



republic^{PM}[®]

advanced functional polymers

Is our 'Why' also your 'Why'?



A strong and shared "Why" is the starting point for inspiration and motivation. That's why, at **dentrepublic**[®], we have defined why we do what we do before diving into the development of new products, processes, and services.



When it comes to dental polymers, **biocompatibility is our top priority**. Milled medical devices made from industrially polymerized blanks offer clear advantages: they are largely **free from residual monomers**, particularly **dense and homogeneous** – ensuring maximum biocompatibility and safety in the oral cavity.



In addition, we think differently and offer you what the industry doesn't like to talk about: authentic market prices. Our products are sustainable and of high value – but our prices reflect their real value, without unnecessary mark-ups.

Founded for the new generation of digital laboratories.

dentrepublic[®]

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For the new generation of digital labs

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Polyamide 12 – flex-elastic premium polymer



milky flex

Blanks offer high toughness for heavy bruxers. PA12 is a semi-crystalline thermoplastic, which naturally results in a slightly milky.

Application:
e.g. therapeutic splints, reflex splints, relaxation splints, positioning and stabilization splints.

Risk class:
Medical device Class IIa
(long-term use > 30 days)

- High strength & toughness**
Extremely resistant to mechanical stress.
Withstands high occlusal forces without becoming brittle.
- Flexibility & fracture resistance**
More elastic and less prone to cracks or fractures compared to PMMA.
The flexibility improves wearing comfort and increases the durability of the splints.
- High biocompatibility**
Well tolerated by the oral mucosa. Free from monomers – ideal for allergy sufferers.
Contains no BPA or plasticizers (such as phthalates).
- Comfortable to wear**
Thanks to its flexibility, it adapts well to the dentition without causing uncomfortable pressure.
The material is more pleasant to wear than stiffer materials like PMMA and reduces biting noises.



Low modulus of elasticity of approx. 1,350 MPa for high elasticity.

0,0%
residual-
monomer

Technical data (ISO 20795-1)		
Material	Polymer (PA12) / pigment	
Flexural strength [MPa]	≈ 60	
Water absorption [µg/mm³]	≈ 40	
Residual monomer content [%]	0,002	
Variants	Ø 98,5	Height: 15, 20, 25 mm
Color	transparent	

PMMA – acrylic polymer



splint

Blanks are the most efficient choice for crystal-clear splints. Thanks to their PMMA base, they can be combined at any time with conventional PMMA materials. CAM-optimized hardness allows for fast milling.

Application:
e.g. therapeutic splints, reflex splints, relaxation splints, positioning and stabilization splints.

Risk class:
Medical device Class IIa (long-term use > 30 days)


Variants	Ø 98,5	Height: 15, 20, 25 mm
Color	highly transparent	

provi

Blanks are designed to deliver reliable results thanks to natural base shades. Suitable for all indications up to 16 units as long-term temporaries.

Application:
Provisional crowns and bridges, for use until permanent restoration.

Risk class:
Medical device Class IIa (long-term use > 30 days)

Variants	Ø 98,5	Height: 20 mm
Color		

- Highly transparent**
Aesthetic, easy and quick to polish
- High abrasion resistance**
Excellent shape stability
- Minimal moisture absorption**
Prevents odors and extends possible wearing time
- Proven material**
Pure PMMA quality, used in millions of applications

Technical data (ISO 20795-1)	
Material	Acrylic polymer based on methyl methacrylate (PMMA) / pigments
Flexural strength [MPa]	≈ 78
Water absorption [µg/mm³]	≈ 19-25
Residual monomer content %	0,02