Thermoplastic Seals and Components

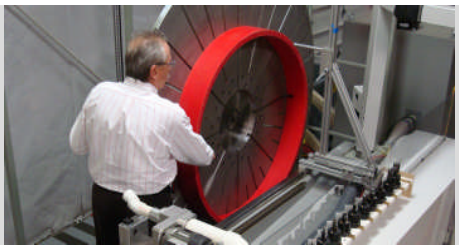
With the increase in temperatures and pressures in today's applications, thermoplastic seals provide an economical and high performance solution. Our wide offering of thermoplastic seals provide excellent temperature and pressure resistance while operating in a variety of chemicals. Our ability to match the right materials to the application with our design expertise places Simrit a degree higher than the rest.

Typical Markets:

- Mobile machinery
- Automotive and heavy truck
- Industrial equipment including HVAC compressors
- Semiconductor
- Pipes & valves

Simrit Xpress

- Custom made seals, often within 24 hours
- Over 200 standard designs to choose from
- Wide range of stocked materials
- Capabilities up to 100 inches in diameter



Capabilities:

- Prototype to production scale injection molding and machining
- Machining of complex profiles using various thermoplastics
- Angled & straight notching
- Excellent surface finish
- Clean room packaging
- Component assembly

Quality Certifications:

- ISO9002/TS16949
- ISO9001

Your Technology Specialist simrit®

Material capabilities ranging from commodity grade to high performance thermoplastics

Material (Symbol)	Brands	Melt F° (C°)	Advantages	Applications
Polytetrafluoroethylene (PTFE)	Quantum™	620° (327°)	Chemically inert with a wide temperature service range. Low coefficient of friction, non-sticking and excellent wear resistance when combined with fillers. High dielectric strength.	Sealing components for chemical processing including semiconductor equipment Down-hole oil & gas drilling, automotive/heavy truck seals and self lubricating bearings.
Polyetheretherketone (PEEK)	Victrex®, PEEK	649° (343°)	Hydrolysis resistant at continuous operating temperatures exceeding 482°F. Resists changes in properties due to chemicals, moisture, or physical stress.	Piston parts, valves, bearings and compressor plate valves.
Polyphenylene sulfide (PPS)	Ryton®, Forton®	545° (285)°	Outstanding chemical resistance only absorbing small amounts of solvents and resists dyeing. Resistant to UV, mildew, abrasion and aging.	Oil field - rod guides, scrapers and valve seats/seals. Automotive/truck fuel rails, fuel injectors, shift cams/forks
Polyamideimide (PAI)	Torlon®	532° (278°)	Highest strength and stiffness of any thermoplastic up to 525°F. Resistant to creep, chemicals and wear in both lubricated & non-lubricated environments.	Automobile/truck transmission thrust washers, seals, bushings, gears and bearing retainers.
Polyphthalamide (PPA & HTN)	Zytel®, Amodel®	581° (305°)	Product group bridges gap between engineered resins and high performance specialty products. Resistant to temperature, moisture, chemicals including fuels and glycol.	Components for small appliances, thermostat housings, lawn & garden equipment, power tools, automotive fuel system components
Polyamide / Nylon (PA)	Zytel®	504° (262°)	Can be formulated with additives including reinforcements to offer a wide range of stiffness and toughness. Electrical insulating offering excellent wear, temperature and chemical resistance.	Typically used for mechanical parts such as gears and other cast metal replacement applications requiring medium or low stress.
Ethylene Tetrafluoroethylene (ETFE)	Fluon®, Tefzel®	500° (260°)	Stable mechanical properties over wide range of temperatures -392° to 356°F, chemically inert, excellent electrical insulation, good weathering including UV, nonflammable and high energy radiation resistant.	Linings and coatings for pipes, valves, tanks, bottles, mixing heads and electrical wire.
Polyurethane (PU)	Disogrin®	400° (204°)	Most versatile of all thermoplastics. Outstanding toughness, compression set, resistance to extrusion and wear.	Wide range use in seals for automotive shocks/struts, hydraulic cylinders and valves.
Thermoplastic Elastomer (TPE)	Santoprene™ Hytrel®, Riteflex®	380-450° (195-230°)	Flexibility, toughness of rubber and strength of plastic. Resistant to fatigue, abrasion, hydrocarbons and other chemicals.	Seals, bearings, rail track pads, snowboard bindings, hose, tubing and air bag doors.
Thermoplastic Vulcanizate (TPV)	Zeotherm®	428° (220°)	Higher heat resistance than conventional TPVs and copolymers. Over molding adhesion to nylon without pretreatment and resistant to automotive fluids.	Automotive under-hood seals, transmission components, air intake ducts, fasteners, clips and electrical connectors.
Formulated as either Thermoplastic Vulcanizate or Thermoplastic Elastomer (TPV / TPE)	FluoroXprene™	450° (230°+)	Potential replacement for FKM rubber and fluorinated thermoplastics. Resistant to temperature and most chemicals including ketones and alcohols. Outstanding conductivity and dynamic sealing with cost effective processing.	Used as inner liner of coextruded fuel line for gasoline, flex, diesel, and biodiesel fuel applications.