



## C2000 PERFORMANCE ENHANCEMENT SERIES

The CirKular+™ C2000 Performance Enhancement Series represents a family of block copolymers based on styrene and ethylene/butylene brought to market by Kraton Polymers. CirKular+™ products are multi-resin compatibilizers and performance enhancement additives for upcycling mixed post-consumer (PCR) and post-industrial (PIR) polyolefinic streams suitable for multiple end use applications.

Depending on the target performance requirements and different resins used in the formulation, typical levels of CirKular+ addition range from 3 to 10% weight. CirKular+™ C2000 Performance Enhancement Series is manufactured in North America and Taiwan and are supplied in a form of dusted pellets.

Property	Test Methods	C2000
Melt Flow, 230°C and 5kg (g/10min)	ASTM D 238	24
Tensile Strength <sup>1</sup> (psi)	ASTM D 412	580
Elongation at Break <sup>1</sup> , %	ASTM D 412	724
300% Modulus <sup>1</sup> (psi)	ASTM D 412	267
Hardness (10s), Shore A <sup>2</sup>	ASTM D 2240	47
Specific Gravity	ASTM D 792	0.90

<sup>1</sup> Determined on sample injection molded at 221°C

<sup>2</sup> Determined on sample compression molded at 141°C

These are typical values and should not be used to set specifications.

### VERSATILE END USE, PROCESSING AND FUNCTIONALITY

- ▶ Compounding and Dry Blending
- ▶ Extrusion, Injection and Blow Molding
- ▶ Films and Thermoforming
- ▶ Multi-layer Film Structures

Recommended Processing Conditions Guide is available on request and should be reviewed before use.

### POTENTIAL APPLICATIONS

- ▶ Packaging (Food or Non-food)<sup>1</sup>
- ▶ Flexible Packaging and Films
- ▶ Automotive
- ▶ Consumer Products
- ▶ Industrial
- ▶ Building and Construction

<sup>1</sup> FDA Food Contact status provided upon request

## Features & Benefits

### END PRODUCT DURABILITY AND AESTHETICS

- ▶ Superior mechanical properties: High impact strength at room and low temperature
- ▶ Flexibility in tailoring properties: Tailored balance between stiffness and impact
- ▶ Enhanced stress crack resistance

### INCREASED END PRODUCT CIRCULARITY

Multi-resin compatibility across virgin plastics, bioplastics and post-consumer and post-industrial resin waste streams

- ▶ Higher post-consumer and post- industrial content
- ▶ Improved product recyclability
- ▶ Lightweighting and downgauging
- ▶ Positive environmental impact with lower CO2 emissions and plastic waste reduction

### MULTI-MATERIAL DESIGN FLEXIBILITY

Multi-resin compatibility across virgin plastics, post-consumer and post-industrial resin waste streams, and wood plastics composites

- ▶ Polyolefins and polyolefinic blends: PP, HDPE, MDPE, LLDPE and LDPE, metallocenes
- ▶ Polystyrene and high impact polystyrene
- ▶ Polar resins: EVOH, PVA, EVA
- ▶ Wood plastic composites

### PCR PP Performance Enhancement Benchmarking

