

## We know our materials. And we know more of them.

Material selection is a crucial step in product manufacturability. The correct material drives tolerance, dimension, strength, usability, design, speed-to-market, critical features and cost.

MTD consults our customers on the best materials to achieve the highest results for each product and application.

Through our 15+ years of medical micro-manufacturing, we've developed measurable expertise in a range of thermoplastics and bioresorbables. We stay up-to-date with the most advanced materials and technologies, so our customers can be leaders in product innovation.

### BIORESORBABLES

Bioresorbable materials are popular in micro medical applications as the materials can dissolve/absorb into the body. Medical bioabsorbable stents, implantable staples, bioresorbable micro-plugs and micro-screws are popular applications.

#### A SELECTION OF BIORESORBABLE MATERIALS WE WORK WITH:

- PURASORB® PLG 8531 (85/15 L-lactide/glycolide copolymer)
- PURASORB® PLG 8218 (82/18 L-lactide/glycolide copolymer)
- PURASORB® PLG 1017 (10/90 L-lactide/glycolide copolymer)
- PURASORB® PDLG 5010 (50/50 DL-lactide/glycolide copolymer)
- RESOMER® L210S (Poly-L-lactide)
- RESOMER® LR 706 (Poly-L-lactide-co-D,L-lactide) 70:30
- RESOMER® LR 708 (Poly-L-lactide-co-D,L-lactide) 70:30
- RESOMER® LR 704 (Poly-L-lactide-co-D,L-lactide) 70:30
- RESOMER® RG 509 S (Poly-L-lactide-co-glycolide) 50:50
- RESOMER® X 206 S
- P4HB-based (poly-4-hydroxybutrate)
- PCL-based (polycaprolactone)
- PLGA-based (poly lactide-co-glycolide)
- PLLA-based (Poly-L-lactide)
- Other (Customer Proprietary Bioresorbable Materials)

#### ADDITIVES & FILLERS:

- Color concentrates
- Pharmaceuticals for drug elution
- TCP (Tricalcium phosphate)



PLDL



PLG



PLG

## THERMOPLASTICS

Thermoplastics are polymers that become pliable and moldable above a specific temperature, and return to a solid state upon cooling. This property makes thermoplastics an ideal choice for micromolding miniatures like fixation screws and thin-walled micro components.

### A SELECTION OF THERMOPLASTIC MATERIALS WE WORK WITH:

- ABS (Acrylonitrile Butadiene Styrene)
- ABS/PC alloys
- Acetal/POM
- COC (Cyclic Olefin Copolymer)
- COP (Cyclo Olefin Polymer)
- ETFE (Polyethylenetetrafluoroethylene)
- LCP (Liquid Crystal Polymer)
- PEEK (Polyetheretherketone)
- PEI (Polyetherimide)
- PE (Polyethylene)
- PBT (Polybutylene Terephthalate), includes elastomeric grades
- PC (Polycarbonate)
- PEKK (Polyetherketoneketone)
- PET (Polyethylene Terephthalate), includes elastomeric grades
- PMMA Copolymers (Polymethyl Methacrylate)
- Polyamide (Nylon), includes elastomeric grades
- PP (Polypropylene)
- PS (Polystyrene)
- PSU (Polysulfone)
- PU (Polyurethane), includes elastomeric grades
- SAN (Styrene Acrylonitrile)
- TPE (Thermoplastic Elastomers)
- Other (Customer Proprietary Materials)

### ADDITIVES & FILLERS:

- Barium sulfate
- Carbon fiber
- Color concentrates
- Glass fibers
- Glass spheres
- Nucleating agents



CUSTOMER PROPRIETARY MATERIAL



PC



PEEK