

## APPLICATIONS

- Abradable shrouds
- Back-up rings
- Bearings
- Bushings
- Cam followers
- Cams
- Chain guides
- Dies
- Fixtures
- Gears
- Housings
- Insulators
- Labyrinth seals
- Liners
- Locators
- Manifolds
- Nozzles
- Pulleys
- Rider bands
- Rollers
- Rotors
- Scrapers
- Seals
- Sheaves
- Sleeves
- Slider Beds
- Spacers
- Sprockets
- Star wheels
- Thrust washers
- Valve seats
- Washers
- Wear pads
- Wear rails
- Wear rings
- Wear shoes
- Wear strips
- Wheels
- Wipers

# Custom Plastics from All-State

### The value of experience

All-State Industries is a leader in custom engineered plastic components. As metal replacement experts, we can show you how high-performance plastics can improve part life, reduce wear on mating surfaces, decrease corrosion and reduce or eliminate lubrication. From simple wear strips to high-speed bushings, All-State has the solution for your component requirements.

### Advanced technology

All-State utilizes state-of-the-art equipment, advanced compounds and proprietary process technology to deliver high-quality parts for your application. Our experience in component design enables us to select the proper material, machining process and initial stock shape to meet the performance, tolerance and cost requirements of your parts.

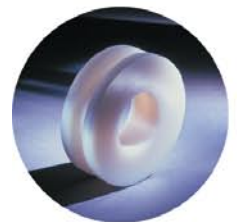
### Call the experts

All-State is ready to provide answers and solutions to your current problems or future development projects. We are your partner in the design, development and production of engineered plastic components.

We have been a pioneer in the custom products arena since 1959. Founded on the highest quality products and outstanding service, All-State has continued to excel at die cutting, molding, extruding and customizing products for their customers.

**all-state**  
**INDUSTRIES, inc.**

[www.all-stateind.com](http://www.all-stateind.com)



# All-State is your plastics partner

All-State Industries provides components machined from a wide variety of high performance plastic materials. Milling, turning, routing and sawing is done on state-of-the-art CNC equipment.

Our focus is on wear applications such as bushings, slide pads and gears. We provide the technical assistance you need for material selection and part design parameters. Prototypes or production runs, basic or exotic materials, old parts or new designs, All-State provides solutions for your plastic requirements.

Material	Tensile Strength	Comp. Strength	Flexural Modulus	CLTE	Continuous Use Temperature	Heat Def. Temperature	Coefficient of Friction	Limiting PV	Wear Factor (K)	Abrasion Factor
<b>Polypropylene</b>	4,800	2,600	180,000	6.2 x 10 <sup>-5</sup>	180	125	NA	NA	NA	122
<b>HDPE</b>	4,600	2,500	150,000	7.1 x 10 <sup>-5</sup>	180	110	NA	1,000	490	29
<b>UHMW</b>	3,050	3,000	120,000	7.8 x 10 <sup>-5</sup>	180	118	.10	2,000	125	10
<b>Repro UHMW</b>	3,200	3,000	120,000	7.8 x 10 <sup>-5</sup>	180	118	.10	2,000	125	10
<b>UHMW-GB</b>	2,800	3,200	120,000	5.9 x 10 <sup>-5</sup>	180	118	.12	2,000	125	8
<b>Nylon 6/6</b>	11,500	12,500	450,000	5.5 x 10 <sup>-5</sup>	210	200	.25	2,700	75	54
<b>Nylon 6/6 + MD</b>	12,500	16,000	460,000	4.0 x 10 <sup>-5</sup>	220	200	.20	3,000	70	60
<b>Nylon 6</b>	12,000	15,000	500,000	3.5 x 10 <sup>-5</sup>	200	200	.20	3,000	72	44
<b>Nylon 6 + MD</b>	11,000	14,000	500,000	3.5 x 10 <sup>-5</sup>	200	200	.20	3,000	70	50
<b>Nylon 6 + Oil</b>	9,300	12,000	370,000	5.0 x 10 <sup>-5</sup>	200	200	.19	5,600	68	68
<b>Nylon 6 MD/Oil</b>	10,000	13,000	500,000	5.9 x 10 <sup>-5</sup>	200	200	.18	5,500	65	72
<b>Nylatron NSM</b>	11,000	14,000	475,000	5.0 x 10 <sup>-5</sup>	200	200	.18	15,000	9	38
<b>Nylatron 703XL</b>	9,000	10,000	360,000	4.9 x 10 <sup>-5</sup>	200	200	.14	17,000	18	40
<b>Acetal-CoPoly</b>	9,500	15,000	400,000	5.4 x 10 <sup>-5</sup>	180	220	.25	2,700	200	133
<b>Acetal-Delrin</b>	11,000	16,000	450,000	4.7 x 10 <sup>-5</sup>	180	250	.25	2,700	200	135
<b>Delrin AF</b>	8,000	16,000	445,000	5.0 x 10 <sup>-5</sup>	180	244	.16	8,300	58	160
<b>PET-P</b>	12,400	15,000	490,000	3.3 x 10 <sup>-5</sup>	210	240	.20	2,800	60	65
<b>Ertalyte TX</b>	11,000	15,250	460,000	4.5 x 10 <sup>-5</sup>	210	180	.19	6,000	35	80
<b>PTFE (Teflon)</b>	3,350	1,600	72,000	8.4 x 10 <sup>-5</sup>	500	132	.05	1,500	270	78
<b>PEEK</b>	16,000	20,000	600,000	2.6 x 10 <sup>-5</sup>	480	320	.40	15,000	375	56
<b>PEEK-BG</b>	10,900	26,700	1,100,000	1.7 x 10 <sup>-5</sup>	480	383	.21	20,000	80	63
<b>PEEK-CF</b>	19,000	29,000	1,300,000	1.0 x 10 <sup>-5</sup>	480	518	.20	25,000	90	67
<b>Torlon 4301</b>	12,000	22,000	800,000	1.4 x 10 <sup>-5</sup>	500	534	.20	22,500	10	236
<b>Torlon 5030</b>	29,700	38,300	1,700,000	0.9 x 10 <sup>-5</sup>	500	539	.19	20,000	60	240
<b>Polyimide</b>	12,500	19,300	450,000	3.0 x 10 <sup>-5</sup>	600	680	.20	35,000	30	53

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Visit our Web site at [www.all-stateind.com](http://www.all-stateind.com)

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