

Data Sheet
IFU

TriLor®



English	
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Product Name	TriLor®
Field of Application	Permanent esthetic restorations, either screw-retained or cemented
Intended Use	TriLor® is intended for making copings, substructures or frameworks for permanent and transitional anterior or posterior crowns, bridgework and substructures for either cemented or un-cemented restorations.
Composition	High Performance Polymer, multidirectional glassfibre re-inforced
Instructions for use	Compatible with 4 or 5 axis dental CNC machines. Wet or dry technique. Adhere to the CAM manufacturers pre-set milling parameters for HighPerformance Polymers. If none exists, inquire manufacturers recommendation (i.e. PEEK, PMMA)
Important Notes	Avoid overheating during the machining and finishing. Wear protective dust mask and / or use suction.
Cleaning	Cleaning can be done with alcohol based cleaning agents, steam cleaner, ultrasonic. Avoid overheating - Temperatures > 150°C will destroy the matrix!
Esthetic Opportunities	Zirconia, Lithium Disilicate, PMMA and Composite can be bonded to TriLor. For best results, adhere to material manufacturers suggested bonding protocol.
Storage	Store at room temperature, keep away from direct sunlight.

English

Typical mechanical properties

Tensile strength	380 MPa
Flexural strength	540 MPa
Tensile elongation	2%
Elasticity modulus	26 GPa
Tensile modulus	26 GPa
Compressive strength	530 MPa
Charpy impact strength	300 KJ/cm2
Shore D. hardness	90
Density	1,8g/cm3
Water absorption	< 0,05%

Suggested Milling Parameters

Roughing	Ø 2 mm
Speed (rpm)	20.000 - 25.000
Feed rate (mm/min)	800
Z-axis feed	0,4 mm

Finishing	Ø 1 mm
Speed (rpm)	25.000 - 28.000
Feed rate (mm/min)	800
Z-axis feed	0,15 mm

Details	Ø 0,6 mm
Speed (rpm)	25.000 - 28.000
Feed rate (mm/min)	300
Z-axis feed	0,03 mm

Rec. distance to blank edge	2 mm
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Empf. Fräsergeometrie	Diamond or Tungsten Carbide
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Mechanical Testing

Flexural hardness ISO14125:2000
Fracture toughness ISO 14125:2008

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

English	
Bonding / Cementing Treatment	General Treatment before Bonding / Cementing Sandblast contact areas with Al₂O₃ 110 µm at 2bar. Clean surface with gentle pressurized steam. All gingival contact areas should be sealed (GC OptiGlaze recommended) Zirconia Bonding Apply Zirconia Primer (Mfr. recommended). Apply Bonding Adhesive (Mfr. recommended). Bond with Dual Cure Cement (Mfr. recommended). Lithium Disilicate Bonding Etch internal surface, Hydrofluoric Acid 9%, 20 seconds. Rinse for 20 seconds. Post etch clean with Phosphoric Acid 32% for 20 seconds. Rinse for 20 seconds. Apply Silane and let evaporate for 5 minutes. Apply Bonding Adhesive (Mfr. recommended). Bond with Dual Cure Cement (Mfr. recommended.) Composite / PMMA-Milled Bonding Apply Bonding Adhesive (Mfr. recommended). Bond with DualCure Cement (Mfr. recommended). Composite / PMMA-Build-up Bonding Apply Bonding Adhesive (Mfr. recommended). Build-up Composite directly to TriLor®.
Limits Framework Design	Crown & Bridge Wall thickness single crown 0.6 Margin thickness single crowns 0.2 Wall thickness bridges 0.6 Margin thickness bridges 0.2 Anterior Number of pontics 2 Connector cross section, thickness 7.02x 122 Posterior Number of pontics 1 Connector cross section, thickness 7.02x 122
Contraindications	Insufficient oral hygiene. Implant abutment fabrication. Wall thickness less than 0.6 mm. Connector dimensions less than 7mm². Bridges on implants with more than 2 pontics
Certification	CE 0546 / Medical device class IIa acc. 93/42/EEC