

Vertex™ ThermoSens

Monomer-free, rigid, C & B, full and partial dentures

**VIRTUALLY
UNBREAKABLE**



Vertex Dental

Premium Denture Solutions

Over 70 years of Dental Excellence

The global dental technical market is changing day by day. The latest state-of-the-art denture techniques are far more advanced than those available only a short time ago. Research, developments and innovations are continuing at full speed.



Vertex-Dental is at the forefront of this dynamic movement. We are constantly developing, producing and launching innovative products and techniques. Our main focus is on the denture department and our main aim is to offer you premium denture solutions that you can rely on for a superb fit and excellent performance.



To provide you with the best and most up-to-date solutions, we anticipate new trends in

the dental technical field and create the products that professionals and patients alike are looking for. We use our specialist capabilities and independent structure to ensure you benefit from production efficiency, environmentally responsible materials, more durable end products and cost reductions – including for end users.

At Vertex-Dental, we go out of our way to offer you better alternatives to established techniques. Our worldwide network of master technicians, specialist chemists and marketing experts is constantly on the lookout for improvements to the products and services that we offer.



It is through our commitment to quality and innovation that we are able to present to you our new, virtually unbreakable and monomer-free denture solution Vertex™ ThermoSens. Take a look through this brochure now to see what it could mean for you.

Vertex™ ThermoSens

Monomer-free, rigid, C & B, full and partial dentures

Vertex™ ThermoSens is the innovative, virtually unbreakable, new monomer-free rigid denture base material from Vertex-Dental B.V.

Monomer-free

Vertex™ ThermoSens is ideally suited to patients unwilling or unable to accept dentures made from materials that could result in allergic reactions or other sensitivity problems. The increasing public awareness of such issues, and the need for professionals to offer biocompatible solutions, without dangerous raw materials, mean that Vertex™ ThermoSens has an important role to play in today's dental marketplace.

Virtually no shrinkage: excellent fit

Created from a unique thermoplastic material, Vertex™ ThermoSens also offers a number of other important advantages. It is virtually unbreakable, and provides an excellent fit due to the lack of volume shrinkage.



10 colours and in different size tubes of Ø22 mm and Ø25 mm

Furthermore, Vertex™ ThermoSens is very easy and versatile to work with. It can be used for rebase and reline jobs, and is also suitable for creating overdentures on implants. Though it is even possible to make repairs too! It is available in several sizes and in 10 colours, in cartridges that are not vacuum-packed because it has good humidity resistance. Vertex™ ThermoSens is also easy and quick to polish.

This innovative new product from Vertex Dental B.V. will benefit you and your patients both now and in the future.

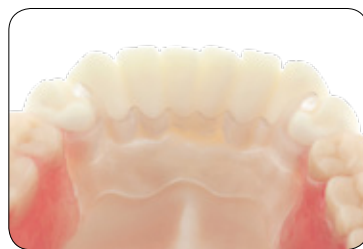
The Vertex-Dental team



Vertex™ ThermoSens



Suitable for full and partial dentures



Bonding between ThermoSens and PMMA with the aid of Fusing Liquid



Rebasing and relining possible with two injections



Overdenture on implants - virtually unbreakable

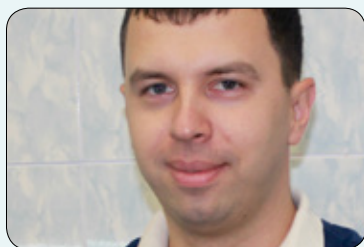


The ideal solution in limited spaces



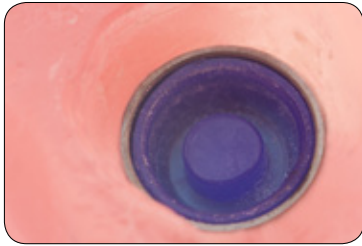
Optimized fit of locators

“It must be something special...”



Fedir Moiseiev
Interdent Lab, Ukraine

“Our Lab has already been working with rigid thermoplastic materials for 7 years. This is why, when Vertex started to produce its new rigid thermoplastic ThermoSens, we were pleased to try it out as Vertex has a reputation for quality. We knew in advance that it must be something special, and we were right! It has optimal physical characteristics, is very easy to polish, has a wide range of colours and doesn't shrink! Another very important feature is that this material is not affected by humidity and can be stored without vacuum packaging. With ThermoSens, you can produce full dentures with no volume shrinking and the right stiffness, with transparent frames like you do in metal, but with much improved aesthetics – and they are more biocompatible. Also, it's very easy to repair and reline.”



Locators with perfect fit



State-of-the-art aesthetic solutions



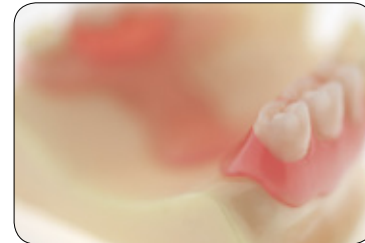
The material for tooth coloured crowns and bridges



Monomer-free / low allergy risk
Non veined / veined colours



No volume shrinking



Quick to finish due to easy polishing

“Virtually unbreakable...”

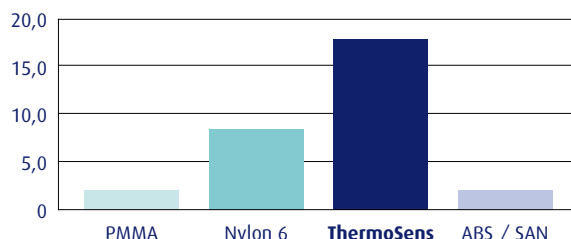


AJ Posca
Posca Brothers Dental Lab, USA

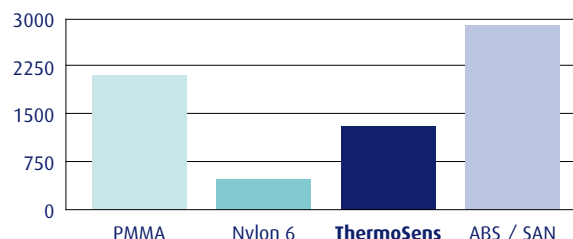
“So far our experience with the Vertex ThermoSens has been nothing but great success! Being able to fabricate a full denture that is virtually unbreakable was unheard of until this material was produced. Now, with Vertex ThermoSens, we are able to offer doctors and their patients an appliance that they can depend on. Not only are dentures capable of being fabricated, but we also have used Vertex ThermoSens in multiple other devices that give our doctors reassurance that their patients’ will go home satisfied.”

Vertex™ ThermoSens

Charpy Impact Strength kJ/m² notched



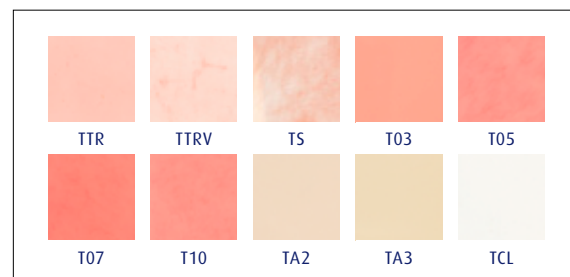
Flexural Modulus [MPa]



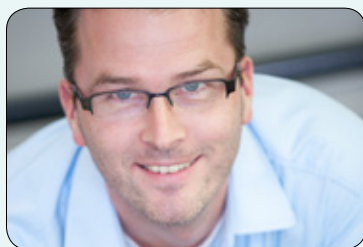
Toughness

Toughness tests		
Material	K _{max}	W _f
ISO 20795-1:2008	≥ 1.9 MPa·m ^{1/2}	≥ 900 J/m ²
PMMA	3.6 MPa·m ^{1/2}	3000 J/m ²
ThermoSens Rigid No breakage	3.4 MPa·m ^{1/2}	160210 J/m ²

Available colours



**“ThermoSens,
an ideal material...”**



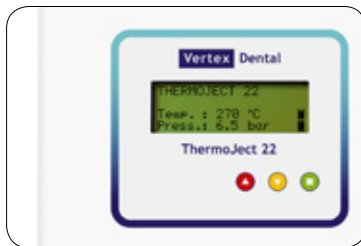
Menno Pot
4Dental TLZ, the Netherlands

“Injecting implant-supported dentures is always a challenge. At 4Dental TLZ, we work with a lot of different implants, and we find the superstructures particularly susceptible to breakage when space is limited. As ThermoSens is virtually unbreakable, we decided to try it out. We have already used it to inject a number of different implant-supported dentures and are very pleased with the results. It’s extremely strong, so it is suitable for partial dentures. However, it also offers some flexibility when it’s kept thin, thereby giving our laboratory more options. ThermoSens doesn’t contain any monomers, so we can use it for patients who have burning mouth syndrome and mouth allergies. Its biocompatibility and other qualities make it an ideal material from which to construct implant-supported dentures.”

Vertex™ Thermoject 22

The Vertex™ Thermoject 22 is the injection machine which enables dental technicians to inject easily, efficiently and quickly.

In only 8 minutes the temperature will reach 270°C. The heating of the cartridge and the actual injection material is fully automated. It was our aim to work with precise temperature and pressure values so that the technicians will have predictable end results.



Technical specifications

- Suitable for Ø22 mm cartridges
- Operational in 8 minutes (from 0°C to 270°C)
- Pressure adjustable from 6 - 9 bars
- Deviation of display temperature < 1%
- Heating mode max. 20 minutes
- Full automated heating and injection programme
- Operational again after 3 minutes
- Available in 100V, 110V and 230V
- 50Hz - 60Hz
- Universal power supply plug available

Vertex™ ThermoSens Ø22 step by step



Make holes of 0.9 or 1.3 mm in a T connection. Clean the wax model. Separate the model. Embed the model. Apply Sprue Wax Soft to the injection channel.



Mix the putty properly before applying. Press the putty firmly so that the teeth come through. Create retention in the putty. Separate the plaster with Divosep.



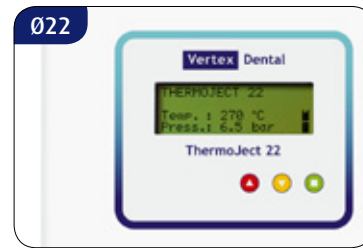
Close the flask and tighten the screws. Embed the second half carefully. After closing, let the plaster harden. Place the flask for 10 minutes in 70°C water to soften the wax.



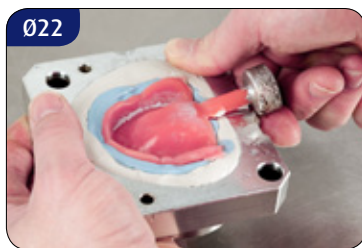
After softening the wax, open the flask. Remove the wax. Clean with boiling water.



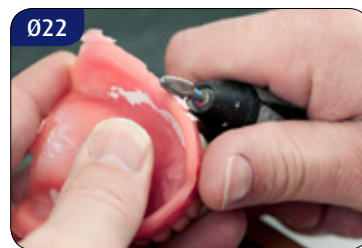
Separate the plaster only with ThermoFlow isolation.



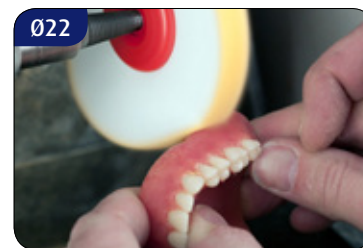
Preheat the flask for 15 min. in $\geq 90^\circ\text{C}$ water and put it in the machine just before injecting. After 16 min. of preheating the cartridge at 270°C, you can inject with 6.5 bars of pressure.



Place the complete flask in an oven ($>100^\circ\text{C}$) or in boiling water for 30 minutes, then cool down the flask on the bench for 20 minutes and then open the flask. Take out the denture carefully.



Cut off the injection channel. Grind the edges with the HM cross standard. Equalize the surface with silicone polishers.



Use ThermoGloss and a microfibre polishing brush for finishing. Complete the final finish with the brush felt cloth.

Vertex™ ThermoSens product range



Vertex™ ThermoSens
Available in rigid and flexible and in medium, large and extra large cartridges, packed per 12. Also available in Ø25 mm.



Vertex™ ThermoSens
Also available as bulk granulate for filling cartridges. Empty cartridges available.



Vertex™ Thermoject 22
Suitable for Ø22 mm cartridges. Available in 100V, 110V and 230V.



Vertex™ ThermoFlask
Key included.



Vertex™ Sprue Wax Soft
Special wax to enable you to create better injection channels.



Vertex™ ThermoFlow
Separation liquid for plaster versus Vertex™ ThermoSens.



Vertex™ ThermoGloss Paste
High-gloss paste for finishing Vertex™ ThermoSens.



Vertex™ ThermoGloss Emulsion
Emulsion for finishing Vertex™ ThermoSens.



Vertex™ Thermo Silicon Polisher
For polishing the surface and the edges.



Vertex™ Twisted Drill
To create small holes in the teeth. 0.9 or 1.3 mm.



Vertex™ Thermo Fusing Liquid
Liquid for repairing, relining and rebasing.



Shade Guide Vertex™ ThermoSens
Vertex™ ThermoSens is available in 10 colours.



Authorised dealer

Vertex Dental

Vertex-Dental B.V.

Johan van Oldenbarneveltlaan 62 | 3705 HJ Zeist
P.O. Box 10 | 3700 AA Zeist | The Netherlands
Tel. +31 (0)30-69 76 749 | Fax +31 (0)30-69 55 188
info@vertex-dental.com | www.vertex-dental.com

Vertex-Dental Asia Pte Ltd

The Alpha #04-16 | Singapore Science Park II
10 Science Park Road | Singapore 117684
Tel. +65 6872 9315 | Fax +65 6775 7963
info.sg@vertex-dental.com | www.vertex-dental.com