

BIOCOMPATIBLE AND ADVANTAGEOUS MECHANICAL PROPERTIES FOR FAST RECOVERY



- Biocompatibility acc. to DIN ISO 10993-5 / -12
- Dynamic fixation and stabilization: High yield strength, large elastic strain limit and low Young's modulus
- Effective regeneration: Bone formation promoting materials
- Individualization: 3D-printing for rapid realization of patient-specific designs

Applications

- Implants (spine, dental, traumatology)
- Medical devices and fixtures
- Surgical and dental instruments

IMPRESSIVE AESTHETICS, UNIQUE ROBUSTNESS AND CRYSTAL CLEAR SOUND

- Functional properties: High storage capacity of elastic energy and low damping ratio
- Touch: Skin-friendly anti-bacterial properties and good haptic experience due to low thermal conductivity
- Durability: High scratch and wear resistance
- Design: Freedom of geometric design and manufacturability within tight tolerances

Applications

- Wearables
- Music instruments
- Sports equipment



AT THE FRONTIERS OF PERFECTION, DESIGNED FOR THOSE WHO DEFY LIMITS



- Uniqueness: Exceptional material class for high-quality appearances
- Surface: From highly shiny to deliberately structured
- Strength: Protection of most sensitive technologies in miniaturized space and housing designs
- Long-time stability: Extraordinary corrosion resistance for consistent performance and appearance

Applications

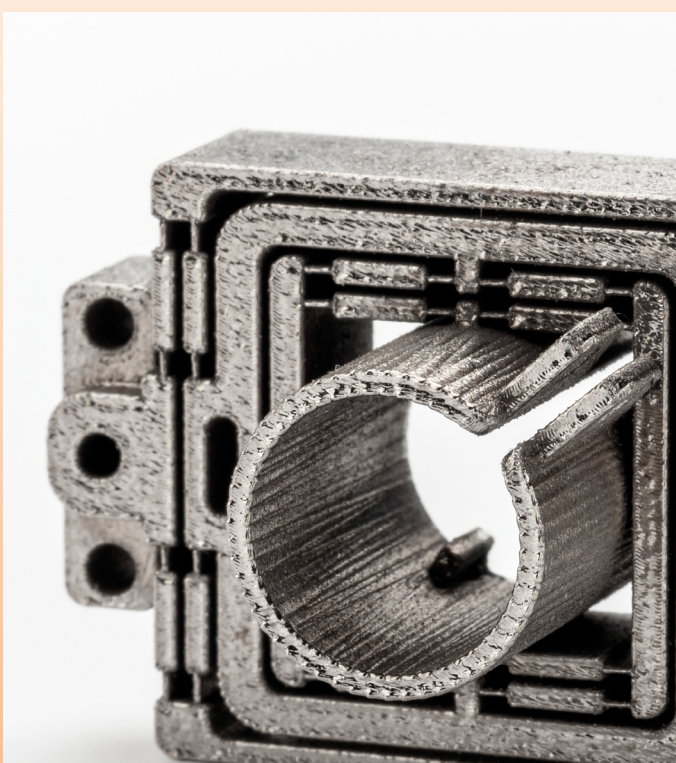
- Watchmaking
- Wearables

FOR SOME CHALLENGES THERE IS ONLY ONE MATERIAL SOLUTION

- Miniaturization and design improvements: 3D-Printing or injection molding within tight tolerances and reproducible manufacturing
- Elastic elongation: Elastic strain of nearly 2 %
- Stress persistent: Uniform distribution of stress during deformation
- Sensitivity: High accuracy, high resolution in low pressure ranges

Applications

- Sensors
- Joints and hinges
- Spindle bearings



DESIGNED TO FUNCTION RELIABLY UNDER EXTREME CONDITIONS



- Resilience: High wear resistance in extreme environments
- Reliability: Low hysteresis with no significant temperature effects (under T_g)
- Lightweight constructions: complex and precise geometries
- Use in aggressive surroundings: Due to intrinsic corrosion resistance no additional coatings required

Applications

- Bearing housing, drilling heads, tools
- Impeller, rotor and blade components
- Engine mounts and discs, seals and flaps

Heraeus AMLOY is part of the Heraeus Group, headquartered in Karlstein, Germany. Heraeus AMLOY specializes in the development of amorphous alloys as well as the manufacturing of amorphous components. As the only manufacturer worldwide Heraeus AMLOY offers its customers two different near net shape process technologies for the manufacture of amorphous components in-house: With injection molding customers benefit from the shortest process times, with 3D printing Heraeus offers the best surface quality on the market.

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