

Confidence through certified and traceable material solutions

**50+**  
traceable quality control tests performed per batch

**35**  
years of quality and security of supply

**400** works years of technical expertise with  
**60** scientists, engineers and technicians sharing  
**17** Ph.D.s that are focused on PEEK



**World Headquarters**  
**Victrex plc**  
Hillhouse International  
Thornton Cleveleys  
Lancashire FY5 4QD  
United Kingdom

**TEL** + (44) 1253 897700  
**FAX** + (44) 1253 897701  
**MAIL** victrexplc@victrex.com

**Americas**  
**Victrex USA Inc**  
300 Conshohocken State Road  
Suite 120  
West Conshohocken, PA 19428  
USA

**TEL** + (1) 800-VICTREX  
**TEL** + (1) 484-342-6001  
**FAX** + (1) 484-342-6002  
**MAIL** americas@victrex.com

**Europe**  
**Victrex Europa GmbH**  
Langgasse 16  
65719 Hofheim/Ts.  
Germany

**TEL** + (49) 6192 96490  
**FAX** + (49) 6192 964948  
**MAIL** customerservice@victrex.com

**Japan**  
**Victrex Japan, Inc.**  
Mita Kokusai Building Annex  
4-28, Mita 1-chome  
Minato-ku  
Tokyo 108-0073  
Japan

**TEL** + 81 (0)3 5427 4650  
**FAX** + 81 (0)3 5427 4651  
**MAIL** japansales@victrex.com

**Asia Pacific**  
**Victrex High Performance**  
**Materials (Shanghai) Co Ltd**  
Part B Building G  
No. 1688 Zhuanxing Road  
Xinzhuang Industry Park  
Shanghai 201108  
China

**TEL** + (86) 21-6113 6900  
**FAX** + (86) 21-6113 6901  
**MAIL** scsales@victrex.com

Victrex, headquartered in the UK, is an innovative world leader in high performance polymer solutions focused on the Aerospace, Automotive, Electronics, Energy and Medical markets. Every day, millions of people rely on products or applications which contain our polymers, from smartphones, aeroplanes and cars to oil & gas operations and medical devices. With over 35 years' experience, we are investing in technical excellence to deliver leading edge solutions to our customers and our markets, and to drive value for our shareholders. Find out more at [www.victrex.com](http://www.victrex.com)

**Victrex plc September 2015**

VICTREX PLC BELIEVES THAT THE INFORMATION CONTAINED IN THIS BROCHURE IS AN ACCURATE DESCRIPTION OF THE TYPICAL CHARACTERISTICS AND/OR USES OF THE PRODUCT OR PRODUCTS, BUT IT IS THE CUSTOMER'S RESPONSIBILITY TO THOROUGHLY TEST THE PRODUCT IN EACH SPECIFIC APPLICATION TO DETERMINE ITS PERFORMANCE, EFFICACY AND SAFETY FOR EACH END-USE PRODUCT, DEVICE OR OTHER APPLICATION. SUGGESTIONS OF USES SHOULD NOT BE TAKEN AS INDUCEMENTS TO INFRINGE ANY PARTICULAR PATENT. THE INFORMATION AND DATA CONTAINED HEREIN ARE BASED ON INFORMATION WE BELIEVE RELIABLE. MENTION OF A PRODUCT IN THIS DOCUMENTATION IS NOT A GUARANTEE OF AVAILABILITY. VICTREX PLC RESERVES THE RIGHT TO MODIFY PRODUCTS, SPECIFICATIONS AND/OR PACKAGING AS PART OF A CONTINUOUS PROGRAM OF PRODUCT DEVELOPMENT. VICTREX® IS A REGISTERED TRADEMARK OF VICTREX MANUFACTURING LIMITED. VICTREX PIPEST™ IS A TRADEMARK OF VICTREX MANUFACTURING LIMITED. PEEK-ESD™, HT™, ST™ AND WG™ ARE TRADEMARKS OF VICTREX PLC. VICOTE® AND APTIV® ARE REGISTERED TRADEMARKS OF VICTREX PLC. VICTREX PLC MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, A WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR OF INTELLECTUAL PROPERTY NON-INFRINGEMENT, INCLUDING, BUT NOT LIMITED TO PATENT NON-INFRINGEMENT, WHICH ARE EXPRESSLY DISCLAIMED, WHETHER EXPRESS OR IMPLIED, IN FACT OR BY LAW. FURTHER, VICTREX PLC MAKES NO WARRANTY TO YOUR CUSTOMERS OR AGENTS, AND HAS NOT AUTHORIZED ANYONE TO MAKE ANY REPRESENTATION OR WARRANTY OTHER THAN AS PROVIDED ABOVE. VICTREX PLC SHALL IN NO EVENT BE LIABLE FOR ANY GENERAL, INDIRECT, SPECIAL, CONSEQUENTIAL, PUNITIVE, INCIDENTAL OR SIMILAR DAMAGES, INCLUDING WITHOUT LIMITATION, DAMAGES FOR HARM TO BUSINESS, LOST PROFITS OR LOST SAVINGS, EVEN IF VICTREX HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, REGARDLESS OF THE FORM OF ACTION.

**INCREASING FAB PRODUCTIVITY**

**VICTREX® PEEK POLYMER SOLUTIONS FOR THE SEMICON INDUSTRY**



# FUTURE PERFORMANCE IN SEMICON

Advancements in semiconductor technologies are allowing the industry to reach new levels of performance along the drive to 450mm wafers, at smaller process nodes, with increased functionality, while maintaining productivity and reducing cycle times. These trends urge industry-leading companies to raise the bar on wafer processing optimization through the use of cutting-edge materials.

**Victrex and our high-performance PEEK polymer solutions can enable your valuable assets to run longer and more efficiently — that's future performance.**

## POTENTIAL BENEFITS



\*CMP retaining rings made from VICTREX® PEEK have the potential to last up to twice as long as rings made from PPS.

\*Potential productivity increase through reduction in downtime, defects and cost.

\*Result based on one fab using VICTREX® PEEK polishing rings achieved saving of \$2 million. Actual saving depends on customer process.

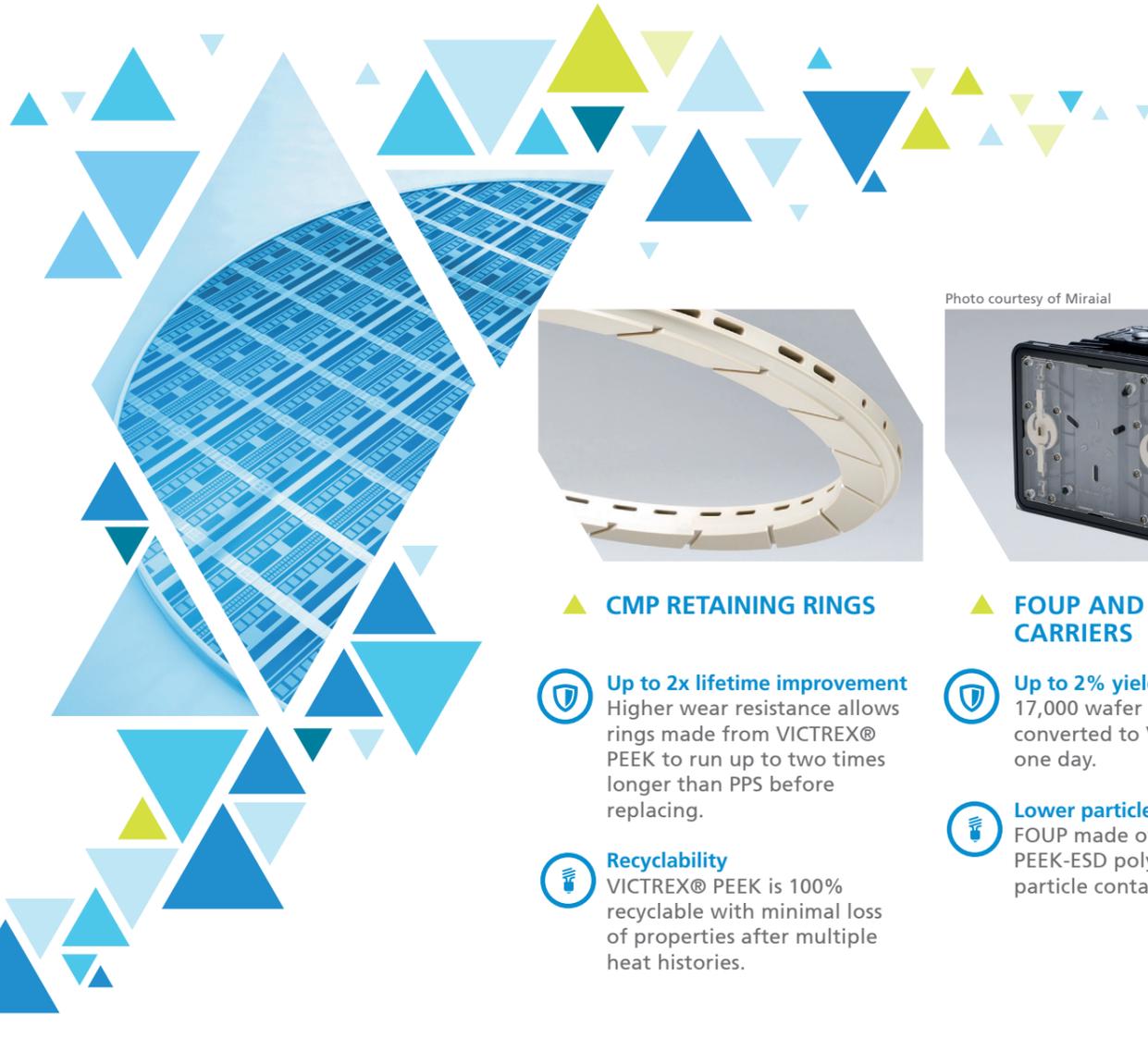


# 40,000,000+

**WAFERS POLISHED**

Annually using CMP retaining rings made from VICTREX® PEEK.

## APPLICATIONS



### ▲ CMP RETAINING RINGS

- Up to 2x lifetime improvement**  
Higher wear resistance allows rings made from VICTREX® PEEK to run up to two times longer than PPS before replacing.
- Recyclability**  
VICTREX® PEEK is 100% recyclable with minimal loss of properties after multiple heat histories.

Photo courtesy of Mirai



### ▲ FOUP AND WAFER CARRIERS

- Up to 2% yield improvement**  
17,000 wafer carriers were converted to VICTREX® PEEK in one day.
- Lower particle generation**  
FOUP made of VICTREX® PEEK-ESD polymer can prevent particle contamination.

Photo courtesy of Gudeng



### ▲ RETICLE PODS/EUV PODS

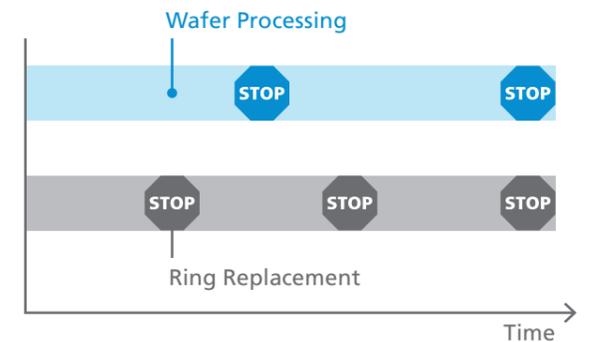
- Lower ionic contamination**  
Prevent haze formation on reticles.
- Lower outgassing**  
VICTREX® PEEK can enable reticles to be stored in a mini environment with low contamination risk.

### GREEN MANUFACTURING

Reduce downtime, extend your operating cycle and polish more wafers with fewer rings.

### VICTREX® PEEK

PPS



Example showing PPS rings are replaced 3 times in a given time period. With much higher wear resistance, rings made from VICTREX® PEEK are only replaced 2 times in the same period.

**PROVEN SUCCESSES TODAY...  
ACTIVE DEVELOPMENT FOR TOMORROW**

**CMP RETAINING RING RSP EUV TEST SOCKETS  
ROLLERS ETCH CHAMBER FOUP INSULATORS  
BEARINGS BOLTS WAFER CARRIER WAFER HOLDER**

