

thermopress

The System - Overview of thermoplastic Materials



Better quality of life through
metal-free restorations



40 years of dental innovation

bredent

thermopress



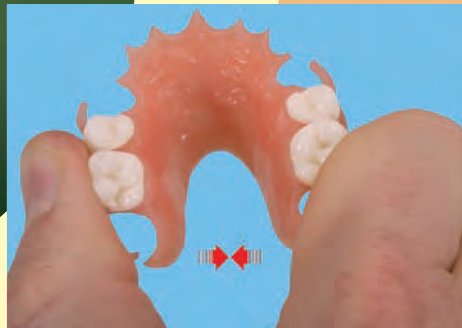
The advent of thermoplastic materials in dentistry

The bredent group develops and produces now on a manufacturing area of 12,000 m² Products as well as treatment concepts for dental labs and dentists.

In the processing of thermoplastics in prosthetics the bredent group looks back on 15-years of experience, which distinguishes a perfectly matched injection system today.

The „thermopress 400“ injection system, particularly the compact injection molding machine offers the possibility of producing precise homogeneous dentures without external independent pressure sources.

This provides dentures especially for allergy sensitive patients with high compatibility to the aesthetics and stability of comparable dentures to forego with metals.

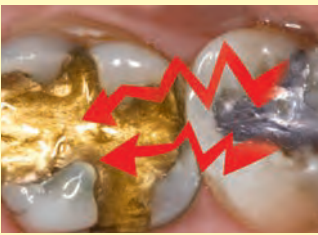


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Better quality of life with metal-free restorations



The ever-increasing amounts of chemicals, additives in foods and environmental toxins are an increasing burden on our Population. For this reason, more and more patients ask about acceptable and metal-free materials for their dentures.

In restorative dentistry, metal alloys such as gold, cobalt-chromium, nickel-chromium alloys and amalgam (mercury alloy) due to their good working properties are the most used dental materials from which crowns and bridges, as well as frameworks for removable dentures are made. These materials can in sensitive patients lead to thermal effects, metallic taste, and allergic reactions. Usually these allergies are not connected with these materials, that have been inserted into the patient.



A sharp rise in allergies, intolerances and more frequent symptoms of metal intolerance have led to a rethink in the selection of dental materials for restorative dentistry.

Today, the team of dentists and dental technicians can offer metal-free solutions, which a few years ago would have been unthinkable. In a constant exchange with dentists, dental technicians and customer suggestions developed by the bredent group an extensive, high-quality and optimally tuned to the needs of allergy sufferers, a range of products for aesthetic and stable dentures. The „thermopress 400“ system combines materials with good biocompatibility, coupled with aesthetics, functionality, and an optimal solution for new dentures.



We want to bring these presented materials to you as a user, and the patient the advantages of thermoplastics materials closer together in dentistry.



What is the thermopress 400 injection molding system?

The injection molding technique, or more correctly, injection molding is a process in which under very high pressure heated high-performance thermoplastic materials are injected into a hollow mold. Until now, this technology is only possible with the help of very large industrial machines.

In 1958, the first attempt was made to use industrial molding technology for the manufacture of dental prostheses.

The continuous development has made it possible to bring a very powerful injection molding machine onto the dental market. The Bredent group has succeeded in developing the first injection moulding machine, working without an external source of pressure, for the dental laboratory.

What are the benefits for the patient?

The variety of medical materials used for the preparation and processing of dentures used to lead to allergic reactions in sensitive patients.

The materials used in the injection molding technique, called thermoplastics allow the dental technician without the use of chemical additives or the use of catalysts to make dentures for sensitive patients. This option, in light of the strong rise in allergies is a unique selling point for the laboratory.

Why metal free?

In restorative dentistry, metal alloys such as gold, CrCo, amalgam are important materials due to their good properties.

Thermal effects, metallic taste, and allergic reactions caused by dental alloys in the mouth were treated only secondary.

Only the strong increase of allergies, intolerances and more frequent symptoms of metal intolerance have led to a rethink in the selection of dental materials for restorative dentistry.

The Machine!

The „thermopress 400“ system allows for gentle processing of biocompatible materials into high-quality, metal-free restorations. This means that it is unnecessary for metal retaining elements spoiling aesthetics in prosthetic restorations.

We will make you successful!

We are happy to invite you to the training laboratories in our contemporarily designed rooms in Senden near Ulm. We will gladly send you, on request, more detailed information about the course program.



Dentures for sensitive patients

For the „thermopress 400“ system, there is a choice of five different thermoplastic materials. There are many technical dental indications that can be realised with this large variety of materials.

Bio Dentaplast
Polyan IC
bre.flex & bre.flex 2nd edition
bre.dentan HP



low (<1%) Monomer content
benzylperoxid free
stabile
hard
accurate fit
colour stable
highly compatible
high comfort of fit

In close cooperation between the plastics industry and experienced dentists and dental technicians already in 1958 the first recipe for a thermoplastic denture base material in five different colors was developed.

Polyan IC is easily and safely processed in the specially designed injection moulding machine Thermopress 400. The specially selected materials for sensitive people meets the high expectations of your patients.

Closely interlaced chain particles form the highly connected and compact denture base material.

Polyan IC is a transparent glass-like thermoplastic material based on a polymethyl methacrylate. This material is free from Benzylperoxide and iron oxides. It is well tolerated and minimizes the occurrence of allergic reactions. Polyan IC is available in six different colors (clear, pink 1-3, pink 4 veined and pink 5).

Colours



clear



pink 1



pink 2



pink 5



pink 3



pink 4,
veined

available from
September 2013



Properties:

- biocompatible
- best fit with top suction
- absolute colour stability over many years
- highly crosslinked with a smooth surface
- high break resistance and flexural strength
- easy, secure and homogeneous material processing
- BPO-free, no mucosal irritation
- monomer content of < 1 %
- fast surface cleaning
- optimized chemoplastic materials expandable

REF	colour	cont.
540PI024	clear	20 x 24 g
540PI030	clear	20 x 30 g
540PI124	pink 1	20 x 24 g
540PI130	pink 1	20 x 30 g
540PI224	pink 2	20 x 24 g
540PI230	pink 2	20 x 30 g
540PI324	pink 3	20 x 24 g
540PI330	pink 3	20 x 30 g
540PI424	pink 4, veined	20 x 24 g
540PI430	pink 4, veined	20 x 30 g
540PI524	pink 5	20 x 24 g
540PI530	pink 5	20 x 30 g

Dental Indications

Denture base material for partial and full dentures and as a base material for tough, clear splints.

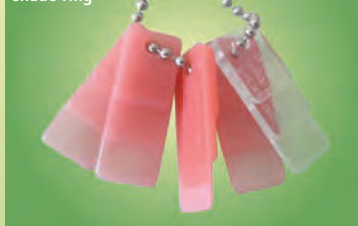
Bonding

For a safe bond to the acrylic teeth we recommend surface roughening and the use of the adhesion promoter poly.link IC.

Repairs / Upgrades

With the repair material uni.lign (self curing) Polyan IC can be repaired quickly and easily. For a high class addition / relin we recommend rebasing (Re-injecting) with Polyan IC.

Polyan IC sample shade ring



REF	cont.
992503FP	1 piece

poly.link IC bonding agent for acrylic teeth



REF	cont.
polylink5	1 x 50 ml

REF	cont.
540PISET	Polyan IC introductory assortment 2 x 24g Polyan IC clear 2 x 24g Polyan IC pink 1 2 x 24g Polyan IC pink 2 2 x 24g Polyan IC pink 3 2 x 24g Polyan IC pink 4, veined 2 x 30g Polyan IC clear 2 x 30g Polyan IC pink 1 2 x 30g Polyan IC pink 2 2 x 30g Polyan IC pink 3 2 x 30g Polyan IC pink 4, veined
14000902	thermopress introductory assortment 3 x 24g Polyan IC clear 5 x 30g Polyan IC pink 1 2 x 20g bre.flex pink 2 5 x 24g bre.flex 2 nd edition pink stippled 2 x 16g bre.dentan HP A (corresponding Vita classical shade A2) 3 x 16g Bio-Dentaplast A2

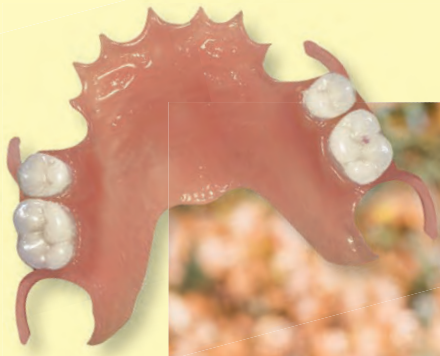
Literature collection of Polyan IC

Sensitisation test: Maximization test of Magnusson and Klingmann according to ISO 10993-10; Project No.: 010915-30/3 test plates Polyan IC Medical Device Services Report No.: 207050108 Results: No reactions whatsoever could be detected. 21.06.2001

„Review of modern prostheses basic plastics according to ISO 1567:1999“ Ernst Ulrich Rosenbauer, Ph.D. Nov. 2000; Cologne University Prof. low Meier

„Prostheses made of thermoplastic injection molding process in cartridge system“ Karl Wirz; Womrath; appeared in the June 1993 Dental Laboratory

„The different prostheses manufacturing process with special reference to thermoplastic method“; Prof. Marx University of Mainz; Reprint from the free dentist, No. 2/1983.



- monomer-**
- benzylperoxide free**
- iron oxide-free**
- flexible**
- almost unbreakable**
- no clasping needed**
- permanent plastically without becoming brittle**
- metal-free support elements protect the natural tooth enamel**

bre.flex and bre.flex 2nd edition belong to the polyamides and are two 100% monomer-free denture base materials for the production of almost unbreakable, flexible partial dentures.

The bre.flex and bre.flex 2nd edition use colour pigments which are cadmium-free and free of metal oxides.

This easy-flowing thermoplastic material is characterized by very good flow properties. Slender and thin wax parts can be manufactured up to a thickness of only 0.5 mm safely.

bre.flex is available in three different shades of pink, available in translucent and available in a tooth shade.

Colours: bre.flex



translucent



pink 1



pink 2



pink 3



tooth shade B

Colours: bre.flex 2nd edition



clear

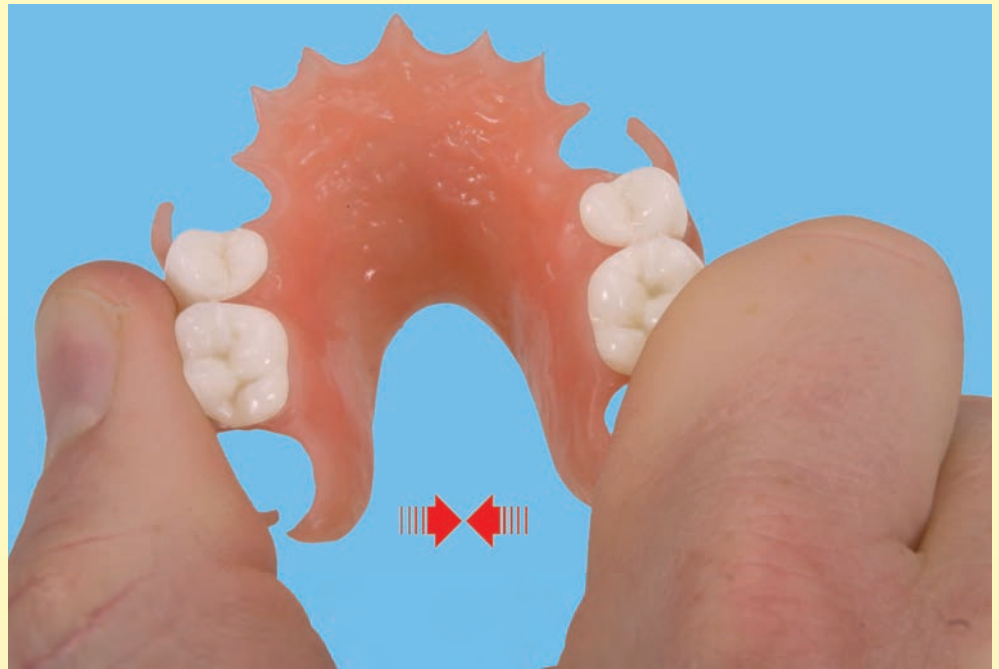
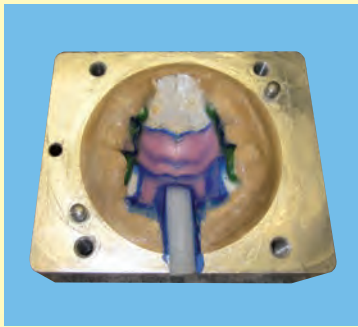


pink 2



pink stippled

bre.flex 2nd edition is available in shades clear, pink 2 and pink stippled.



Properties:

- biocompatible
- lightweight
- very high flexibility
- extremely durable
- metal-free clasped partial dentures possible
- very good flow properties into delicate areas down to 0,5 mm thick
- durable plastic without becoming brittle
- easy, safe and homogeneous material processing
- free of Cadmium and metals, no mucosal irritation
- fast surface cleaning

bre.flex is more flexible than bre.flex 2nd edition. The polishing performance of bre.flex 2nd edition when compared to bre.flex is easier. bre.flex 2nd edition has a higher translucency than bre.flex.

Dental Indications

A removable partial denture that is aesthetically pleasing, and all requirements for functionality and comfort are fulfilled.

Ideal for patients who have opted for a removable denture – but do not want metal clasping.

Perfect for monomer-allergy patients. Excellent treatment for the healing of implant supported dentures. Almost an invisible flexible partial denture – without metal clasps.

Easily combined with CrCo frameworks and combination work.

Bonding

For a safe bond to the acrylic teeth mechanical retention is necessary.

There is no a chemical bond between bre.flex 2nd edition and the artificial tooth. We recommend a 0.8-1.5 mm thick retention hole from mesial to distal.

Repairs / additions

bre.flex 2nd edition should be rebased (injected) to repair or when an addition is required.

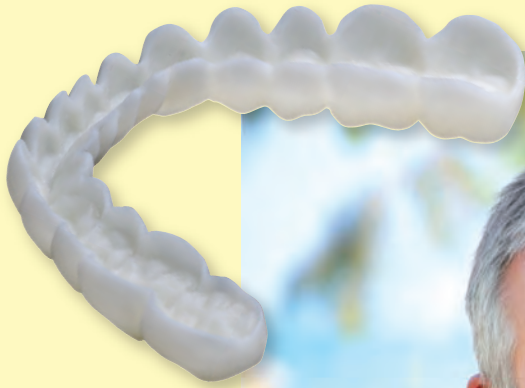
Literature collection to bre.flex

Sensitisation test: Maximization test of Magnusson and Klingman according to ISO 10993-10;

Test plates 010915-30/2 bre.flex pink (pink Flexiplast) Result: No reactions whatsoever could be detected. 12.06.2001

Test for cytotoxicity, L929 proliferation in accordance with DIN EN ISO 10993-5, -12, ISO 9363-1, LM SOP 4-06-01, test plates bre.flex pink (pink Flexiplast) Result: The prosthetic material bre.fl ex (Flexiplast) after 24 hours of continuous contact there was no toxic cell acting substance detected. The material has no cytotoxicity.

REF	colour	cont.
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
2 nd edition		
5400F505	pink 2	1 x 500 g
5400F516	pink 2	20 x 16 g
5400F524	pink 2	20 x 24 g
5400F605	pink stippled	1 x 500 g
5400F616	pink stippled	20 x 16 g
5400F624	pink stippled	20 x 24 g
5400F805	clear	1 x 500 g
5400F816	clear	20 x 16 g
5400F824	clear	20 x 24 g



- universal use**
- metal-free restorations**
- high degree of accuracy**
- inherent flexibility**
- tooth colour**
- high biocompatibility**
- very good oral tolerance**
- excellent wearing comfort**
- unbeatable aesthetics**

Bio Dentaplast is a techno-polymer based on polyoxymethylene. The high crystallinity gives the material Bio Dentaplast excellent material properties (the higher the crystallinity in a plastic, the harder it will be). Because of this property delicate attachment elements, for example fixed movable cases, but also telescopes, manufactured with optimum friction levels.

The unusual physiological behavior and the wide range of mechanical properties make it possible to use this material in many areas of Prosthodontics. This material expands the application in the CrCo casting department or removable partial dentures.

Bio Dentaplast is available in the colours A1, A2, A3, B2 and B3.

Colours



tooth colour
dentine A1



tooth colour
dentine A2



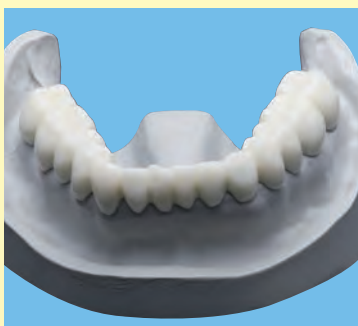
tooth colour
dentine A3



tooth colour
dentine B2



tooth colour
dentine B3



Properties:

- high level of comfort for patients
- high-crystalline material, hard Surface, yet flexible
- extreme detail reproduction, filigree tooth-coloured retentive elements
- perfect fit
- metal-free, tooth-coloured clasping frameworks are possible
- ultra-thin, opaque splints realizable
- stress-free contact material against antagonist enamel
- no abrasive effect

Dental Indications

A removable partial denture is aesthetically pleasing and meets all requirements for functionality and comfort requirements. Ideal for patients who would like to have a removable partial denture and have decided not to have metal clasps.

Perfect for monomer-allergic patients because Bio Dentaplast have no residual monomer.

Temporary flexible dentures are excellent as a healing appliance for patients with newly inserted implants.

Almost invisible, flexible partial dentures and tooth-coloured, with or without metal clasps, using telescopes and / or attachments, when made with this material are perfectly feasible.

Other indications

- Telescopic and attachment frameworks
- Partial clasp prosthetics
- splint techniques
- Orthodontic
- SNAP-ON-prostheses

REF	colour	cont.
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



low residual monomer content
stable
accurate fit
plaque resistant

bre.dentan HP is a modified thermoplastic material, which with the help of the thermopress 400 injection molding system is processed without sensitizing setting-catalyst to translucent crowns and bridges. The residual monomer content is below 0.3% and reduces mucosal irritation.

With the thermopress 400 optional muffle system crowns and bridges and wax frameworks can also be embedded with conventional investment and pressed using bre.dentan HP.

bre.dentan HP has a very high tensile strength and the high density of the material, ensures an excellent high gloss finish. For this reason plaque build up is reduced. bre.dentan HP is available in three different tooth colours (A, B and C).

Colours



tooth colour
A (A2)



tooth colour
B (A3/B2)



tooth colour
C (C2/D3)



Properties:

- high level of comfort
- extremely detailed reproduction filigree surface (texture)
- perfect fit
- reduced monomer content of < 0.3 %
- easy to polish
- minimal plaque vulnerability

Dental Indications

With bre.dentan with HP, temporary crowns and bridges can be fabricated. This material should only be in the patients mouth for a maximum of 6 months. The material is also very well suited for tooth-coloured splints.

REF	colour	cont.
5400DA16	A	20 x 16 g
5400DB16	B	20 x 16 g
5400DC16	C	20 x 16 g



thermopress 400

Injection moulding unit for thermal resins up to 400° C

No additional equipment such as CO₂ cylinder or compressed air required. This way costs and time are saved. The injection moulding result can be achieved more easily and safely since pressure drop is avoided.

Added comfort thanks to simple programming and operating of the unit.

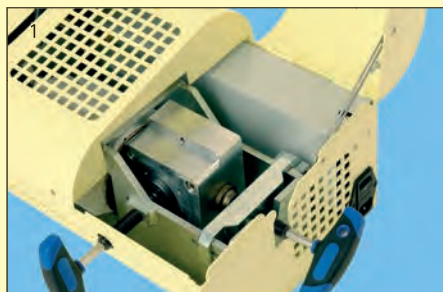
Time-saving function thanks to simultaneous operation of both heating chambers

The injection process can only be performed with the lid being closed; additional safety is provided. Convenient removal of the flask thanks to automatic cartridge ejection if the bracket is unlocked.

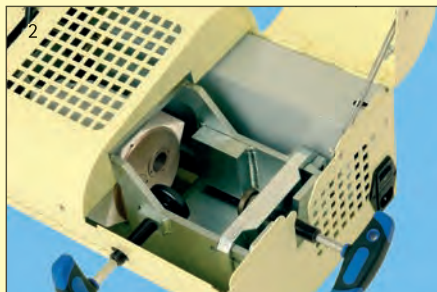


thermopress 400

1 unit with power cord
2 allen keys
1 cleaning brush
1 special tool
REF 110 0040 0



Guide and fastening mechanism holds the flask safely in the unit. As a consequence, transmission of power during the injection process is fully utilized - no energy is lost.



Heating is accelerated by high-performance thermocouples. The temperature of the resin is maintained on a constant level by two thermocouples.



Convenient and clear operation using the multi-functional display. Up to 30 different program variations can be selected.

Technical data - thermopress 400

Width	650 mm
Height	250 mm
Depth	300 mm
Weight	40 kg
Voltage	220 - 230 V
Power	0.5 - 1.6 kW max. 2.2 kW

Accessories thermopress 400:

1 press-out device and punch*	REF 140 0090 4
1 pair of cartridge pliers*	REF 140 0090 6
1 flask hook with hex*	REF 140 0091 2
1 flask, small* (l 122 mm, w 102 mm, h 72 mm)	REF 140 0N90 3
1 flask, large (l 140 mm, w 102 mm, h 72 mm)	REF 140 0N90 5
1 cleaning brush	REF 110 0040 2
1 thermopaste 400 special paste, 50 g*	REF 540 0105 1
Expando-Rock-Set	
5 kg expansion plaster, 500 ml Expandosol	REF 570 0ERS 5

thermopress-Workshop
REF 950 0020 0

thermopress introductory assortment
3 x 24 g Polyan IC clear
5 x 30 g Polyan IC pink 1
2 x 20 g bre.flex pink 2
5 x 24 g bre.flex 2nd edition pink stippled
2 x 16 g bredentan HP A (corresponding Vita classical shade A2)
3 x 16 g Bio Dentaplast A2
REF 140 0090 2

thermopress 400 accessories assortment, 7 pieces
REF 110 0040 1

View above, accessories thermopress 400: articles marked with * are included in thermopress 400 accessories assortment!

bredent

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