



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

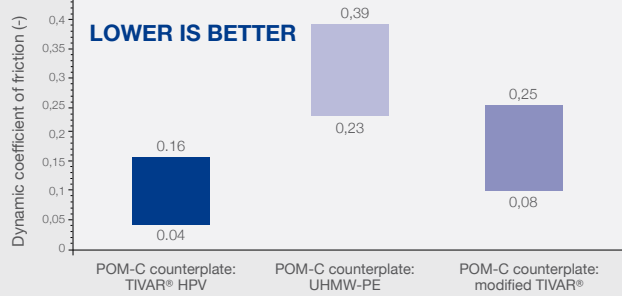
- Reduced maintenance costs
- Energy saving and protection of expensive mating partners (e. g. chains and belts)
- Longest possible and trouble free bearing life (without unallowable deformation or excessive wear)
- Improved product safety and risk management
- Improved safety of your employees
- Environmental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

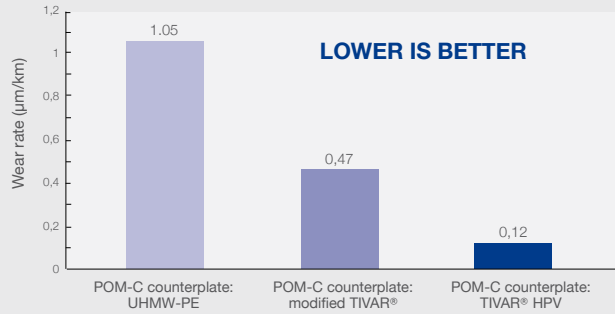
Test conditions: 3MPa pressure/ POM C pin/ sliding velocity: 0.33m/s / normal environment: air, 23°C, 50% RH / unlubricated operation / test time: 24 hours



WEAR RESISTANCE

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

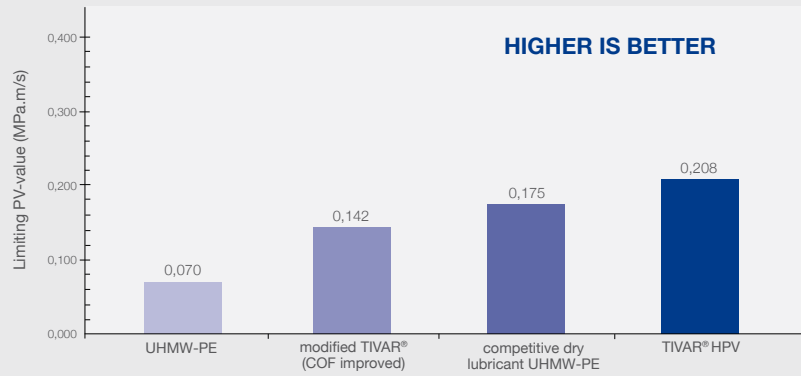
Test conditions: 3MPa pressure/ POM C pin/ sliding velocity: 0.33m/s / normal environment: air, 23°C, 50% RH / unlubricated operation / test time: 24 hours



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

This brochure and any data and specifications presented here or on our website shall provide promotional and general information about the Engineering Plastic Products (the „Products“) manufactured and offered by Quadrant Engineering Plastic Products („Quadrant“) and shall serve as a preliminary guide. All data and descriptions relating to the Products are of a general informational nature only. Neither this brochure nor any data and specifications presented on our website shall create or be implied to create any legal or contractual obligation. This brochure and any data or specifications herein do not create expressly or by implication any legal, contractual or warranty obligation whatsoever. No warranty of any kind, either express or implied, is made as to the information contained in these pages, including, but not limited to, all warranties provided for by Louisiana law, any implied warranty of merchantability, of fitness for a particular purpose, and any warranty against hidden defects or redhibitory defects or vices. No information in this brochure creates any express or implied warranty that the goods described here in shall conform to any description herein. Quadrant sells the products described herein solely to sophisticated users and not to consumers, and Quadrant assumes no responsibility that any goods described herein will be fit for any particular purpose for which a Quadrant customer may determine to purchase such goods, except and to the sole extent otherwise provided in a separate written contract.

Any illustration of the possible fields of application of the Products shall merely demonstrate the potential of these Products, but any such description does not constitute any kind of covenant or warranty whatsoever. Irrespective of any tests that Quadrant may have carried out with respect to any Product, Quadrant does not possess expertise in evaluating the suitability of its materials or Products for use in specific applications or products manufactured or offered by the customer respectively. It thus remains the customer's sole responsibility to test and assess the suitability and compatibility of Quadrant's Products for its intended applications, processes and uses, and to choose those Products that according to its assessment meet the requirements applicable to the specific use of the finished product. The customer undertakes all liability in respect of the application, processing or use of the aforementioned information or product, or any consequence there of, and shall verify its quality and other properties.

TIVAR® is a registered trademark of the Quadrant Group.

You inspire ... we materialize®

