

thermopress 400

One system for five thermoplastic materials



Enhanced quality of life - Increased therapeutic success



Enhanced quality of life

Biocompatible solutions for metal-free dentures

Prostheses in the body should behave in the same way as the body parts they replace. Established denture materials such as metal, ceramic or zirconium dioxide, however, are harder than any substance contained within the body and therefore disrupt the natural processes contained within.

In contrast to this, thermoplastic dentures will not prevent any natural movement of the jaw. This prevents discomfort such as muscle and neck tension while protecting the natural tooth and bone tissue. In addition, loosening of the teeth can be prevented by using metal braces.

The “oral battery” phenomenon

Electric currents can flow in the mouth especially between different metals (e.g. between gold and non-noble metals/ amalgam). As a result, metal ions are dissolved and absorbed into the body through ingestion. Use of thermoplastic materials eliminate this common problem.

Literature collection

* Niedermeier W. Oral Galvanism - causes and consequences. ZWR 2015; 124 (12): 578-584

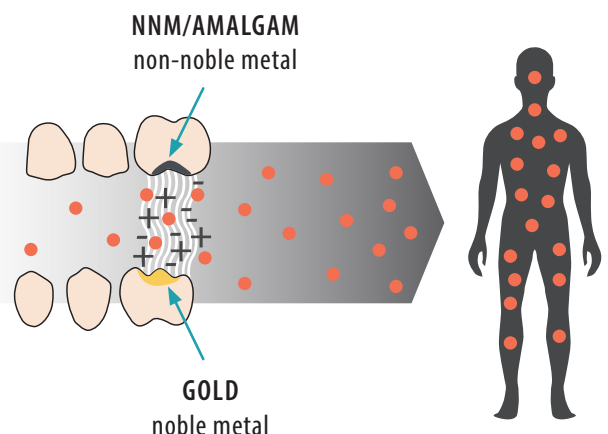
Avoid allergy risks

Scientific studies* have shown that metals present a risk of developing allergies within the oral mucosa. Metals release ions into the saliva that burden the immune system. Increasingly people will have a negative reaction to these materials, sometimes effecting the entire body.

However, some patients are also sensitive to dental plastics. The residual monomer content presents a problematic risk, especially in the case of chemoplastics. By contrast, the processing of Bredent's thermoplastics prevents the release of residual monomer.

Aesthetics Plus

Tooth or gingiva-coloured plastics achieve a much more natural look than their metallic counterparts. For example, plastic brace prostheses fit harmoniously within the overall appearance of the dentition and give a more natural appearance when speaking or laughing.



The “oral battery” dissolves ions from the metals, which can then reach the entire body.

Bio Dentaplast
Tooth-coloured braces

Aesthetics and
biocompatibility

bre.flex 2nd edition pink veined

Mandible frame + gum

Even surfaces
Seamless
Gum colours

neo.lign
Acrylic teeth

Function
Biocompatibility
comfort



Successful therapies

One system - multiple indications

Bredent thermoplastics impress with their biocompatible properties as well as their simple and rapid processing. They can be used to treat sensitive and allergy-burdened patients with aesthetic, hypoallergenic dentures.

The efficient thermopress 400 injection moulding machine can be used for numerous indications and special solutions:

Bio Dentaplast

- > Brace model casting
- > Secondary construction for advancement
- > Secondary construction for telescopes
- > Secondary construction for bridge work
- > (therapeutic splints)

Bio Dentaplast 2

- > Therapeutic splints
- > Aesthetic splints
- > Secondary construction for advancement
- > Secondary construction for telescopes
- > Secondary construction for bridge work

bre.flex

- > Protective splints
- > Secondary construction for bridge work
- > Over denture
- > Full dentures implant-supported
- > Secondary construction for conical crowns

bre.flex 2nd edition

- > Protective splints
- > Brace model casting
- > Secondary construction for bridge work
- > Over denture
- > Full dentures implant-supported

Polyan IC

- > Therapeutic splints
- > Snoring splints
- > Full dentures without holding elements
- > Full dentures implant-supported



Aesthetic, almost invisible beauty & bite splints made of Bio Dentaplast 2.



Product range

REF	Colour	QTY
540BA105	A1	1 x 500 g
540BA116	A1	20 x 16 g
540BA120	A1	20 x 20 g
540BA205	A2	1 x 500 g
540BA216	A2	20 x 16 g
540BA220	A2	20 x 20 g
540BA305	A3	1 x 500 g
540BA316	A3	20 x 16 g
540BA320	A3	20 x 20 g
540BB205	B2	1 x 500 g
540BB216	B2	20 x 16 g
540BB220	B2	20 x 20 g
540BB305	B3	1 x 500 g
540BB316	B3	20 x 16 g
540BB320	B3	20 x 20 g

Colours



Tooth shade
Dentine A1



Tooth shade
Dentine A2



Tooth shade
Dentine A3



Tooth shade
Dentine B2



Tooth shade
Dentine B3

Literature collection

Thermoplastic Temporary Prostheses in Laboratory and Practice
International Dental Technology Magazine
Dr. Jochen Mellinghoff MDT Franz Kreutle updated 18/04/2012



Bio Dentaplast

Polyoxymethylene (POM/Acetal, semi-flexible)

Advantages

- > biocompatible
- > monomer-free
- > non antagonistic
- > aesthetic
- > no metallic taste
- > good value for money
- > high wearing comfort
- > high fit accuracy and detail reproduction
- > optimal friction values
- > filigree designs possible (> 0.3 mm)
- > rapid, easy preparation
- > Teeth preparation and subsequent relining of saddles with cold polymerisate is possible

Indications

- > **Brace model casting:**
 - Mechanical retention for saddles + teeth
 - Monolithic preparation
- > **Secondary construction for advancement:**
 - With a frame or transpalatal arch
 - As a scaffold or monolithic
- > **Secondary construction for bridge work:**
 - tooth or implant-supported
- > **Secondary construction for telescopes:**
 - Provisional dentures
 - Tooth or implant-supported
 - With a stage or tooth/implant supported
- > **(Therapeutic splints: Beauty & Bite)**
 - Bite lift / relocation
 - Temporary restoration, therapy accompanying





Product range

REF	Colour	QTY
52BA1016	A1	2 x 16 g
52BA1020	A1	2 x 20 g
52BA1028	A1	2 x 28 g
52BA2016	A2	2 x 16 g
52BA2020	A2	2 x 20 g
52BA2028	A2	2 x 28 g
52BA3016	A3	2 x 16 g
52BA3020	A3	2 x 20 g
52BA3028	A3	2 x 28 g
52BA3516	A3,5	2 x 16 g
52BA3520	A3,5	2 x 20 g
52BA3528	A3,5	2 x 28 g
52BA4016	A4	2 x 16 g
52BA4020	A4	2 x 20 g
52BA4028	A4	2 x 28 g

REF	Colour	QTY
52BB2016	B2	2 x 16 g
52BB2020	B2	2 x 20 g
52BB2028	B2	2 x 28 g
52BB3016	B3	2 x 16 g
52BB3020	B3	2 x 20 g
52BB3028	B3	2 x 28 g
52BC2016	C2	2 x 16 g
52BC2020	C2	2 x 20 g
52BC2028	C2	2 x 28 g
52BC3016	C3	2 x 16 g
52BC3020	C3	2 x 20 g
52BC3028	C3	2 x 28 g

REF	Colour	QTY
52BD2016	D2	2 x 16 g
52BD2020	D2	2 x 20 g
52BD2028	D2	2 x 28 g
52BD3016	D3	2 x 16 g
52BD3020	D3	2 x 20 g
52BD3028	D3	2 x 28 g
52BP2016	PC 20	2 x 16 g
52BP2020	PC 20	2 x 20 g
52BP2028	PC20	2 x 28 g
52BTP016	TP	2 x 16 g
52BTP020	TP	2 x 20 g
52BTP028	TP	2 x 28 g

Colours



Tooth shade
Dentine A1



Tooth shade
Dentine A2



Tooth shade
Dentine A3



Tooth shade
Dentine A3,5



Tooth shade
Dentine A4



Tooth shade
Dentine B2



Tooth shade
Dentine B3



Tooth shade
Dentine C2



Tooth shade
Dentine C3



Tooth shade
Dentine D2



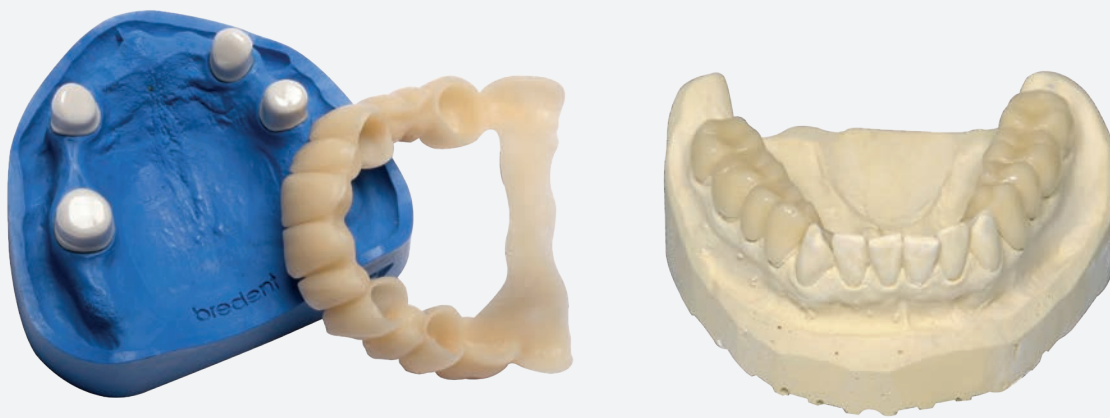
Tooth shade
Dentine D3



PC20



transparent
(clear)



Bio Dentaplast 2

Modified dental polymer

Advantages

- > expandable
- > expansion-free
- > functional and temporary restoration with only one splint
- > high added value
- > biocompatible
- > aesthetic
- > stable and durable
- > hard and soft relinable
- > suitable as a model casting base as well as for the direct injection of teeth

Indications

- > **Therapeutic splints: Beauty & Bite**
 - bite lift/relocation
 - temporary restoration / therapy-accompanying
 - 24-hour use possible
- > **Aesthetic splints: Beauty & Bite: inexpensive aesthetic correction of abrasions, tooth gaps, malocclusions, discolouration etc.**
- > **Secondary construction for telescopes:**
 - definitive
 - tooth/implant supported
 - with stage or tooth/implant supported
- > **Secondary construction for advancement:**
 - with frame or transpalatal arch
 - as scaffolding or monolithic
- > **Secondary design for bridge work: tooth-supported or implant-supported**

Beauty & Bite splint functional + aesthetic

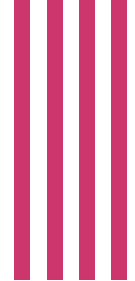


The tooth-coloured Beauty & Bite splint blends harmoniously into the overall appearance of the dentition.

Advantages

- > "non prep": no tooth preparation needed
- > aesthetic
- > functional splint + provisional restoration: high restoring force ensures optimum grip; 24-hour restoration for eating, sleeping, talking
- > gnathological therapy accompaniment: Bite lift, bite stabilisation
- > resistant material
- > acetal-free
- > expansion-free
- > inexpensive

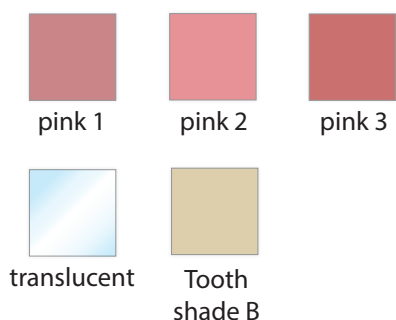




Product range bre.flex

REF	Colour	QTY
5400F005	pink 1	1 x 500 g
5400F016	pink 1	20 x 16 g
5400F020	pink 1	20 x 20 g
5400F024	pink 1	20 x 24 g
5400F105	translucent	1 x 500 g
5400F116	translucent	20 x 16 g
5400F120	translucent	20 x 20 g
5400F124	translucent	20 x 24 g
5400F205	tooth shade B	1 x 500 g
5400F216	tooth shade B	20 x 16 g
5400F220	tooth shade B	20 x 20 g
5400F224	tooth shade B	20 x 24 g
5400F305	pink 3	1 x 500 g
5400F316	pink 3	20 x 16 g
5400F320	pink 3	20 x 20 g
5400F324	pink 3	20 x 24 g
5400F405	pink 2	1 x 500 g
5400F416	pink 2	20 x 16 g
5400F420	pink 2	20 x 20 g
5400F424	pink 2	20 x 24 g

Colours bre.flex



Product range bre.flex 2nd edition

REF	Colour	QTY
5400F505	pink 2	1 x 500 g
5400F516	pink 2	20 x 16 g
5400F524	pink A 2	20 x 24 g
5400F605	pink veined	1 x 500 g
5400F616	pink veined	20 x 16 g
5400F624	pink veined	20 x 24 g
5400F805	clear	1 x 500 g
5400F816	clear	20 x 16 g
5400F824	clear	20 x 24 g

Colours bre.flex 2nd edition



Literature collection

Sensitisation test

Maximation test of Magnusson and Klingmann according to ISO 10993-10; Test slides 010915 - 30/2 bre.flex pink; Result: No reactions of any kind have been detected (12/06/2001).

Test for cytotoxicity, L929 proliferation

According to DIN EN ISO 10993-5, -12, ISO 9363-1, LM SOP 4-06-01 Test slides bre.flex pink (Flexiplast pink); Result: In the case of the prosthesis material bre.flex (Flexiplast), no cytotoxic substance could be detected after 24 hours of continuous contact. The material exerts no cytotoxicity.



bre.flex & bre.flex 2nd edition

Polyamide (PA/flexible bre.flex and semi-flexible bre.flex 2nd edition)

Advantages

- > very good flow properties, even in very thin areas (as 0.5 mm)
- > non brittle
- > fracture resistant
- > friction + flexibility
- > high biocompatibility, as it is 100% residual monomer free
- > aesthetic
- > easy insertion / removal
- > high wearing comfort
- > lightweight
- > good value for money
- > low water absorption compared to nylon materials

Indications

- > **Over denture:**
 - gingiva supported
 - tooth or implant retained
- > **Protective splints**
 - provisional restoration
 - sports mouthguard
 - protection from grinding and chipping
- > **Secondary design for bridge work: tooth-supported or implant-supported**
- > **Full dentures implant-supported: definitively removable**
- > **Brace model casting bre.flex 2nd edition:**
 - definitive
 - aesthetic
- > **Secondary construction for conical crowns (bre.flex):**
 - tooth/implant supported
 - with stage or tooth/implant supported



Telescopic prosthesis made of bre.flex with neo.lign full teeth.



Product range

REF	Colour	QTY
540PI005	transparent (clear)	1 x 500 g
540PI024	transparent (clear)	20 x 24 g
540PI030	transparent (clear)	20 x 30 g
540PI205	pink 2	1 x 500 g
540PI224	pink 2	20 x 24 g
540PI230	pink 2	20 x 30 g
540PI405	pink veined	1 x 500 g
540PI424	pink veined	20 x 24 g
540PI430	pink veined	20 x 30 g

Colours



Literature collection

Sensitisation test

Maximation test of Magnusson and Klingmann according to ISO 10993-10; Project No.: 010915-30 / 3, Test Slides Polyan IC Medical Device Services, Report No.: 207050108

Result: No reactions of any kind have been found.
21/06/2001

Review of modern denture base resins according to ISO 1567: 1999

Dr. Ernst Ulrich Rosenbauer, doctorate Nov. 2000; University of Cologne under Prof. Niedermeier

Prostheses made of thermoplastic, injection moulding procedure in cartridge system

Dr. Karl Wirz; Womrath; published in the Dental Labor June 1993

Different prosthesis manufacturing methods with special consideration of the thermoplastic method

Prof. Marx University Mainz; Reprint from Der Freie Zahnarzt; Issue 2/1983.

Material-mechanical comparison of hypoallergenic denture base resins

Manar Izzuldin Jarkas acquiring a doctorate in September 2007

Martin-Luther-University Halle-Wittenberg
Prof. Dr. med. dent. habil. Jürgen M. Setz



Polyan IC

Polymethyl methacrylate (PMMA / the reference: hard, rigid, impact-resistant, biocompatible)

Advantages

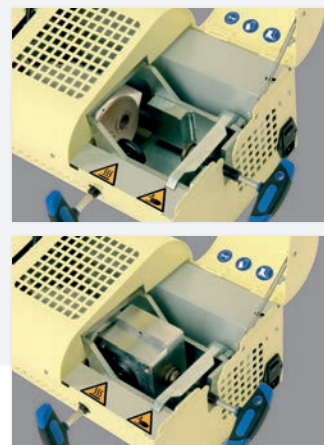
- > reproducible, fast material processing
- > low residual monomer content
- > highly cross-linked, dense material; low water absorption
- > high breaking and bending strength
- > reference for biocompatible total prosthetics
- > reference for implant-supported complete prosthetics
- > customisable
- > more biocompatible and more stable than heat-cured resin
- > high accuracy of fit with very good suction effect
- > colour stable

Indications

- > Full dentures without holding element: **definitively removable**
- > Full dentures implant-supported: **definitively removable**
- > Therapeutic splints:
 - definitive
 - CMD therapy
- > Snoring splints: **definitively removable**



Removable full denture made of Polyan IC with neo.lign full teeth.



thermopress 400

1 efficient injection moulding system – 5 biocompatible materials – infinite indications

Many years of experience

For the development of the thermopress 400 injection moulding system, bredent exploit its long standing experience in plastic processing. The device ensures excellent material processing thanks to stable pressure and temperature control.

Compatibility for the patient

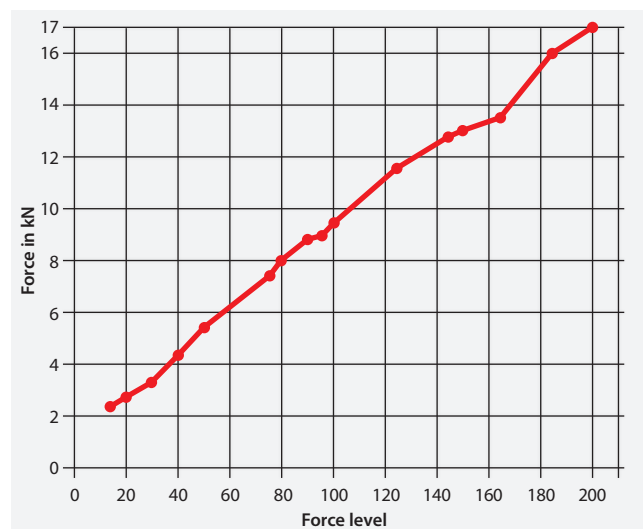
Because of its low residual monomer content, thermo-plastic dentures minimise the risk of allergies in the patient. All patients benefit from the high tolerability of the biocompatible, aesthetic and stable dentures. Not just those who are susceptible to allergic reactions.

Processing and injection reliability

The compact, freely programmable injection moulding machine can be operated independently of an external source of compressed air. In a systematic manufacturing process, special cartridges filled with granules are used to prevent any negative influences. Contact allergies, such as those which can occur when processing chemoplastics, can be eliminated. This is because unlike chemoplastics (powder-liquid method, heat-curing resins), high-quality polymers have minimal or even no monomer content.

Because of its electric drive, the materials are injected with a uniform propagation of force. During the entire cooling process, the programmed level of force is maintained so that an optimum fit can be created and porosity prevented.

thermopress 400 strength development



Settings for the thermopress 400 Version 2.62

Embed- ding tech- nique	Material	Target temperature in ° C	Heating time in min.	Pressing time in sec.	Speed	Force level	Cartridge tempera- ture	Program slot in the device	Settings for compressed air operated injection moulding machines in bar
Cuvette	Polyan IC	250	10	60	6	200	40	1	9,5
	bre.flex	222	15	90	6	90	40	3	7,5
	bre.flex 2 nd edition	280	15	90	6	165	60	4	9,5
	Bio Dentaplast	220	15	120	6	80	40	5	7,5
	Bio Dentaplast 2	270	15	120	8	80	40	10	7,5
Muffle	Bio Dentaplast	220	15	240	2	60	20	8	
	Bio Dentaplast 2	270	15	120	8	80	40	10	



Bio Dentaplast
Skeletal framework
casting

Bio Dentaplast 2
Beauty & Bite splint

bre.flex
Over denture

bre.flex 2nd edition
Brace prosthesis definitive
+ aesthetic

Polyan IC
Full denture without
holding element

Product range

thermopress 400 unit	REF
1 unit with power cord	11000400
2 allen keys	
1 cleaning brush	
1 special tool	

thermopress 400 accessory set	REF
1 Devesting Frame and Stamp	11000401
1 Cartridge Pliers	
1 Flask Hook with Allen key	
1 Flask small (L: 122 mm, B: 102 mm, H: 72 mm)	
1 Thermopaste 400 - special paste for cartridges 50 g	

thermopress 400 accessories	REF
1 Devesting Frame and Stamp	14000904
1 Cartridge Pliers	14000906
1 Flask Hook with Allen key	14000912
1 Flask small (L: 122 mm, B: 102 mm, H: 72 mm)	1400N903
1 Flask large (L: 140 mm, B: 102 mm, H: 72 mm)	1400N905
1 Cleaning Brush	11000402
1 Thermopaste 400 - special paste for cartridges 50 g	54001051
Expando-Rock Set 5 kg expansion plaster, 500 ml Expandosol	5700ERS5

System benefits

- > no additional equipment required
- > electric drive (no compressed air unit)
- > simple programming and operation
- > pre-installed injection moulding parameters for bredent thermoplastics
- > high, uniform force transmission during the injection process
- > high pressure for optimum fit
- > uniform heating of the thermoplastics
- > parallel operation of dual heating chambers

Technical details thermopress 400

Width	650 mm
Height	250 mm
Depth	300 mm
Weight	40 kg
Volt	220 -230 V
Power	0,5-1,6 kW max. 2,2 kW



Know-how thermopress 400

Training

*Small jobs,
great effect!*

In this two-day basic course, the participants will learn how the thermopress 400 injection moulding system is operated. They will be trained on the indications and contraindications of the individual materials, as well as given the opportunity to independently produce

allergy-free, metal-free dentures. A Bio Dentaplast framework shall be produced. Take your first step into the world of allergy-free, thermoplastic materials. An excellent option for both you and your patients!

Programme

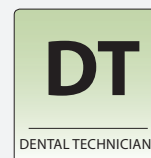
1. Theoretical part

- a) Intensive training in the handling of the thermopress 400 device
- b) Intensive system training: Material science, indications, processing
- c) Live demonstration of the working procedure

2. Practical part

Production of a Bio Dentaplast framework.

Target group



thermopress 400 module 1 Basic course

<i>Place and speaker</i>	<i>Date / duration</i>	<i>Course number</i>
In your lab or in Senden ZT Wyatt Dawn ZTM Jens-Christian Fehsenfeld	upon request 2-day course 1st day: 8 am - 6 pm 2nd day: 8 am - 6 pm	95000201



* Processing in the for2press system; separate courses bookable

Complete range of indications

Hints and tips from experienced experts. In this advanced course on the thermopress 400 system, a telescopic or advanced injection moulding base shall be processed. You shall acquire material and subject-relat-

ed in-depth knowledge that will enable you to produce high-quality and allergy-free dentures. Let yourself be inspired by the many possibilities and the huge range of indications offered by the thermopress 400 system.

Programme

1. Theoretical part

a) Advantages, b) Special features, c) Notes: Metal-free dentures for allergy patients, telescopic and advancing anchors constructed from thermoplastic material and wax modelling (course of the injection channels and polish)

2. Practical part

Manufacture of a telescopic or advancing injection moulding base made of Bio Dentaplast.

Target group



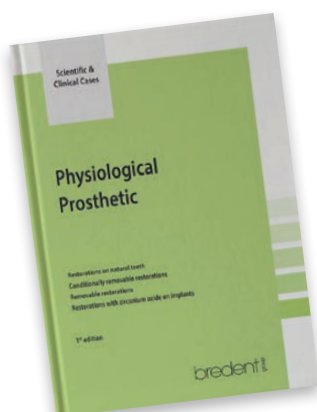
ADVANCED

thermopress 400 Module 2 Advanced course

Place and speaker	Date / duration	Course number
In your lab or in Senden ZT Wyatt Dawn ZTM Jens-Christian Fehsenfeld	upon request 2-day course 1st day: 8 am - 6 pm 2nd day: 8 am - 3 pm	95000202

thermopress 400

One system for five thermoplastic materials



Scientific & clinical cases online



The online version of Scientific & Clinical Cases can be viewed by scanning the QR code or by visiting

www.bredent-medical.com/en/scientific

