

Instructions for use & technical data CopraTi



Technical data

Manufacturer:	Whitepeaks Dental Solutions GmbH & Co. KG Langeheide 9 - 45239 Essen - Germany
Product / Product type:	CopraTi-2 pure titanium blanks CopraTi-4 pure titanium blanks CopraTi-5 titanium alloy grade 5-ELI blanks for the production of individual dental restorations
Product form:	discs and blocks in different sizes
Material type:	pure titanium grade 2 – medical device class IIa pure titanium grade 4 – medical device class IIa titanium alloy grade 5-ELI – medical device class IIa
Circle of users:	Instructed users who produce individual dental restorations

Indication/ intended use

CopraTi is exclusively suitable for the production of dental products.

Indication

CopraTi-2

single crowns, small bridges in anterior and posterior region

CopraTi-4

single crowns, medium bridges and bar constructions in anterior and posterior region, implant abutments and superstructures

CopraTi-5

single crowns up to big bridges and bar constructions in anterior and posterior region, implant abutments and superstructures

CopraTi is a type 4 material in accordance with DIN EN ISO 22674.

CopraTi is in accordance with DIN EN ISO 22674 free of nickel, cadmium, beryllium and lead.

Contraindikation

Do not use in case of proven hypersensitivity against the alloy or one of its components

Veneer ceramics

all standard veneering porcelains, that are suitable for titanium

Material properties/ technical data

composition	CopraTi-2	CopraTi-4	CopraTi-5
titanium (Ti)	> 99%	> 99%	> 90%
iron (Fe)	max. 0,30%	max. 0,50%	max. 0,25%
aluminium (Al)	-	-	5,5 – 6,5%
vanadium (V)	-	-	3,5 – 4,5%
carbon (C)	max. 0,08%	max. 0,08%	max. 0,08%
nitrogen (N)	max. 0,03%	max. 0,05%	max. 0,05%
oxygen (O)	max. 0,25%	max. 0,40%	max. 0,13%
hydrogen (H)	max. 0,0125%	max. 0,0125%	max. 0,012%

mechanical properties	CopraTi-2	CopraTi-4	CopraTi-5
density	~ 4,51 g/cm ³	~ 4,51 g/cm ³	~ 4,43 g/cm ³
Vickers hardness	~ 120 - 160 HV10	~ 180 - 210 HV10	~ 341 HV10
coefficient of thermal expansion (20°C)	8,7 * 10 ⁻⁶ /K	8,7 * 10 ⁻⁶ /K	9,7 * 10 ⁻⁶ /K
yield strength	min. 275 MPa	min. 483 MPa	min. 780 MPa
tensile strength	min. 345 MPa	min. 550 MPa	min. 860 MPa
elongation at break	min. 20%	min. 15%	min. 10%
reduction of area	min. 30%	min. 30%	min. 15%

Specification

CopraTi is a biocompatible nickel-, cadmium-, bryllium- and lead-free titanium milling blank, which has been especially configured for the requirements of the CAD/CAM technique. The material is characterized by its good machinability and homogeneity as well as unrestricted laserability.

Instructions for use

Removal of frameworks

Cut out and smoothen frameworks and single elements with cross-toothed hard metal milling burs or cutting discs. Please always use the same rotating instruments for one metal to avoid contamination.

Cleaning

Finalize frameworks with a hard metal milling bur suitable for titanium. Work only in one direction to avoid blistering during the firing of the veneering porcelain due to overlapping metal.

Then sandblast the surfaces clean aluminum oxide (110µ) with 2-3 bar pressure and steam clean or dip in methylalcohol. Never use hydrofluoric acid.

Veneering with ceramic

All commercial veneering porcelains suitable for titanium can be used. Please follow the instructions for use of your chosen veneering porcelain manufacturer.

Safety instructions

During dry milling of titanium, chips and swarfs can ignite themselves and cause fire.

Storage

No special storage conditions

Disposal

See safety data sheet.

Explanation of the markings on the packaging



Symbol for „item number“



Symbol for „LOT number“



Confirmation: The product complies with the applicable European directives.



Symbol for „number of products in package“



Symbol for „follow the instructions for use“

Rx only

Symbol for “Caution: US Federal law restricts this device to sale by or on the order of a licensed physician or dentist.”