THERMEO®

- exceptional wearing comfort
- unique flexibility by thermomemory effect
- self adjusting
- no yellowing
- extreme durability
- Iong-lasting
- highest biocompatibility
- "snap on" splints available

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Materials are our DNA!



idea to product.

3d ure





Smart materials, also called intelligent or responsive materials, have one or more properties that can be significantly changed in a controlled manner by external stimuli, such as temperature. The change is also reversible. The high tech polymer of the THERMEO® family are among smart materials that are characterized by a unique thermomemory effect. For the manufacture of nightguards and splints, the complete THERMEO® line can be used to the best advantage. The THERMEO® splint stands out because of its highest wearing comfort and is self adjusting by thermomemory effect. On the basis of its outstanding properties, THERMEO® combines the advantages of hard as well as flexible splint materials.

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build-up of stress as a function of deflection at 73.4 °F (23 °C).*





The material composition complies with highest medical technology standards. Therefore, no plasticizer on the basis of phthalates are used, but only components which are certified for medical applications. The yellowing of the splints are avoided by the elimination of amines in the composition. THERMEO® is also MMA-free and due to this its irritation and sensitization potential is significantly reduced. It can be used in the conventional ways of cast and compressed mold techniques. Additionally, THERMEO® is also available as a milling blank in order to integrate this material class into the digital workflow. By doing so today you are now "MDR-ready".



The THERMEO® family is characterized by their unique and patent secured flexibilizer technology. At room temperature 73.4° F (23 °C) the THERMEO® build-up of stress as a function of the deflection (according to DIN EN ISO 178) is similar to competitor material A (Fig. 2). At body temperature 98.6 °F (37 °C) the THERMEO® effect becomes clearly apparent. The loss in tension of the THERMEO® material doubles nearly the values of competitor A (Fig. 3). Accordingly a nearly tension free adoption to the tooth structure can be realized. Due to that the highest wearing comfort in its material class is accomplished. Furthermore, the technology advantages of THERMEO® blanks are evident, too, by considering the thermomemory effect. On this basis, further research was conducted on the time and temperature dependent deformation and reformation of sample parts (dimensions 80 mm x 10 mm x 4,2 mm) after a 90° deflection. In terms of a wait for 1 min, the recovery is determined (in this context 100 % correspond to 0° remaining deformation). It can be derived from Fig. 4, that THERMEO® exhibits both at 73.4 °F (23 °C) and 98.6 °F (37 °C) an unparalleled elastic recovery of ≥ 94 %. THERMEO® is capable of returning into its initial shape after being subjected to stress within a very short time. In contrast, the competitor A material obtain significantly lower values (67 % and 78 % e.g.) under identical test conditions. All of the listed THERMEO® advantages are now also available as THERMEO® SO blanks in dental colours A1/A2/A3 for the digital fabrication of "snap on" splints (Fig. 1). Of course THERMEO® is also available in different packaging sizes for the conventional cast and compressed mold techniques or for the repair of milled splints.

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MEO ®	Starterkit	item-no.: D1010118
VIEO®	liquid 130 ml	item-no.: D1010122
VIEO®	liquid 255 ml	item-no.: D1010123
VIEO®	liquid 600 ml	item-no.: D1010124
VIEO®	powder 180 ml	item-no.: D1010119
VIEO®	powder 340 ml	item-no.: D1010120
VIEO®	powder 800 ml	item-no.: D1010121
VEO®	<mark>blank</mark> 16 mm	item-no.: D1022002
VEO®	<mark>blank</mark> 20 mm	item-no.: D1022003
VIEO® SO	blank 20 mm, A1	item-no.: D1010125
VIEO® SO	blank 20 mm, A2	item-no.: D1010126
VIEO® SO	blank 20 mm, A3	item-no.: D1010127

