

# A Closer Look at an Award-Winning Environmental Program

*Quadrant Engineering Plastic Products received the top IAPD Environmental Excellence Award in 2017. Learn more about the innovations behind their program.*

Several years ago, Quadrant Engineering Plastic Products (EPP) embarked on an initiative to advance their stewardship as a global leader in UHMW-PE extruded products. Quadrant EPP identified key areas in the supply, extrusion and service channels where redundancies and waste could be eliminated or redirected to benefit the channel. Through an extensive technology review, Quadrant EPP was able to identify several essential opportunities and initiatives that would reduce waste and energy consumption while increasing their global product offering. After identifying these opportunities, their business case was validated, as well as their application of principles, and their mission of improvements began — an approach consistent with their KAITEKI philosophy. In order to achieve their goal and execute on the many advancement opportunities, a multimillion dollar investment plan was approved and implemented. This project included the design and installation of new proprietary production technology in their Scranton, PA, USA facility. The first phase of the project yielded several key outcomes, including:

- Development and introduction of Quadrant EPP's ECO (recycle) grades
- An aggressive post-consumer buyback program

The outcome is one set of global recycled products, being produced on processes with a substantial portion of the feedstock supplied from post-consumer materials. These products also provide an avenue to reuse any internally produced off-quality or nonconforming materials.

In 2014 and 2015, Quadrant EPP intensified its environmental commitment in this area by increasing the number of products offered, upgrading machinery capacity for reprocessing reclaimed materials and expanding the buyback volumes from customers. Additionally, they also had the ability to sort and separate reclaimed materials at much higher volumes. Due to this new sorting capability, Quadrant EPP has been able to increase their "buyback" sources and include significantly more reclaimed material into their manufacturing process.

The results of these initiatives are:

- Quadrant EPP produces several millions of pounds per year of products from recycled materials; production in 2015 increased by 87 percent over 2013 levels.
- Quadrant EPP's 2015 buyback from customers increased by 75 percent over 2013 levels.
- Air emissions have been reduced by 20 percent to date, with more improvement expected as the project progresses.
- The advanced technology has significantly improved yield. For example,

on their 1/4" and 3/8" ECO products, yields have improved by 12 percent over 2013 levels, saving thousands of dollars in energy costs, labor time, reprocessing and landfill costs.

These achievements are directly enhancing the ability of Quadrant EPP and partnering customers to reduce waste and to redirect materials, which previously would have gone to a landfill, back into products critically needed in the market. It also assists all customers who purchase these products to be good environmental stewards and to achieve their own sustainability goals. Quadrant EPP's innovation, leadership, stewardship and their goal to contribute to sustainable development through growing a KAITEKI culture will continue to drive healthy environmental changes in their process to a sustainable future for the performance plastics industry.

## About KAITEKI

KAITEKI means "the sustainable well-being of people, society and our planet Earth." It is an original concept of the Mitsubishi Chemical Holdings Group that proposes a way forward in the sustainable development of society and the planet, in addition to serving as a guide for solving environmental and social issues.

To realize KAITEKI, they have adopted an approach called KAITEKI Management. It is a management approach to enhancing corporate value based on three types of management.

Two of them, Management of Economics (MOE) and Management of Technology (MOT), have been traditionally emphasized. MOE promotes to optimize capital efficiency within the company, and MOT strives to create innovations for society. The third management approach, Management of Sustainability (MOS), has a new perspective and aims to improve the sustainability of people, society and the Earth.

KAITEKI Management is unique, and they call the value created from the three kinds of management "KAITEKI value." They believe that enhancing KAITEKI Value will lead to the realization of KAITEKI. They promote this management approach aiming to generate revenue and develop sustainably while contributing to solving environmental and social issues as a company.

Source: [www.mitsubishichem-hd.co.jp/english/kaiteki\\_management/kaiteki](http://www.mitsubishichem-hd.co.jp/english/kaiteki_management/kaiteki).