TIVAR® HPV – UHMW-PE bearing grade for outstanding performance in conveying systems

Cost, time and safety

The top priority production factor for designers and operators of modern high-speed conveyor systems, is to employ conveying equipment which will give the best possible result. It is not only crucial to choose first class parts and materials for the individual process steps, but also to realize optimum coordination of all sub-processes.

Quadrant offers superior quality plastic materials and finished parts for all touch points in your conveyor system where friction and wear appears. Our plastics have been developed specifically for challenging production environments: high speeds, high temperatures, high loads and aggressive cleaning agents.
Engineering plastics from Quadrant connect the individual components of your valuable production facility into a reliable, economic and modern system.

What are your benefits?

Longer productive cycles between maintenance, shorter downtimes and your systems run smoothly with less interruption. The time required for failure analysis and installation of replacement parts is reduced, the safety and return on your investment improves.

Key properties

- Very low wear of both belt and slide plates
- COF reduced by 80 %* vs POM-C
- LPV value appr. 18 %* higher than competitive dry lubricant material
- Food Contact Compliance
- Noise reduction
- Built-in dry lubricant

*Quadrant Lab Tests (results next page)

Customer benefits

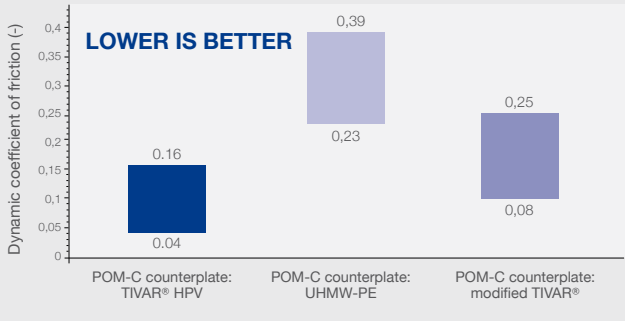
- Reduced maintenance costs
- Energy saving and protection of expensive mating partners (e. g. chains and belts)
- Longest possible and trouble free bearing life (without unallowable deformation or excessive wear)
- Improved product safety and risk management
- Improved safety of your employees
- Environmental protection

UHMW-PE Sliding Materials Comparison*

DYNAMIC COEFFICIENT OF FRICTION

Tribological test procedure: similar to Test Method A „pin-on-disk“, as described in ISO 7148-2:1999

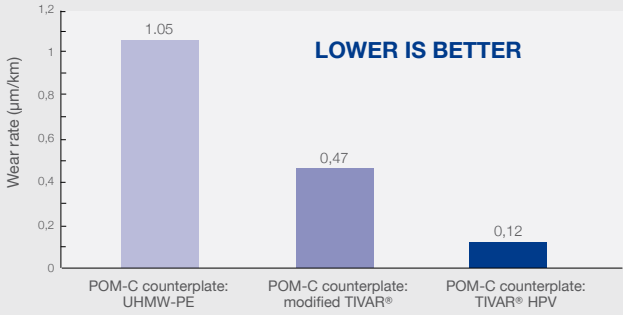
Test conditions: 3MPa pressure/ POM C pin/ sliding velocity: 0.33m/s / normal environment: air, 23°C, 50% RH / unlubricated operation / test time: 24 hours



WEAR RESISTANCE

Tribological test procedure: similar to Test Method A „pin-on-disk“, as described in ISO 7148-2:1999

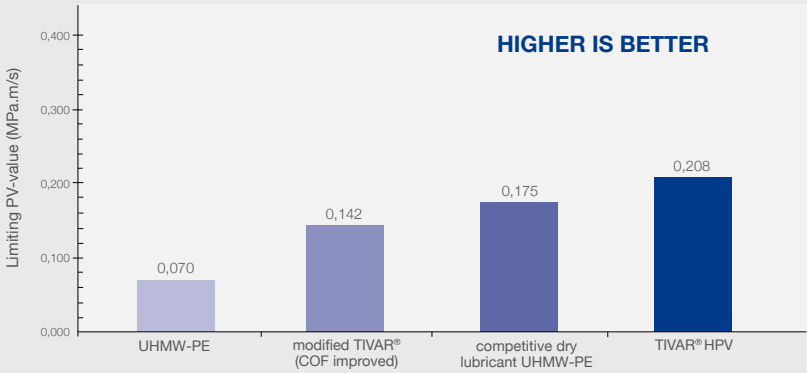
Test conditions: 3MPa pressure/ POM C pin/ sliding velocity: 0.33m/s / normal environment: air, 23°C, 50% RH / unlubricated operation / test time: 24 hours



LIMITING PV-VALUES

Tribological test procedure: Thrust washer testing

LPV-limits measured on a Thrust Washer rotating against a metal system, speed 0.5 m/s (wear as limit)



* Data source: Quadrant Lab Tests

TIVAR® HPV Availability

Shapes: Plate, round rod
Profiles: Extruded, machined
Finished parts according to customer’s drawing

Quadrant Engineering Plastic Products

Quadrant EPP AG | **Europe**
Hardstraße 5
CH-5600 Lenzburg
T +41[0] 62 8858150
F +41[0] 62 8858385
contact@qplas.com

Quadrant EPP USA, Inc. | **North America**
2120 Fairmont Avenue
PO Box 14235 - Reading, PA 19612-4235
T 800 366 0300 | +1 610 320 6600
F 800 366 0301 | +1 610 320 6638
americas.epp@qplas.com

Quadrant EPP Asia Pacific Ltd | **Asia-Pacific**
60 Ha Mei San Tsuen, Ping Shan
Yuen Long - NT Hong Kong
T +852 24702683
F +852 24789966
asia.epp@qplas.com

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