

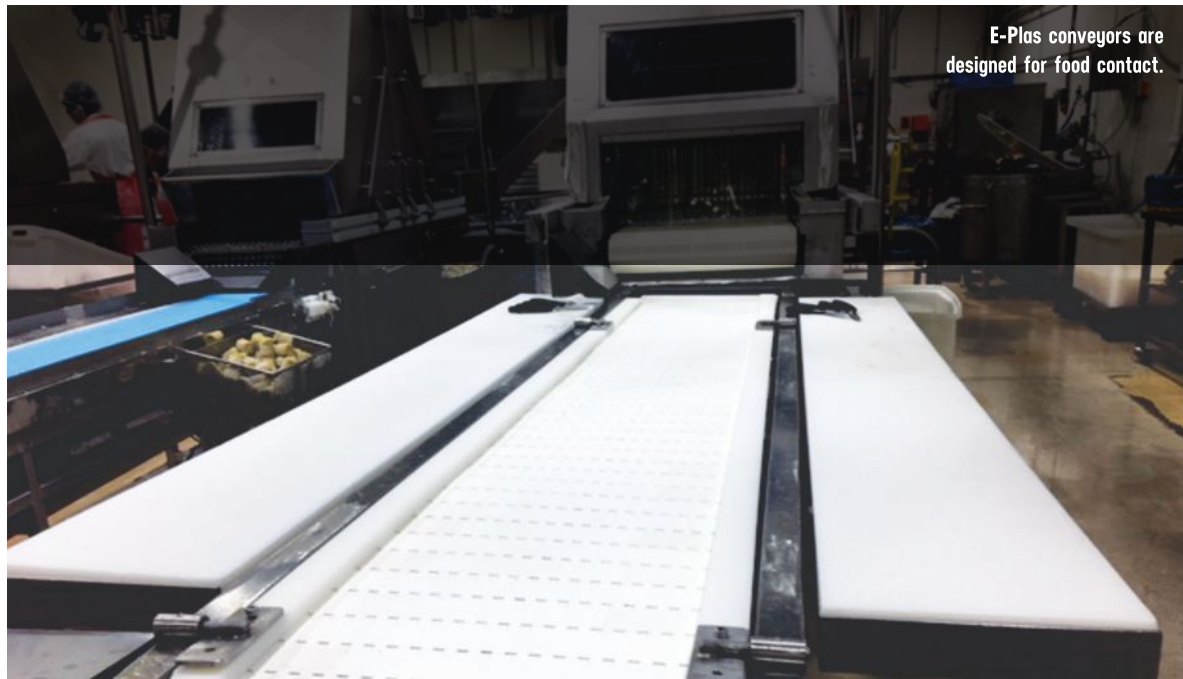
Plastics that meet conveying needs

E-Plas ensures food and packaging manufacturers have an effective solution for their conveying needs. *Food and Beverage Industry News* explains.

E-Plas, a specialist in engineering and industrial plastics, has expanded its product set to include additional conveying options. The company, established in 1981, now offers more comprehensive solutions for customers that need efficient conveyor systems in their food and beverage manufacturing facilities.

E-Plas national operations manager, Sean Kelly, said the company is able to supply a range of markets – from mining and bulk handling, to the food and beverage sector. “In 2017, E-Plas serviced one of the largest suppliers of quality chemical products to the Australian market. Being an aerosol filling plant – the conveying system required a special anti-static conveyor chain system to eliminate the potential of static discharges, which was further incorporated with the Tivar1000 Anti-Static Wear strip material to minimise any potentials of static discharges,” said Kelly.

The Tivar 1000 Anti-Static Electro Static Dissipative (ESD) material helps manufacturers achieve high line speeds and conveying rates. The anti-static properties are achieved by incorporating efficient carbon black and proprietary additives into the material. The Tivar 1000 Anti-Static ESD grades handle tough conditions where dust and static electricity can cause problems.



E-Plas conveyors are designed for food contact.

The material is ideal to use when potentially volatile conditions exist, such as those in grain elevators and munitions plants, effectively safeguarding against static discharges. In addition, it resists heat and protects robotics and other products that are sensitive to dust accumulation and electrical charge build up. It can be used in belt guides, guiding and conveyor components, chute liners, transfer tables, trough liners and discharge spout liners.

“E-Plas is also working to supply abrasion-resistant polycarbonate sheets

to a food manufacturing company in their wash down bays,” said Kelly. “The customer has traditionally used UV2 polycarbonate sheets, which has a lower chemical resistance. Our abrasion-resistant sheets have a silicon coating, which makes it more chemical and scratch resistant.”

E-Plas helps cover food manufacturing needs as well as packaging needs. “We have a wide range of products for the packaging and conveying markets, the majority of which are suitable for food contact,” said Kelly.

Polycarbonate, for example, is used for machinery safety guarding. The high impact-resistant material is lightweight, easy to fabricate, and is food industry approved for glazing and guarding applications. Having 250 times the impact-resistance of glass and 30 times that of acrylic, polycarbonate is almost unbreakable.

The Tivar UHMW-PE is a good solution for conveyor beds, tracks and wear strips, said Kelly. “Nylon and acetal are used for more aggressive applications, as well as PTFE for higher temperature areas.”

Nylon is a partially crystalline thermoplastic and is known as the workhorse of engineering plastics due

to its variety of properties. Because of its good mechanical strength, abrasion resistance, chemical, thermal and low-friction properties, it has earned a reputation as an excellent bearing material. Hardness and strength, yet toughness and tenacity are the combination that makes nylon versatile and the solution for many difficult applications.

Acetals, also known as polyoxymethylene or polyformaldehyde, exhibit predictable mechanical, chemical and electrical properties over a broad temperature range for long periods of time. The high crystallinity of acetals impart excellent creep resistance under continuous load and fatigue endurance under repeated loading and unloading cycles.

Unfilled grades are hard, strong and stiff, and have good toughness although they show some notch sensitivity. Low coefficient of friction and good chemical resistance are also standard features combined with their inherent dimensional stability. Acetals, homopolymer and copolymer are available in a number of commercial stock shape grades, each having specific properties, however, the copolymer grade has the better broad range optimum benefits.



E-Plas products can be used in meat processing plants like this chicken factory.