

# Deflex<sup>®</sup>

**DEFLEX PEEK**

*Injectable*



**FIXED & REMOVABLE DENTURES**

*Dental labs catalogue*

# DEFLEX PEEK

## Injectable



**DEFLEX PEEK** is an injectable Polyether ether ketone. It is the most biocompatible thermoplastic for dental use nowadays, with high performance mechanical properties, enormous resistance to wear and a valuable combination of stiffness and elasticity that resembles bone.

**Metal free, monomer free, inert and virtually unchanged in the oral environment.**

BIOCOMPATIBILITY IN ITS MAXIMUM EXPRESSION

SUITABLE FOR FIXED AND REMOVABLE DENTURES

PERFECT BALANCE OF HARDNESS AND ELASTICITY

HIGH PERFORMANCE POLYMER

## APPLICATIONS



ANATOMICAL STRUCTURE OF BRIDGES AND CROWNS (1-2 INTERMEDIATE ELEMENTS)

INFRA-STRUCTURE OF BRIDGES AND CROWNS, COATABLE WITH COMPOSITE (1-2 INTERMEDIATE ELEMENTS)

SUPER-IMPLANT  
SUPPORTED  
STRUCTURES

HYBRID  
DENTURES

RPD'S FRAMEWORKS  
(FREEDOM OF DESIGN)












TELESCOPIC CROWNS  
AND SCREW-RETAINED  
IMPLANT CROWNS

IMPLANT BAR  
OVERDENTURES

**LOWER INVESTMENT IN EQUIPMENT!**  
ELABORATION of fixed dentures without ceramic furnace  
or CAD/CAM system.

**Note:** Not indicated for the elaboration of structures of more than two intermediate elements, neither implants, nor conical telescopic crowns

## BENEFITS

	Lightweight but very resistant		Resistant to wear		Biocompatible*
	Non-abrasive to opposing teeth		Low chew impact on dental implant	<b>3.6 - 4.1 GPa</b>	Low tensile modulus
	Chemically inert to acids and oral fluids		Esthetically pleasing		Accepts fine polish
	Suitable for steam sterilization		Temperature - resistant		Low liquid absorption

## TECHNICAL CHARACTERISTICS

MELTING TEMPERATURE	330°C	TENSILE MODULUS (E)	3.6 - 4.1 GPa
INJECTION TEMPERATURE	370°C	CHARPY IMPACT STRENGTH	N = No break
STRESS AT YIELD	95 MPa	WATER ABSORPTION (SATURATION)	0.4



PEEK: EVOLUTION TOWARDS A DENTISTRY WITHOUT METAL

\* The biocompatibility has been tested according to ISO 10993-1, recommended for permanent contact with the mucosa.

# FIXED DENTURES

The main challenge in this segment was to look for alternative materials to metal, to avoid the effects of corrosion that metals can cause in the mouth.



INFRA-STRUCTURE OF BRIDGE IN PEEK

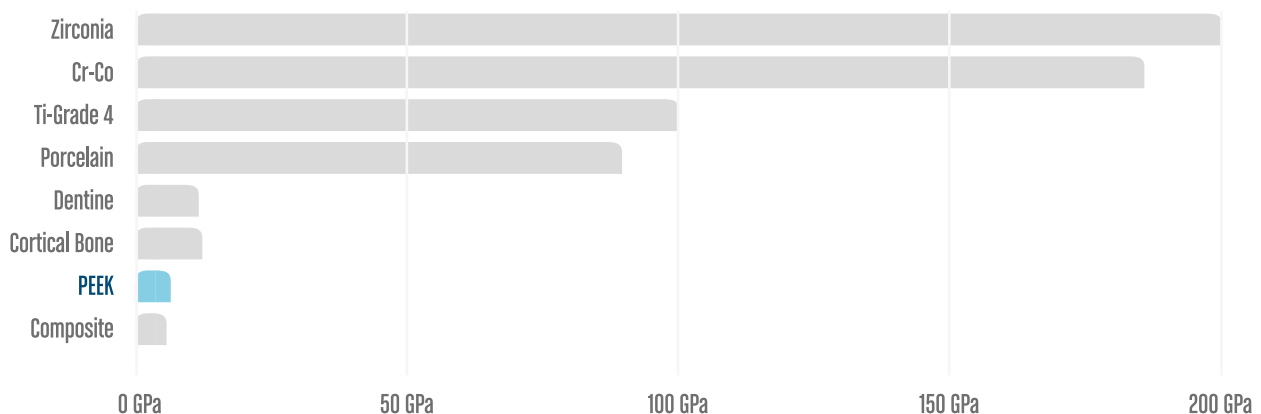


BRIDGE COATED WITH COMPOSITE

## DEFLEX PEEK VS. METAL FRAMEWORK

	METAL	DEFLEX PEEK	PEEK HAS..
STIFFNESS (RIGIDITY)	40-50x higher than bone and PEEK	Bone-like rigidity	Less Impact on supporting tissues (teeth, crestal bone, etc.) and implants
SOLUBILITY	Releases minerals and metallic ions	Totally insoluble in mouth.	Greater biocompatibility
ESTHETICS	Needs to be masked with an opaquer material	Coloured as similar to tooth and soft tissues, beige (ivory) and pink	Esthetically more pleasant

## (YOUNG'S) ELASTICITY MODULUS



# REMOVABLE DENTURES

The injectable thermoplastic materials - polyamides, acetal, PEEK, among others - have represented a qualitative leap in the world of removable dentures. In addition to bringing aesthetics by replacing metal retainers with translucent or tooth-colored retainers, they also enable the elimination of residual monomer and metals, and their resulting negative effects.

**Thermoplastics are highly resistant, lightweight and hypoallergenic.**

TYPES OF RPD's	COBALT-CHROMIUM RPD coated in normal acrylic	NORMAL ACRYLIC RPD with metal retainers	DEFLEX PEEK coated in Deflex Classic polyamide	DEFLEX PEEK ADVANTAGES
PRESENCE OF METAL	YES	YES	NO	There is no galvanic effect, nor corrosion. Neutral flavor
RELEASE OF RESIDUAL MONOMER	YES	YES	NO	Hypoallergenic
TYPE OF RETAINERS	Metallic	Metallic	Translucents	More aesthetic results
FUNCTIONALITY	Excessive rigidity (damages the abutment teeth)	Excessive rigidity (damages the abutment teeth)	Good balance of flexibility-rigidity	Greater functionality

## PEEK FRAMEWORK FOR RPD

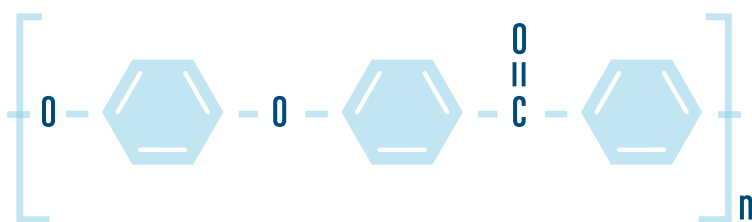


## HYBRID DENTURE IN PEEK



## PEEK IN MEDICAL & DENTAL FIELD

**PEEK has two features that make it suitable for medical and dental fields:**



- A BIOCOMPATIBILITY** with human tissues (has been used for permanent implants as a bone substitute)
- B CORTICAL BONE-LIKE RIGIDITY** (outer bone that provides rigidity but also has an elastic character)

\* DEFLEX PEEK frameworks for RPD can be coated with our translucent pink materials, as an alternative to conventional acrylic.

# DEFLEX INJECTOR



POWERFUL PNEUMATIC  
CYLINDER



PREHEATING OF THE  
MUFLE



MAXIMUM TIME  
SAVING



INTEGRATED  
OVEN



\*AUTOMATIC AND  
DIGITAL PANEL



EASY TO INSTALL,  
EASY TO OPERATE

# COMMERCIAL PRESENTATION

Colors: beige and pink



BULK PELLETS MATERIAL  
packed in plastic tubes  
of 20g and 40g



EMPTY ALUMINUM TUBES MUST  
BE PURCHASED FOR INJECTING  
30mm or 60mm tall tubes.  
Aluminum caps are not needed.

**LESS MATERIAL WASTE**  
You can dose and use the necessary  
amount of material to be injected



Expiration: 24 months  
DEFLEX PEEK has CE class 2 certification



# INJECTION IN CASTING RING

## WAXING & INJECTION SPRUES



## PRE-HEATING



## DOSING



## INJECTING



## RING OPENING



## TRIMMING & POLISHING



## COMPOSITE COATING



**Note:** For frameworks and implant bar for overdentures DEFLEX PEEK can be injected in a Deflex flask, without any other accessory. It is recommended to have a casting oven.

DEFLEX PEEK



LEARN MORE ABOUT OUR PRODUCTS AT  
[WWW.DEFLEX.COM.AR](http://WWW.DEFLEX.COM.AR) & [WWW.DEFLEXGLOBAL.COM](http://WWW.DEFLEXGLOBAL.COM)



## INJECTABLE MATERIALS

*Removable & fixed dentures*



## CAD/CAM MATERIALS

*For milling of bridges and crowns*



DEFLEX MANUFACTURER

**NUXEN**  
SRL

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