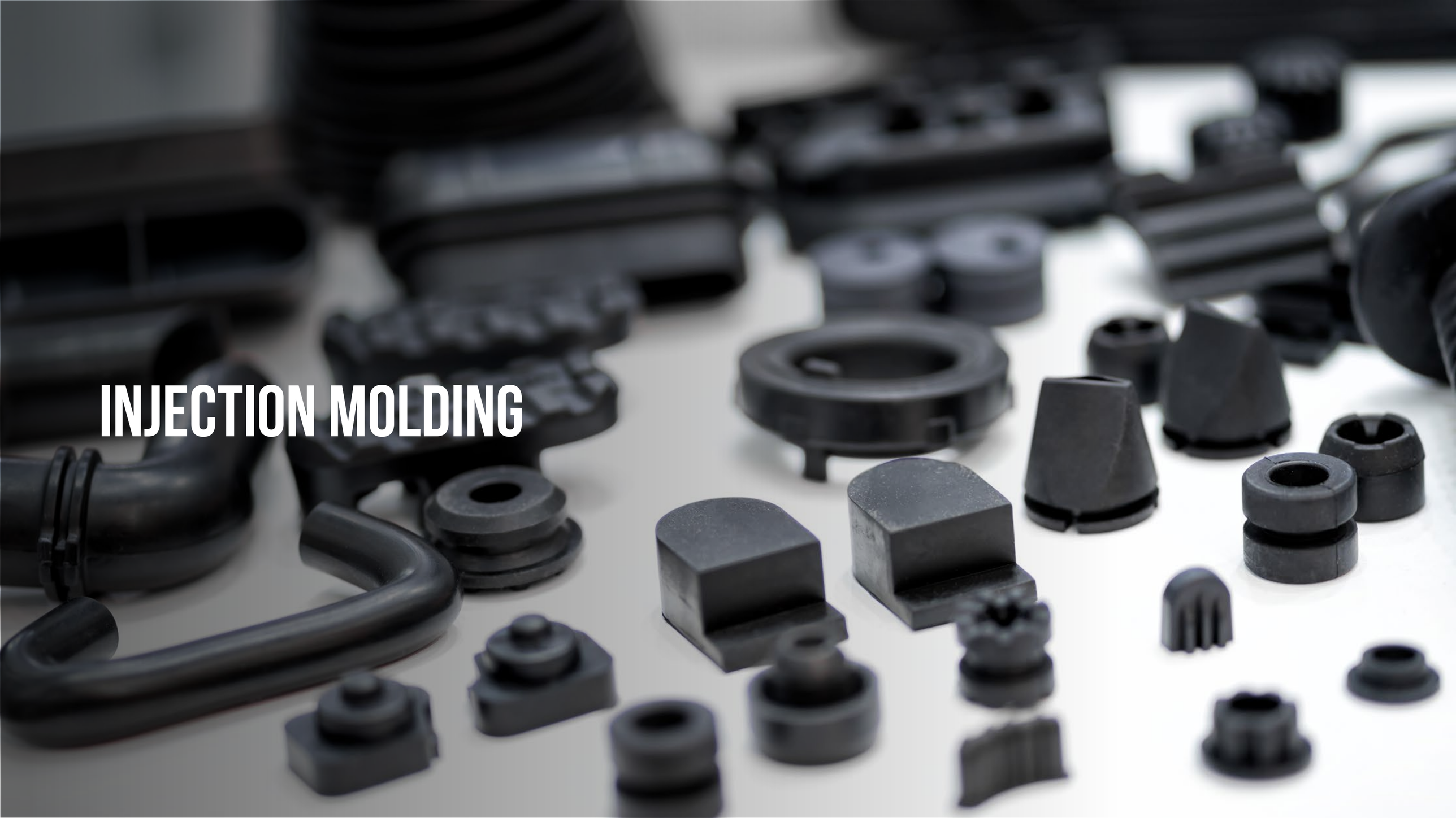
INJECTION MOLDING

INJECTION MOLDING

General process information

MAX. PART SIZE	• 800 x 800 x 400 mm • 31.5 x 31.5 x 15.7 in
MIN. PART SIZE	• 1 x 1 x 1 mm • 0.04 x 0.04 x 0.04 in
TOLERANCE	• Best achievable tolerance: ±0.001" (0.025mm) • Standard: ±0.005" (0.127mm) • For larger part tolerances please contact a SyBridge engineer
LEAD TIME	• As low as 2 weeks for T1 samples • After T1 sample approval, lead time for < 10,000 parts is as low as 1 week
TOOL VALIDATION	• Standard process is to produce a small set of T1 samples for approval before initiating full production
PRESS SIZE	• 4500T - 5000T
MIN. ORDER SIZE	• 100 parts and $5000
SET-UP FEE	• $500 per mold per order (applies to sample runs after initial T1 samples or engineering changes)

INJECTION MOLDING

Tooling

RAPID TOOLING	• Molds with aluminum cavity and core with a shot life of 5,000-10,000 shots • Typically machined in 2 weeks
PRODUCTION TOOLING	• Steel tool with shot life up to 1M shots • Ability to integrate side-pulls or cam-actions • Typically machined in 3 weeks
MULTI-CAVITY OR FAMILY MOLDS	• Multiple identical cavities or family of parts machined into a single tool • Allows for more parts to be produced per shot, minimizing unit costs
INSERT MOLDING	• Inserts are placed into the mold and molding occurs around them to extend tool life for critical features • Allows for inserts such as helicoils to be molded in your design
OVERMOLDING	• Premade parts are placed into the mold and molded over • Allows for multi-material injection molding

INJECTION MOLDING

Materials

MOST COMMON MATERIALS

- Acrylonitrile Butadiene Styrene (ABS)
- Polyethylene (PE)
- Polypropylene (PP)
- Polycarbonate (PC)

OTHER SUPPORTED MATERIALS

- Nylon (PA 6, PA 11, PA 12, PA 66)
- Polycarbonate/Acrylonitrile Butadiene Styrene (PC/ABS)
- Polyurethane (PU)
- Polymethyl Methacrylate (PMMA/Acrylic)
- High Density Polyethylene (HDPE)
- Low Density Polyethylene (LDPE)
- Polystyrene (PS)
- PEEK
- POM (Acetal/Delrin)
- Polyethylene Terephthalate (PET)
- Thermoplastic Elastomer (TPE)
- Thermoplastic Polyurethane (TPU)
- Polyetherimide (PEI)
- Thermoplastic Vulcanizate (TPV)
- Polysulfone (PSU)

ADDITIVES AND FIBER

- UV absorbers
- Flame retardants
- Plasticizers
- Colorants
- Glass fibers

INJECTION MOLDING

Additional information

COLORS

- Pantone color matching
- RAL color matching

FINISHING / POST-PROCESSING OPTIONS

- Standard SPI finishes (A2-D3)
- Pad printing
- Inserts (e.g. heat stake inserts)
- Mold-tech textures also available
- Light assembly
- Protective packaging / film