

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