

# Joint solutions: Medical Polyurethanes in Orthopedics

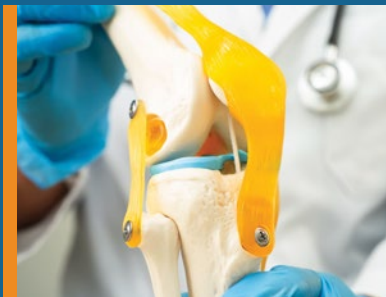


Material performance is the key to successful orthopedic implant design.

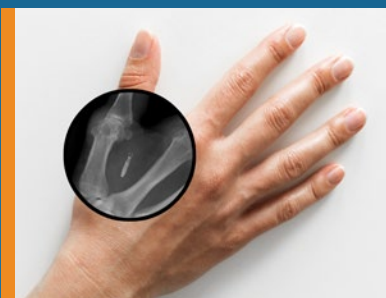
Biomedical's polyurethanes are engineered for applications that demand.



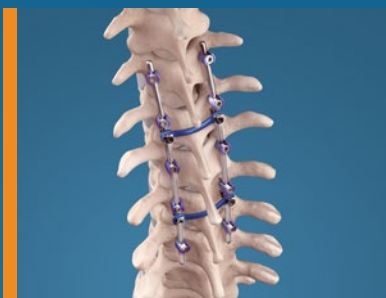
Load Bearing Capability



Wear Resistance



Lubricity



Biostability

- ✓ Arthroplasty
- ✓ Dynamic stabilization (spine)
- ✓ Joint preservation (shoulder & extremities)
- ✓ Lower & upper joint stabilization
- ✓ Meniscus replacement
- ✓ Soft tissue augmentation
- ✓ Spinal disc replacement (cervical and lumbar)



Our premium polyurethanes, including Biomerix®, Bionate®, Bionate® II, Biospan®, Carbosil®, and Elasthane provide the perfect solution to meet all your orthopedic needs.

# Biostable materials built to last<sup>1</sup>

Providing safety, reliability,  
and longevity in every device<sup>2</sup>

Unmatched reliability and  
safety of medical devices

- ✓ Minimized risk of degradation
- ✓ Reduced risk of device failure
- ✓ Less frequent replacement

Engineered for endurance

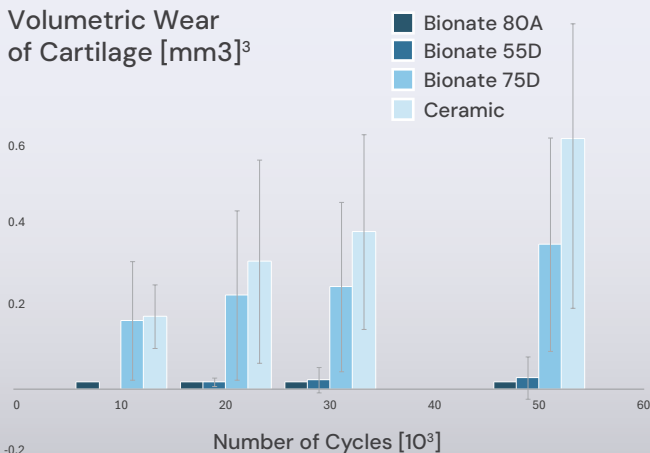
- ✓ Stable in harsh environments
- ✓ Designed for long-term performance

## Your reputation, our reliability

Offering a unique combination of properties  
for custom medical device applications.



Volumetric Wear  
of Cartilage [mm<sup>3</sup>]<sup>3</sup>



### Device reliability

Engineered for durability with abrasion, chemical, and sterilization resistance, ensuring long-lasting performance across gamma, EO, and e-beam methods.



### Exceptional flexibility

Exceptional flexibility and wear resistance for versatile medical applications, ensuring comfort<sup>4</sup> and long-lasting performance in catheters, wearables, and wound care products.

1. Data on file.

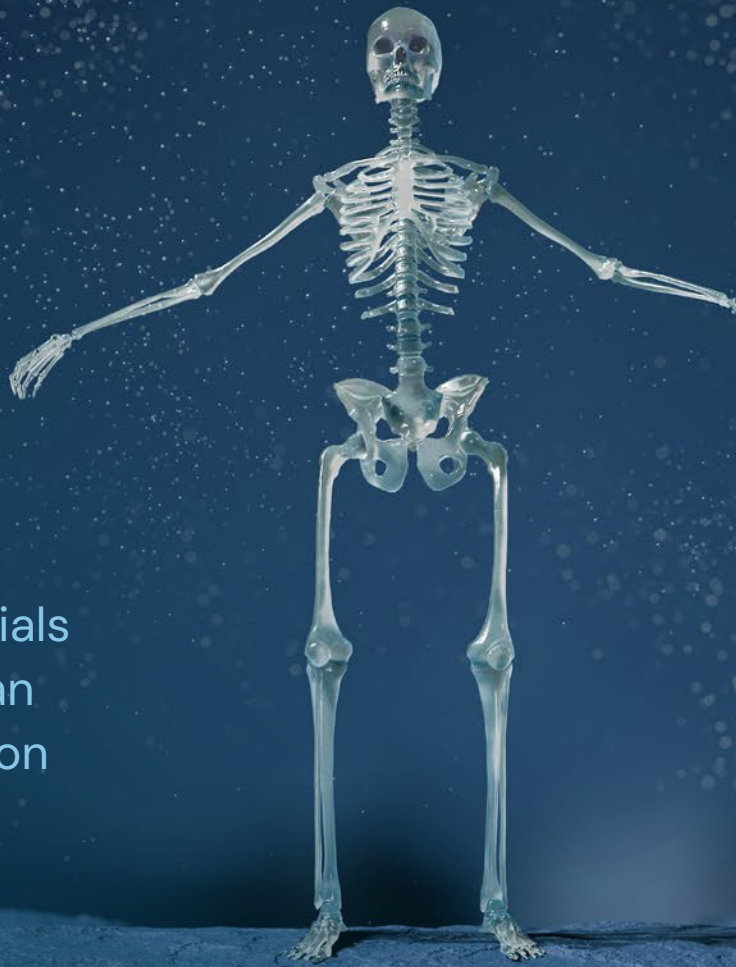
2. Biostability data available for Elasthane™, Biomerix®, Bionate®, Carbosil®, and Biospan® Product Families

3. The Efficacy of Bionate® as an Articulating Surface for Joint Hemiarthroplasty" (2016). Electronic Thesis and Dissertation Repository. 4313.

4. Drożdż, K., Gołda-Cępa, M., & Brzychczy-Włoch, M. (2024). <https://doi.org/10.2478/am-2024-0018>

# Collaborative solutions focused on elevating health

Leveraging our polyurethane materials and orthopedic expertise, to offer an advanced, minimally invasive solution with significant market potential.



## Dependable

Robust quality systems and FDA Master Files available.

## Tailorable

Specialized production and processing capabilities.



## Available

Established supply chain and competitive lead times.

\* Data on file – biocompatibility testing may not be available on all materials

## The Biomedical advantage:

Focused on medical materials where competitors are stretched thin.

- ✓ ISO 13485 Certified Quality System and Facility
- ✓ Class 8 Certified Manufacturing Clean Rooms
- ✓ Comprehensive ISO 10993-1 material testing\*
- ✓ Direct access to our experts including regulatory support/guidance for FDA filings
- ✓ Combination Technologies

# All polyurethane manufacturers are not created equal

At Biomedical, we specialize in medical materials with performance that speaks for itself



Visit [dsm-firmenich.com/biomedical](https://dsm-firmenich.com/biomedical) to learn more or request samples

