors and Composite enamels

The G-CAM disc is produced in two chromatic types:

- G-CAM Monochrome, of only one pure color
- G-CAM Multichrome, which has a unique chromatic range, and a high translucency

The incorporation of graphene into acrylic resins is a new strategy to improve its mechanical properties, simultaneously increasing both the elastic modulus and toughness, reducing the formation of cracks and / or their propagation, as well as decreasing the degree of contraction during polymerization.

Graphene is the ideal candidate to improve the performance of self-curing acrylic resins for dental use, not only for its high tensile strength, low thermal expansion coefficient, high absorption capacity but also for its flexibility. for its excellent strength / weight ratio

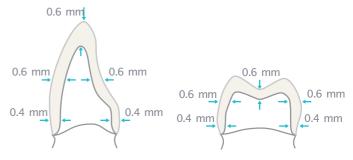
The thickness of the G-CAM disc can be 14, 16, 18, 20.22, 24, 26 mm. Special Piece H 30mm.



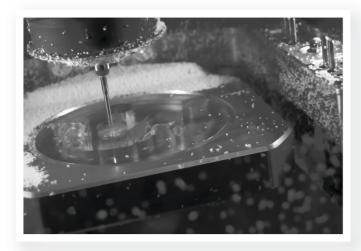
### Comparative table dental solutions

Type of prosthesis	PMMA	Zirconia	Lithium disilicate	Grafene
Single crowns	<b>~</b>	<b>~</b>	<b>~</b>	<b>~</b>
Bridges higher than three elements	×	~	×	<b>~</b>
PBridges with two intermediate elements	×	×	×	<b>~</b>
Inlays	<b>~</b>	<b>~</b>	<b>~</b>	<b>~</b>
Veneers	×	<b>~</b>	<b>~</b>	<b>~</b>
Complete prosthesis	<b>~</b>	×	×	<b>~</b>
Direct and indirect rehabilitation	×	×	×	<b>~</b>

#### Minimum thicknesses



(See the instructions for use for veneers, inlays and onlays).



# **PROPERTY**

The disc doped with G-CAM graphene is especially indicated for permanent dental structures, it is available in different colors, which provide an extremely natural aesthetic appearance. In addition to solving all the mechanical, physico-chemical and biological deficiencies of the rest of the materials used in the sector

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- Appearance similar to that of natural teeth, ideal for areas that are more aesthetic.
- Wide color range
- The density of the material is low so that the prosthesis is light
- The high electrical conductivity maintains a healthy oral mucosa and allows it to respond normally to hot/cold thermal stimuli
- Translucent material that guarantees high transparency by mimicking the natural aesthetics of the tooth
- Totally waterproof and stable material, therefore it does not allow the accumulation of tartar and bacterial plaque

It does not require the use of Bonding before coloring or adding glazes



#### **MECHANICAL PROPERTIES**

- The high modulus and elastic limit ensures that the tensions generated during chewing do not generate permanent deformations and allow the creation of prostheses on smaller sections
- The high resistance to deformation prevents the formation of cracks and fractures.
- High impact resistance in the case of removable dentures
- Great abrasion resistance that prevents excessive wear due to cleaning the prosthesis or food intake
- The ability to add photopolymerizable materials prolongs the life of the treatments.



### CHEMICAL PROPERTIES

- · It is chemically inert.
- It is insoluble in oral fluids
- It does not absorb water or saliva, so the mechanical properties of the material are not altered and it is completely hygienic.
- It does not allow the phenomenon of bimetallism

Elastic module	> 3200 MPa	
Resistance to torsion	> 140 MPa	
Superficial hardness	89 Shore	
Water absorption	15 μg/mm³	
Residual monomer	< 0.1%	



### **BIOLOGICAL PROPERTIES**

It is not irritating or toxic to the patient

It has passed the cytotoxicity tests carried out by the Universidad de Alcalá and for him Instituto Valenciano de Microbiología (IVAMI)

In vitro cytotoxicity test. ISO 10993-5:2009

Bacterial mutation test. ISO 10993-3:2014y OECD 471:1997

It does not allow the growth of fungi and bacteria

It is antiallergic.

### **IMPORT**



BY





Andromedananotech by Biodynamic

info@andromedananotech.com www.andromedananotech.com

43037 Lesignano de' Bagni (PR) - Italy Mob.: +39 3288075617 Export Manager

#### **Graphenano Dental**

www.graphenanodental.com

## PROCEDURE FOR **CEMENTATION**

#### LABORATORY

#### CLEAN THE GRAPHENE CROWN WELL





Dry with clean air

#### **CLINICAL PROCEDURE**

#### **CLEANING OF THE TREATED TOOTH**



(110 µm; 3.5 bar)





Degrease with ethyl alcohol

Eliminate excess

Let it dry (60s)









Apply a rubber dam, etch with orthophosphoric acid

Wash and dry well

Apply the silane

#### **CEMENTATION OF THE TOOTH**







Apply dual

Press firmly and remove excess cement

Polymerize (30s) and remove