

**PALA®**

Product Information



## **PalaXtreme®**

Strong choice. Tough dentures.  
High impact & self-curing denture base material.

Giving a hand to oral health.



**KULZER**  
MITSUI CHEMICALS GROUP

## PalaXtreme® – Benefits

### High-impact, self-curing denture acrylic for special applications

A strong base is key to a long-lasting and high-quality denture: PalaXtreme offers a unique combination of benefits to achieve this goal.

No other dental acrylic combines so much strength and flexibility:

- high-impact & self-curing material
- adds to the prevention of impact damage and therefore avoidance of time-consuming warranty repairs
- its unique formulation offers a broad range of processing options, with injection and pouring techniques
- various gingiva colour options (known Pala shades) and a clear colour option are available

#### Specialised acrylic

PalaXtreme is designed for special applications such as implant based dentures.

Whether you prefer pouring or injection technique, PalaXtreme works perfectly for either option. Making it a flexible choice for your individual needs.

#### Strength

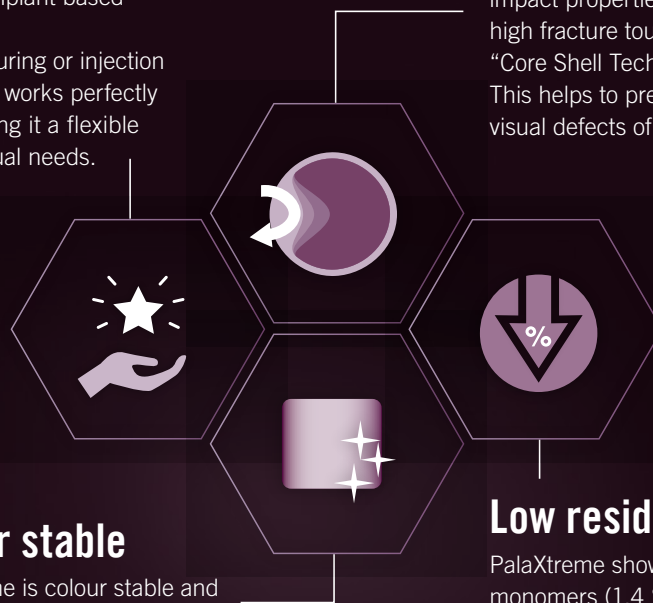
Minimised warranty repairs due to high-impact properties: PalaXtreme boasts high fracture toughness thanks to the new “Core Shell Technology”. (see pg. 4)  
This helps to prevent chipping, cracks and visual defects of any kind.

#### Colour stable

PalaXtreme is colour stable and offers a clear version, e.g. for dental splints.

#### Low residual monomers

PalaXtreme shows very low levels of residual monomers (1.4 %<sup>1</sup>).



**Satisfaction:** **96 %**  
would switch to PalaXtreme  
(pre-launch test)

Pala – Over **85** years  
of experience

**High-impact strength: Exceeds**  
durability requirements.

**Low residual monomers:**

**1.4 %<sup>1</sup>** vs.  
ISO standard 4.5% for  
cold curing and 2.2%  
for heat curing

Fracture toughness = **2.6**  
MPa\*m<sup>1</sup>

Fracture work =  
**1,122** J/m<sup>2</sup><sup>1</sup>

**Extreme colour stability:**  
In accord with  
**ISO 20795-1**

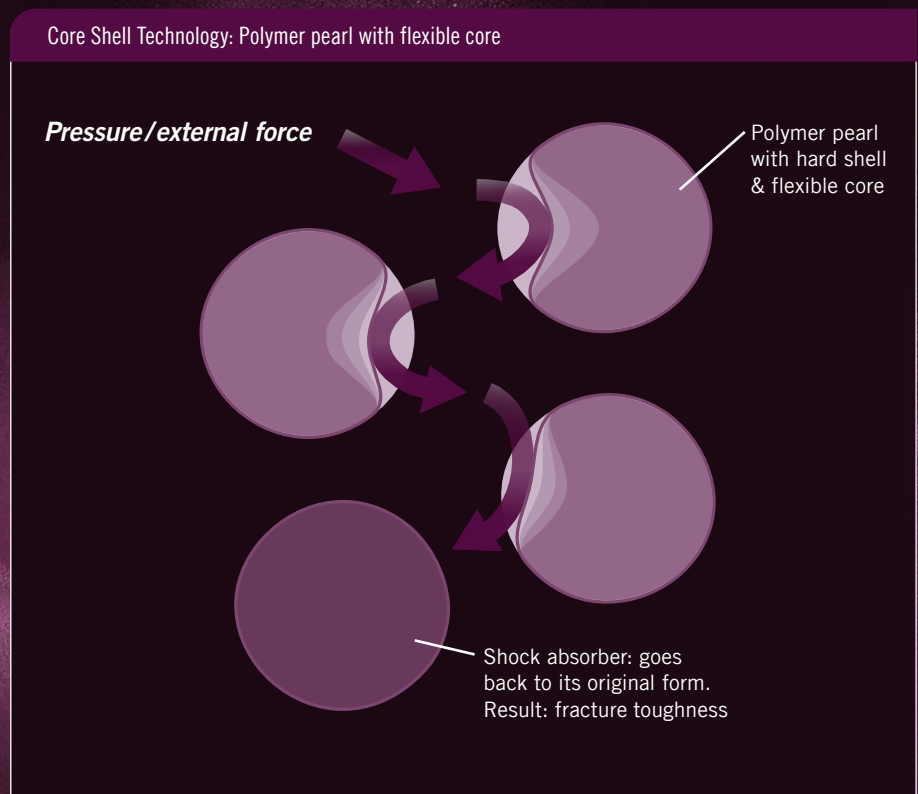
<sup>1</sup> Source of data: Sample value of PalaXtreme.  
Research & Development, Kulzer Wehrheim,  
unpublished data. Data on file.



# PalaXtreme® – Core Shell Technology

## Everything you need to deliver quality that lasts

PalaXtreme is one of the first self-curing dental acrylics to pass both ISO 20795 tests of maximum stress intensity (fracture toughness =  $2.6 \text{ MPa}\cdot\text{m}^{1/2}$ ) and total fracture of work (fracture work =  $1,122 \text{ J}/\text{m}^2$ ), making it an excellent choice for implant-based dentures. This high fracture toughness is based on the “Core Shell Technology” – polymer pearl with a hard shell and a flexible core. The flexible core acts as a shock absorber to stop the spread of microscopic damage.



Fracture toughness is a measure for break resistance. PalaXtreme is highly break resistant and therefore perfect for implant supported dentures.

<sup>1</sup> Source of data: Sample value of PalaXtreme. Research & Development, Kulzer Wehrheim, unpublished data. Data on file.

## PalaXtreme® – Quick guide

### At a glance – how to reach the best results

Please note some characteristics of PalaXtreme that are special to this unique high-impact acrylic material.

Viscosity & Colour	<b>Low viscosity</b> for easier handling of pouring technique <b>Milky appearance</b> of liquid is normal and has no influence on the end result
Compatibility	<b>Liquid &amp; powder of PalaXtreme are not compatible</b> with other Pala denture base acrylics Don't mix it with other acrylic denture base materials

For optimal results, please follow the individual process steps for your preferred processing procedure:



#### Pouring Procedure

Mixing ratio	10 g powder: 6 g liquid ! For an optimal result it is imperative to stick to the mixing ratio
Mixing instructions	<ul style="list-style-type: none"> <li>• Place liquid in mixing cup</li> <li>• Add specified volume of powder immediately</li> <li>• Stir to form a homogenous mass for 30 sec.</li> </ul>
Processing & Polymerisation	<ul style="list-style-type: none"> <li>• Pour about 3 min after mixing at room temperature of 23°C (73°F)</li> <li>• Plastic phase: <b>after 6 min.</b> (lasting approx <b>3 min.</b>)</li> <li>• Surface of the mixture should have a dull appearance</li> <li>• For polymerisation in the Palamat® elite or Palamat® premium: allow material to bench cure for min. 7 min. / max. 13 min.</li> <li>• Polymerisation time in pressure vessel e.g. Palamat® elite or Palamat® premium: 30 min</li> <li>• Water temperature: 55°C (131°F)</li> <li>• Pressure: 2 bar</li> </ul>

# PalaXtreme® – Quick guide

At a glance – how to reach the best results



## Injection Procedure

Mixing ratio	20 g powder: 12 g liquid ! For an optimal result it is imperative to stick to the mixing ratio
Mixing instructions	<ul style="list-style-type: none"><li>• Place liquid in mixing cup</li><li>• Add specified volume of powder immediately</li><li>• Stir to form a homogenous mass for 30 sec.</li></ul>
Processing & Polymerisation	<ul style="list-style-type: none"><li>• <b>Inject when the mixture has a dull surface</b></li><li>• Waiting time between mixing start and injection at 23°C (73°F): <b>7–8 min.</b> (times may vary depending on temperature and mixing volume)</li><li>• Polymerisation time in pressure vessel e.g. Palamat® elite or Palamat® premium: 30 min</li><li>• Water temperature: 55°C (131°F)</li><li>• Pressure: 2 bar</li></ul>

## Post-processing:

Grinding behaviour & Polishing

- Material feels slightly more flexible while grinding
- Polishing works as usual



# PalaXtreme® – Quick guide

## Keep in mind

Special aspects	Recommendation
Liquid – contains residue/ lubricant film	Do not spill liquid. Avoid skin contact with liquid.
Mixing ratio	Comply with given mixing ratio. Avoid too much liquid.
Polymerisation time	Please comply with IFU. e.g. full denture: 30 min. thicker pieces: 40 min.
Polymerisation temperature	Please comply with IFU. Comply with 55°C.
Impact of milling cutter	We recommend cutters with a transverse cut, e.g. FSQ cutters or slide cutters: FSQ router or slide sander, as grinding particles are shorter, finer-grained and less sharp-edged, abrasive to the skin.
Post-processing	Whilst post-processing the material, please comply with protective measures:  Please wear: <ul style="list-style-type: none"><li>■ Protective goggles</li><li>■ Long-sleeved protective clothing</li><li>■ Dust mask</li><li>■ Protective gloves</li></ul> Please use: <ul style="list-style-type: none"><li>■ Suction system with protective screen</li><li>■ Grinding/polishing box</li></ul> Grinding particles: Can be sharp-edged, abrasive. <ul style="list-style-type: none"><li>■ Remove chips regularly from workbench and your body.</li></ul>

## Pala Mix & Match

The perfectly harmonised denture tooth combination system around Pala Idealis, Pala Premium, Pala Mondial and PalaVeneer shell teeth.

Our Pala Mix & Match concept allows you to unite our tooth lines Pala Idealis, Pala Premium, Pala Mondial and PalaVeneer to get individual, professional results. You can cater to individual requirements with considerably more flexibility and better provide patients with precision dentures.

**For more information about our Pala system and tooth lines visit [kulzer.com/pala](https://kulzer.com/pala)**



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