

- ▶ Improved plastic-on-plastic wear resistance
- ▶ Retain desirable host resin physical properties
- ▶ Halogen-free and RoHS Compliant

ADDITIONAL BENEFITS

- Reduced friction results in higher PV load capacity and better wear resistance.
- No plate-out issues, which require regular mold cleaning, common when using PTFE additives.
- Reduced specific gravity allows more parts to be molded with less material and lower cost.
- Improved flow simplifies molding of thin walls and intricate designs.
- No surface splay or detracting blemishes and full colorability allows its use in exterior components.
- Not reactively extruded providing more consistent properties.

Imagine thermoplastic compounds that offer improved wear resistance while retaining important physical properties of the host resin. At RTP Company, we not only imagined them, we've made them a reality.

All-polymeric wear additive (APWA) compounds are an innovative line of materials that offer significant benefits over other wear resistant grades that use particulate or fluid additives for internal lubrication that can negatively impact base resin performance.

Plastic-on-plastic wear rates can be reduced up to five fold – allowing moving and sliding parts such as gears, bushings, and rollers or stationary gaskets and seals to last longer without the added maintenance costs or visual fouling of external lubrication.



Best of all APWA compounds are environmentally conscious, halogen-free and RoHS Complaint allowing their use in electronic devices such as office equipment and consumer goods.

Unlike the popular additive PTFE, which can cause plate-out requiring production down-time for regular mold cleaning, APWA compounds are simpler to work with and useable in cosmetically sensitive applications where wear resistant compounds were not previously considered feasible.

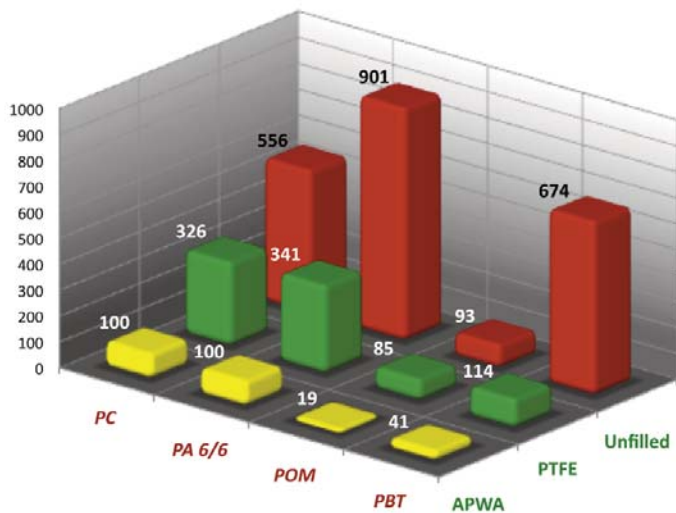
Commercial grades of APWA compounds are available in five popular resin systems commonly used for wear resistant applications: PA 6/6, PC, POM, PBT, and PC/ABS.

APWA compounds...another innovation from RTP Company: your global compounder of custom engineered thermoplastics.

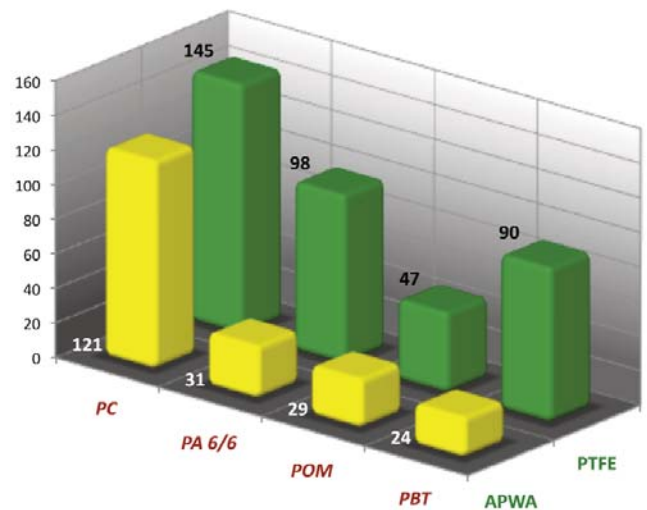


Typical Wear Factors For APWA Compounds

Plastic vs Steel Wear Factor



Plastic vs Plastic Wear Factor



Thrust washer testing per ASTM D3702 versus C1018 steel; PV 2000 ft lb/in² min, load 8 lb, speed 50 ft/min; Wear factor (in³ min/ft lb hr)E-10

Comparison Of Properties For Polycarbonate Compounds

	RTP 300 Unfilled	RTP 300 TFE 10 10% PTFE	RTP 399 X 94744 E APWA	RTP 399 X 121668 B APWA Halogen-Free FR
Specific Gravity	1.19	1.25	1.16	1.21
Notched Impact 1/8 inch (3.2mm) Section ft-lbs/in (J/m)	15.0 ft-lbs/in (801 J/m)	3.5 ft-lbs/in (187 J/m)	10.5 ft-lbs/in (561 J/m)	1.3 ft-lbs/in (69 J/m)
Tensile Strength psi (MPa)	8,500 psi (59 MPa)	8,000 psi (55 MPa)	8,000 psi (55 MPa)	9,000 psi (62 MPa)
Flexural Modulus psi (MPa)	0.34 psi (2344 MPa)	0.33 psi (2275 MPa)	0.35 psi (2413 MPa)	0.43 psi (2965 MPa)
Flammability 1/16 inch (1.5 mm)	HB	HB	HB	V-0

Available APWA Compounds

Commercial grades of all-polymeric wear additive (APWA) compounds are available in PA 6/6, PC, POM, PBT, and PC/ABS resin systems. RTP Company can customize APWA products for structural reinforcement, conductivity, flame retardance, and color or appearance to meet individual application requirements.

RTP Company: Your Global Compounder Of Custom Engineered Thermoplastics

No information supplied by RTP Company constitutes a warranty regarding product performance or use. Any information regarding performance or use is only offered as suggestion for investigation for use, based upon RTP Company or other customer experience. RTP Company makes no warranties, expressed or implied, concerning the suitability or fitness of any of its products for any particular purpose. It is the responsibility of the customer to determine that the product is safe, lawful and technically suitable for the intended use. The disclosure of information herein is not a license to operate under, or a recommendation to infringe any patents.