

# Akestra™

Innovative new plastic alternative



## Set for a sparkling and hot future

- ◆ Transparent sparkling glass-like appearance
- ◆ Heat resistant up to 110°C
- ◆ Alternative to polycarbonate and polystyrene in sensitive applications
- ◆ Sustainable and recyclable design
- ◆ Suitable for films, sheets, blow molding, foams and injection moulding

# Akestra™ – a high performance, safe & sustainable alternative

## Sparkling alternative to polycarbonate, polystyrene & glass

Akestra™ is a remarkable plastic with a sparkling glass-like appearance that is sure to enhance both disposable and reusable packaging. It can be used as a polystyrene alternative for heat resistant thin wall containers, a polycarbonate alternative for durable “dishwasher proof” transparent products, and a glass alternative for hot-fill food containers. The high glass transition temperature, combined with its amorphous and high strength properties make it not only a superior alternative in food and non-food contact packaging, but also a material that can be easily combined with other plastics to improve their properties too.

## Winning properties – clarity, heat resistance & high melt strength

Akestra™ is a totally unique new family of plastics that combines transparency and heat resistance, to open up a whole new range of applications for polyesters. This high performance co-polyester offers, for example, higher heat resistance than APET packaging and bottles plus glass-like transparency, perfect for reusable long lasting articles suitable for dishwashing.

With Akestra™ hot-fill thin wall containers withstanding nearly up to 110°C while maintaining sparkling clarity, easy thermo-formability and wide design opportunities are now possible. When used in co-extrusion sheets Akestra™ bypasses polystyrene heat resistance for hot-fill applications. By using recycled PET as middle layer, it contributes to a more sustainable packaging solution.

Its high melt strength makes it particularly suitable for extrusion blow molding as well as extrusion foaming processes. In combination with PET, it creates a finer cell structure allowing further weight savings with superior mechanical properties in structural and packaging foam applications. Akestra™ excels in heat sealability for flexible packaging, due to its high melt strength resulting in excellent hot tack strength for fast form fill seal applications.

Not the least, Akestra™ also offer high flexural modulus, way superior to any other co-polyesters for thin rigid wall designed articles.

		Akestra™ 90	Akestra™ 100	Akestra™ 110	PET	PETG
Tg	°C	95	100	110	82	83
HDT (0,45 Mpa)	°C	81	86	96	70	70
Total transmittance	%	91	91	91	91	91
Haze (3,2 mm)	%	1	1	1	5	1
Density	g/cm3	1,28	1,27	1,24	1.34	1.27
Tensile strength	Mpa	54	55	56	50	50
Flexural strength	MPa	89	90	90	80	70
Flexural modulus	GPa	2,5	2,5	2,5	2.2	2.1
Elongation at Break	%	220	200	140	200	130

