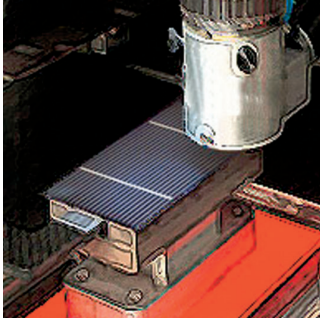


Engineering Plastics for Photovoltaic Production Equipment



Wafer Handling Laser Scribing

PHOTOVOLTAIC INDUSTRY TRENDS

- Drive for higher output leads to higher equipment wear
- Reduce down time, maintenance costs
- Increase automation in handling - requires tighter tolerances for positioning accuracy

QUADRANT ANSWERS

- Improved wear resistant products with self lubrication
- Highly dimensionally stable plastics over a wide process temperature range

CUSTOMER BENEFITS

- Far lower maintenance and replacement cost
- More output - longer run time
- Accurate positioning of wafers during laser scribing reduces damage and rejects

Quadrant provides high performance plastic as rod, plate or tube for machining or as finished parts. Over 60 years of expertise provides the platform for bringing your concept to the production line.

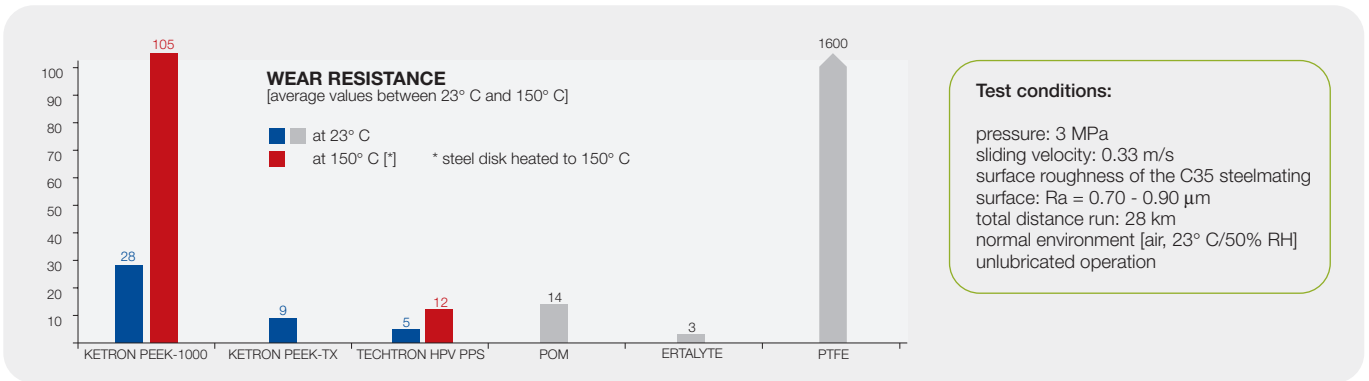
Let us help you build the optimum machine to increase your output, up-time and efficiency.



QUADRANT

You inspire ... we materialize®

QUADRANT PORTFOLIO OF WEAR RESISTANT MATERIALS

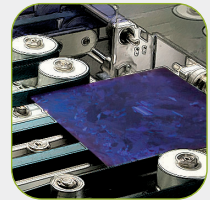


ERTALYTE TX

Solves wear and dimensional problems in rolls, guiders, grippers, tips

Challenges:

- Increased wear at high speed
- Need for dimensional stable parts
- Low weight parts



Solution:

Ertalyte TX, a solid lubricant modified PET that offers good wear resistance, very low thermal expansion and moisture absorption

Benefits:

Rolls and guiders made from Ertalyte TX replace very expensive ball bearings, by providing low friction and high wear resistance up to 90° C. The material increases the operating life of laser scribing equipment and lowers maintenance costs due to its self-lubricating properties.

For higher temperature environments up to 220° C we recommend Techtron HPV, an enhanced wear resistant grade of Quadrant's proprietary PPS.

Learn more online at www.quadrantplastics.com

Quadrant has extensive product and machining resources available online. Our website is a portal to a wealth of technical data and the easiest way to engage our application specialists. Our team stands ready to help offer solutions to your toughest problems.

Distributed by:

