

## Improved biocompatibility

Biocompatibility (or tissue compatibility) is the capacity of a material to interact in a positive and appropriate way, with a living organism.

Ideally, dental products manufacture should take into account the product biocompatibility in the manufacturing process, to ensure a positive interaction with human body.

This is the core of ELSODENT BIO+ approach, when designing dental consumables with improved biocompatibility to offer more health-friendly products.



DENTAL PRODUCTS  
FORMULA WITHOUT ADDITION  
OF HEMA, BisGMA, TEGDMA

## COMPOSITES, ADHESIVES SYSTEMS & RESIN-CEMENTS



Outstanding  
Conversion Rate  
>70%



PUREFILL 2

Ultra-powerful  
Adhesion  
All Substrates



INNOCEM

Universal  
Bonding



HEALBOND MP

Great Flexural  
Streight  
>100mPa



PUREFILL FLOW

The Reference  
Temporary  
Resin-Cement



SEAL TEMP & SEAL TEMP S

# HERE | WE USE MORE HEALTH-FRIENDLY DENTAL PRODUCTS

Resins commonly used in dental products composition could release in mouth toxic substances such as Bisphenol A and Formaldehyde.

We are using, stable and non-degradable resins, formulated without any addition of potentially toxic resin, such as HEMA, BisGMA, TEGDMA.





## THE RANGE BIO+

Dental products with improved biocompatibility, manufactured in France and formulated without addition of potentially toxic resin such as HEMA, BisGMA, TEGDMA.

### The origin of BIO+ ELSODENT range

Alarmed by the potential toxicity of dental products commonly used and sold on the market, the French laboratory ELSODENT wanted to address the major concerns of dentists but also those growing health-conscious patients, by developing more health-friendly dental products.



### Scientific background of the BIO+ range

These questions about dental products go back decades. During the 90s, amalgams, more commonly known as «fillings», containing mercury, were already challenged by a part of the scientific community after the discovery of diffusion of toxic substance in the mouth.

Replaced today by composites, these new materials are now getting contested because of their significant potential toxicity. With formula based on these compounds (TEGDMA, HEMA & BisGMA), these dental products can, under specific conditions, release in the mouth toxic substances for our organism and carcinogenic, like Formaldehyde and Bisphenol A.

### The dental revolution

Elsodent has created the BIO+ product range based on more than 20 years of clinical experience. Innovative and efficient, this range perfectly meets the expectations of both dentists and patients. These products benefit from improved biocompatibility, while maintaining exceptional clinical and physico-chemical properties.

Based on its technical and scientific expertise, our laboratory has developed a complete range of composites, resins, adhesive agents, etc. formulated without addition of these potentially dangerous resins (TEGDMA, HEMA or BISGMA). Elsodent is today the only manufacturer of dental products, French in addition, to place biocompatibility at the heart of its innovation



#### MAIN RESINS USED IN DENTISTRY AND RISKS\*

##### BisGMA (Bis Phenol Glycidyl Metacrylate)

Basic resin for composites and others dental products, synthesized from Bisphenol A (BPA) and Glycidyl Methacrylate. Also contains free BPA, quickly released by the products in the mouth, and found in saliva a few hours after use. When hydrolyzed, the product releases **Bisphenol A**.

##### TEGDMA (Triethyleneglycoldimethacrylate)

Resin used to make BisGMA more flowable. Beyond its intrinsic toxicity, its lipophilic nature allows it to easily penetrate cell membranes and interact with DNA. Easily hydrolysed by salivary enzymes to produce **Formaldehyde**.

##### HEMA (Hydroxy Ethyl Metacrylate)

A short-chain of resin, which easily crosses cell walls and can, like TEGDMA, interact with DNA. Interfering in DNA repair, this can lead to mutations and cancers. Easily hydrolysed by salivary enzymes to produce **Formaldehyde**.

\*Sources : *Mol Biol Rep* (2012) 39:1561–1574 | *Dental Materials Journal* 19 (2) 139-152, 2000 | *Mutation Research* 696 (2010) 122–129 | *Dental Materials* 24 (2008) 1670–1675