## • eledent artificial teeth - Technical report-





The new line of **eledent** artificial teeth is manufactured based on acrylic polymers of high molecular weight, highly crosslinked and reinforced (**R-HCL**). They are latest-generation materials.

#### 1. *Wear resistance*

The hardness and resistance to abrasion are adjusted appropriately according to the degree of crosslinking and the filling of each of the layers. Thus, the incorporation of a biocompatible filling in the enamel and its high degree of crosslinking, gives it great resistance to abrasion and to wear.

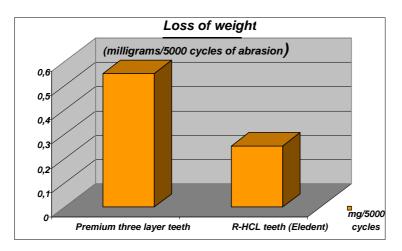
To demonstrate this, Abrasivity test according BSI - BS 5136:1981 / ISO 11609:1995 has been performed on teeth based on R-HCL (like eledent teeth) and premium three layer acrylic teeth.

These were the results:

Type of Test: Abrasion resistance (Abrasivity test ISO 11609/95)

Loss of weigh on premium three layer teeth: 0,438mg / 5000 cycles of abrasion

Loss of weigh on R-HCL teeth: 0,252mg / 5000 cycles of abrasion





In conclusion:

**Eledent** teeth have a wear resistance almost 100% higher than other premium three layer acrylic teeth.

#### 2. Natural look

Eledent teeth are produced with a unalterable coloration, in the most popular color scale worldwide (A1-D4). These Teeth also have a fluorescent effect like natural teeth, The natural transparency provided by its three-layer structure, contribute decisively to the excellent aesthetic effect which gives the teeth an extremely natural and attractive look, whose secret is rooted basically in the following:

- Transparency and fluorescence with bluish and pearly effects
- Presence of mamelons in the central incisors
- Presence of transparency and opalescence in the incisor edges
- Longer necks with a darker tonality, simulating the natural root
- Canines with more colour intensity than the incisors, imitating reality
- Molars with greater quantity of enamel and opalescence on the cuspids

Eledent colour range: A1, A2, A3. A3.5, A4, B0, B1, B2, B3, B4. C1, C2. C3, C4, D2. D3, D4

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## 3. Moulds

Eledent offers a wide selection of shapes with a functional design that is perfectly suited to the different physiognomies found in nature. The forms are equivalent to the most popular in North America.

#### Shape mould equivalence between brands BIOFORM / PORTRAIT & ELEDENT

ELEDENT	BIOFORM / PORTRAIT
(Upper anteriors)	(Upper anteriors)
H11	11H
E12	12E
G12	12G
E13	13E
D21	21D
J21	21J
X21	21X
C22	22C
E22	22E
F24	24F
F31	31F
E32	32E
D42	42D
F42	42F
G42	42G
F43	43F
H45	45H
D55	55D
G62	62G
E75	75E
(Lower anteriors)	(Lower anteriors)
C1	С
E2	E
F3	F
H4	Н
N5	N
06	0
P7	Р
R8	R
S9 **	2
K1 (Upper & Lower posteriors)	KI (Upper & Lower posteriors)
327	632
32F	332
34F	334
29M	29M
31M	3IM
31L	31L
33M	33M
3DM	30M
32M	32M
34M	34M

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#### 4. Technology

The polymerisation of Eledent teeth is made by means of a moulding process by selective injection of the layers (**SICM** -> Selective Injection-compresión moulding) that inhibits the formation of porosity, avoids the contractions of polymerisation and above all achieves the chemical adhesion of the layers through the creation of dentine-neck and dentine-enamel interfaces, that give the tooth greater resistance, in addition to achieving an aesthetic effect similar to the natural tooth.

The different processes are subjected to constant evaluations and quality control. **Unidesa-odi** has implemented and certified a quality system ISO 13485. And the dental pieces manufactured comply with the ISO 22112/05 standard and have their biocompatibility certified, which goes hand in hand with the EC Certification of the European Union for compliance with the 93/42/EEC guideline in matter of quality assurance in the production of healthcare products.



#### 5. Results

Latest-generation materials combined with the most advanced technology and sixty years of experience in the manufacturing of artificial teeth have made possible the new line of *Eledent* dental pieces. Thanks to its reinforced polymeric structure and an appropriate stratification of the layers, both the resistance to abrasion and to plaque and the stability and naturalness of its colours are notably superior to those of the conventional acrylic teeth.



**Eledent** manages to reach great levels of quality, regarding both the technical requisites and the biological requisites attributable to a healthcare product and its use guarantees, for the professional as well as the final user, a satisfactory result.



Reference: Eledent1/14\_eng Date: March 30, 2.014

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