

# Absorv™ Products

Bioabsorbable Extrusions

## Overview-

Absorv™ bioabsorbable products are particularly suitable for medical applications seeking to provide an alternative to metal stents or other components. Absorv™ products are extruded from synthetic homopolymers such as PLA, PGA, PCL, and others. These materials can be combined by our engineers as co-polymers to achieve controlled degradation profiles for bioabsorbable scaffolds. Our extruded products can be precision laser cut or coated with medications to create drug-eluting implants.

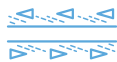
Zeus Absorv™ tubing is used in many clinical situations including cardiovascular, neurovascular, and peripheral applications. Because we often engage with customers during development, we are able to perform custom extrusion and post processing with bioabsorbable polymers to meet specified degradation rates and strength values.



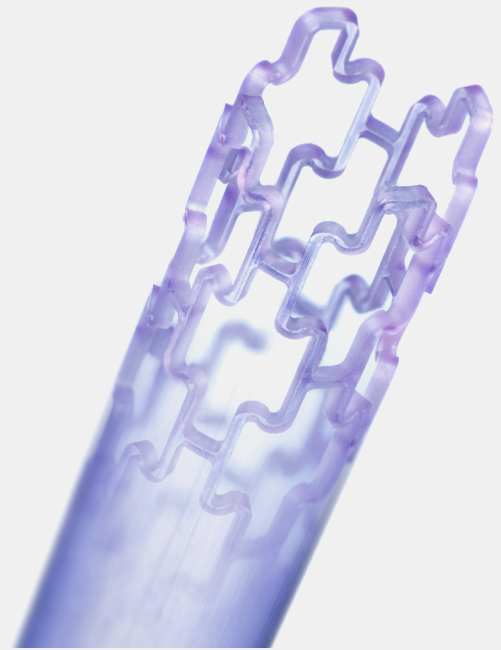
BIOCOMPATIBLE



CHEMICALLY INERT



COEFFICIENT OF FRICTION



*We provide tight tolerance extrusions that are strong and thin enough to be used for as the base for laser-cut scaffold applications.*

## APPLICATIONS

- Scaffolds
- Orthopedic
- Dental
- Tissue engineering
- Support for tissue in-growth
- Controlled drug delivery

## AVAILABLE PRODUCTS

- Extruded tubing, profiles, monofilament, and ribbon
- 100 µm wall thicknesses available
- Ability to compound and synthesize bioabsorbable resins for in vitro testing
- Advanced processing and development expertise
- Custom extrusion and processing of proprietary resins
- Network of partners to laser cut end devices

## KEY PROPERTIES

- Controlled rates of degradation
- Varying strengths and stiffness
- Absence of stress shielding
- No explantation surgery
- Controlled load transfer
- Used in FDA-approved medical devices



# Absorv™ Products

Below are approximate values for a small selection of absorbable materials processed by Zeus.

| Capabilities |                           |               |
|--------------|---------------------------|---------------|
| PRODUCT TYPE | OUTER DIAMETER (OD) RANGE |               |
|              | in.                       | mm            |
| Monofilament | 0.004 - 0.080             | 0.102 - 2.032 |
| Drawn Fiber  | 0.004 - 0.025             | 0.102 - 0.635 |

| Capabilities     |                           |               |                      |               |
|------------------|---------------------------|---------------|----------------------|---------------|
| PRODUCT TYPE     | OUTER DIAMETER (OD) RANGE |               | WALL THICKNESS RANGE |               |
|                  | in.                       | mm            | in.                  | mm            |
| Tubing           | 0.012 - 0.250             | 0.305 - 6.350 | 0.001 - 0.079        | 0.025 - 2.010 |
| Oriented Tubing* | 0.059 - 0.177             | 1.499 - 4.500 | 0.004 - 0.008        | 0.102 - 0.203 |

| Capabilities |             |      |                 |                 |
|--------------|-------------|------|-----------------|-----------------|
| PRODUCT TYPE | WIDTH RANGE |      | THICKNESS RANGE |                 |
|              | in.         | mm   | in.             | mm              |
| Ribbon       | 1.0         | 25.4 | 0.0015 - 0.0080 | 0.0381 - 0.2032 |

*\*Custom sizes outside the listed capabilities may be possible upon request*

