TriLor® Arch Metal Free Dental System

Fiber Reinforced Composite

Data Sheet

01 Product Name
TriLor® Arch Metal Free Dental System

02 Material Description
Fiber Reinforced Composite (FRC)

03 Manufacturer
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05 Product Description
TriLor· Arch is a new techno-polymer for fabricating implant supported bars and structures for definitive restorations on implants. Made of a thermoset resin with integrated multi-directional Fiber-Reinforced-Composite (FRC).

06 Product Character
Biocompatible
Strong
Lightweight

07 Material Properties

Tensile strength	380	MPa
Flexural strength	540	MPa
Tensile elongation	2	%
Flexural modulus	26	GPa
Tensile modulus	26	GPa
Compressive strength	530	MPa
Charpy impact strength	300	KJ/cm2
Rockwell hardness (scale R)	111	HRR
Barcol hardness	70	
Shore D. hardness	90	
Density	1,8	g/cm3

08 Biocompatibility Testing

Genotoxicity	ISO 10993-3
Acute toxicity	ISO 10993-11:2006
Hypersensitivity	ISO 10993-10:2010
Animal skin irritation	ISO 10993-10:2010
Water absorption	ISO 10477-2009
Cytotoxicity	ISO 10993-5;2009,10093-5:2000

09 Mechanical Testing

Flexural hardness	ISO 14125:2000
Fracture toughness	ISO 14125:2008

10 Contraindications
Insufficient oral hygiene.
High temperature process: techniques or protocols subject To temperatures above 150° C.

Instructions for Use

11 Dental Indications
Trilor· Arch allows the analog creation of connection structures between implants that can be embedded in removable prosthetic devices, as well as frameworks for transferring the position of the implants into the mouth, or simple reinforcement bars for total definitive prosthesis.

- Full Arch
- Partial or total mobile prostheses with attachments
- Reinforced bar on implants for immediate or deferred load

12 Trilor® Arch produced in the following thickness:
NOTE: This arch cannot be modified in thickness, but in width only.)

Arch Thickness (mm)
H 3,5 mm
Suggested for the solidarization of transfers and for immediate structures

H 5,5 mm
Standard height, used for the most part for prosthetic frameworks.

H 7,5 mm
Suggested in those cases where it is necessary to model the framework due to angled implants or implants positioned on different heights.

13 Framework Design
Since the most important use of Trilor· Arch is the creation of a connection framework among the implants, it is required that the working model have the analogs (indirect system of implants) in detected position with abutment inserted and screwed.

It is important to choose the right thickness of Trilor· Arch according to the characteristics of the case and according to the indications.

It is suggested to detect the distances among the abutments using a baseplate wax strip in order to fix the exact positions of the abutments by marking a hole through the wax.

Record the detected position, overlaying the wax strip on Trilor· Arch and write with a pencil directly on the material. Position the wax strip over Trilor· Arch, mark the holes on underlying structure with a pencil.

Pierce Trilor·Arch to create the housing of implant abutments according to the needs of shape and length decided for the case using tungsten ball drills. The more accurate the passage hole, the more stable and resistant the structure will be.

Important Warning
Before cutting of the abutment, verify that the height of abutments or of the cannula is the same or greater than the thickness of the Trilor·Arch.

Draw with a pencil the shape of the bar on the arch.

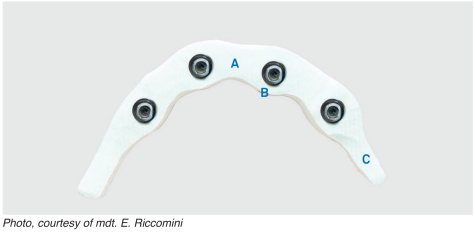
Model with carbide tungsten drills using a micro-motor at max speed of 15000 rpm. To speed up this roughing phase you can also use the trimmer, finishing the hand-piece with carbide tungsten drills.

The Trilor·Arch can also be used partially (cut in sections) for the creation of structures in separated occlusal sectors (posterior or anterior).

14 Suggested Thicknesses
The minimum thickness of the free part between the two abutments shall be 7 mm^2 (3,5 x 2mm) (A).

The possible cantilever (C) shall be at maximum 10mm.

The minimum thickness near the holes for cementation with cannulas shall not go under 0,8mm (B).



Photo, courtesy of mdt. E. Riccomini

15 Surface Preparation
1. Sandblast the surface of Trilor® Arch using disposable aluminum dioxide at 110 micron at 2 bars of pressure
2. Clean with light air blasts (dry, no oil)
3. Clean with ethyl alcohol
4. Treat with silane and let evaporate for a few minutes
5. To link with metal components (abutments) it is suggested to consolidate Trilor® Arch doing a pre-treatment of surface of metals (sandblasting). Sandblast the abutments and then cement the framework with resin cement, preferably opaque to obtain a better mimetic effect.
6. The possible polishing of exposed areas of Trilor® Arch is carried out with silicon gums like the ones used for composites. Then proceed with the final finishing with the diamond paste.
7. Do not exceed 150° C
8. In case of total removable prostheses, having finished the modeling, bonding and superficial finishing, proceed directly tot the assembly of the aesthetic parts (resin teeth, ceramic teeth and so on) that can be linked to the Trilor® Arch structure using the pressure method or pouring with masks.

16 Batch/ Lot Number Traceability
Batch numbers of TriLor® discs are located on box label. Document Lot No. to ensure traceability.

17 Preventative Measure
Wear a protective dust mask, gloves, protective eye glasses, combined with a good suction system. After any treatment or processing, the prosthetic framework has to be cleaned and disinfected according to the national guidelines before being put “in situ”. The Trilor Arch can be sterilized in autoclave at 121° C for 15 minutes or 131ºC for 5 minutes.

18 Side Effects
No known side effects if used as intended.

19 Storage
Avoid exposure to bright light.
Keep away from heat sources

20 Disposal
Can be disposed of with normal household garbage.

21 Ordering information
50000-35 TriLor® Arch 3,5mm 3/pk
50000-55 TriLor® Arch 5,5mm 3/pk
50000-75 TriLor® Arch 7,5mm 3/pk

22. Contact Harvest Dental
If you would like to place an order, or need technical Support, please contact us using the info below.

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Thank you for reading. We appreciate your time.