



# ULTRA WEAR AND FRICTION RESISTANT COMPOUNDS

WEAR RESISTANT PRODUCTS

## FEATURES

- Excellent wear and friction performance at very high speeds
- High performance at elevated ambient and interface surface temperatures
- Excellent chemical and corrosion resistance
- Proven performance against incumbent thermoset materials at PVs up to 100,000 and temperatures up to 400 °F (205 °C)

## BENEFITS

- Eliminate the need for costly alternative materials and/or time consuming annealing processes
- Ability to leverage synergistic wear additives with PEEK, PPA, and PPS resins for performance over a wide range of Pressure (P) and Velocity (V) ratios
- Better mechanical properties than thermoset alternatives
- Achieve design freedom and manufacturing ease, significantly lowering costs



Ultra Wear materials are an excellent option for applications with demanding PVs that require temperature and/or chemical resistance:

- Bearings & bushings
- Seals & rings
- Thrust washers
- Gears

Previously, thermoplastics were not thought capable of meeting the high PV (Pressure \* Velocity) and temperature requirements of demanding applications. This belief led manufacturers to use costly alternative materials that needed to be machined from stock shapes or required extensive annealing. Fortunately, RTP Company's injection moldable Ultra Wear and Friction Resistant Compounds eliminate these needs, thus providing advanced design freedoms.

By leveraging synergistic wear additive technologies combined with high temperature, and chemically resistant PEEK, PPA, and PPS resins, our injection moldable Ultra Wear and Friction Resistant Compounds provide OEMs with a new class of materials that perform under the extreme conditions of high temperatures, high loads, and high speeds. These materials provide benefits that can't otherwise be obtained with thermoset alternatives.

RTP Company has conducted industry leading, side-by-side testing against incumbent thermoset materials at PVs up to 100,000 and temperatures up to 400 °F (205° C), and the results prove the competitive edge of these compounds (see data on back page). Not only do Ultra Wear and Friction Resistant Compounds provide competitive wear and friction performance, but they also reduce production time and costs, while providing more design freedom and better mechanical properties at a lower overall material cost.

For high performance Ultra Wear and Friction Resistant Compounds, contact RTP Company – your global compounder of custom engineered thermoplastics.

### Resin and Additive Combinations Ideal for "Ultra" Testing

Resins:	Additives:	
<ul style="list-style-type: none"> <li>• PEEK</li> <li>• PPS</li> <li>• PPA</li> </ul>	<ul style="list-style-type: none"> <li>• Carbon Fiber</li> <li>• Graphite</li> <li>• Aramid Fiber</li> </ul>	<ul style="list-style-type: none"> <li>• PTFE</li> <li>• Ceramic</li> <li>• MoS<sub>2</sub></li> </ul>

For product data sheets, visit:  
[web.rtpcompany.com/info/data/ultrawear](http://web.rtpcompany.com/info/data/ultrawear)



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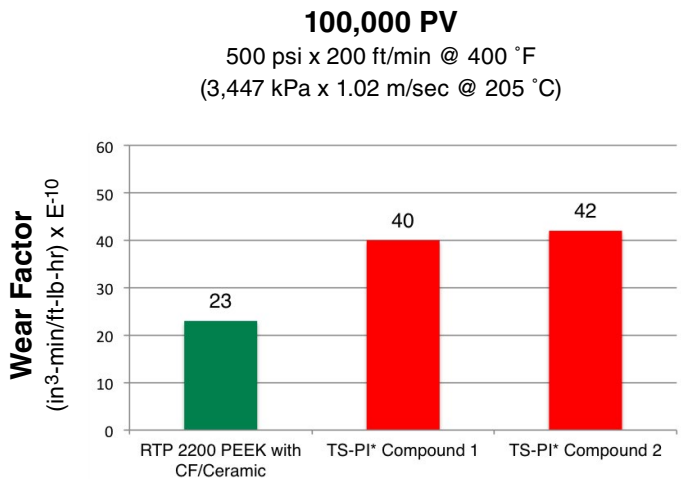
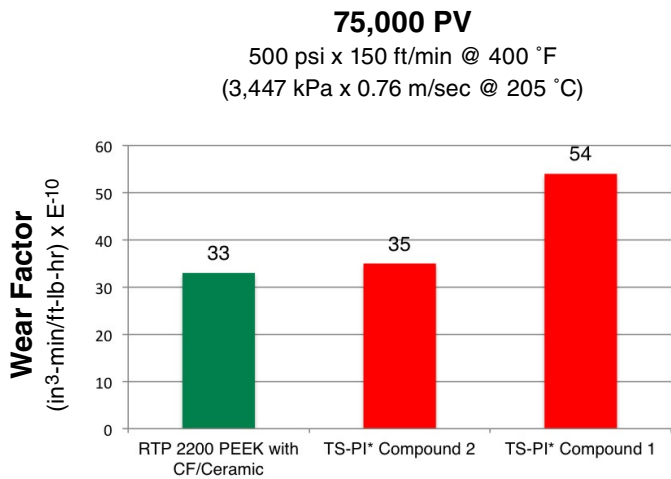
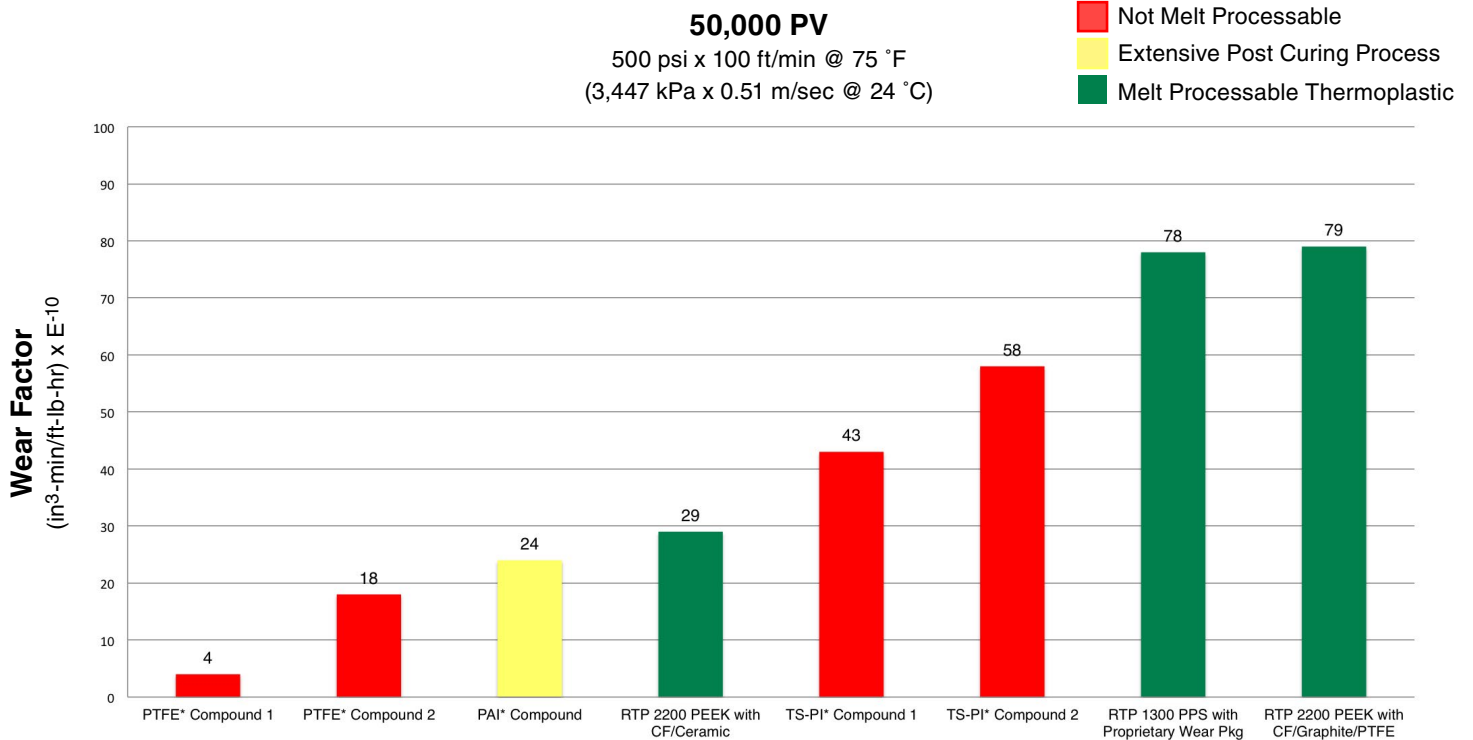
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# ULTRA WEAR AND FRICTION RESISTANT COMPOUNDS

## ASTM D3702 COMPARISON TESTING

Industry leading ASTM D3702 comparison testing provides insight into the reliability and performance that our Ultra Wear and Friction Resistant Compounds provide at elevated conditions.



\* PTFE (Polytetrafluoroethylene), PAI (Polyamide Imide), TS-PI (Thermoset Polyimide).



### RTP COMPANY: YOUR GLOBAL COMPOUNDER OF CUSTOM ENGINEERED THERMOPLASTICS

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