HK:+852-69575415 China GuangDong:+13538586433 ShangHai:+18816996168

CirKular+™

Enabling Plastics Upcycling and Circular Economy

C3000 PERFORMANCE ENHANCEMENT SERIES

The CirKular+™ C3000 Performance Enhancement Series represents a family of block copolymers based on styrene and butadiene brought to market by Kraton Polymers. CirKular+™ products are 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+™ C3000 Performance Enhancement Series is manufactured in Europe and is supplied in a form of a dusted porous pellet.

Property	Test Methods	C3000
Melt Flow Rate (200 °C/5 kg) (g/10 min)	ASTM D 1238	11
Tensile Strength* (MPa)	ASTM D 412	28
Elongation at break* (%)	ASTM D 412	1100
300% Modulus* (MPa)	ASTM D 412	3.8
Hardness Shore A (10 s)**	ASTM D 2240	70
Specific Gravity	ASTM D 792	0.94

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

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

POTENTIAL APPLICATIONS

- Rigid Packaging (Food or Non-food)[1]
- Flexible Packaging and Films
- Automotive
- Consumer Products
- Industrial
- Building and Construction

1FDA Food Contact status provided upon request

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Features & Benefits

END PRODUCT DURABILITY AND AESTHETICS

- Superior mechanical properties: Impact strength at room and low temperature, ductility and toughness
- Flexibility in tailoring properties: Tailored balance between stiffness and impact
- Increased stress crack resistance

INCREASED END PRODUCT CIRCULARITY

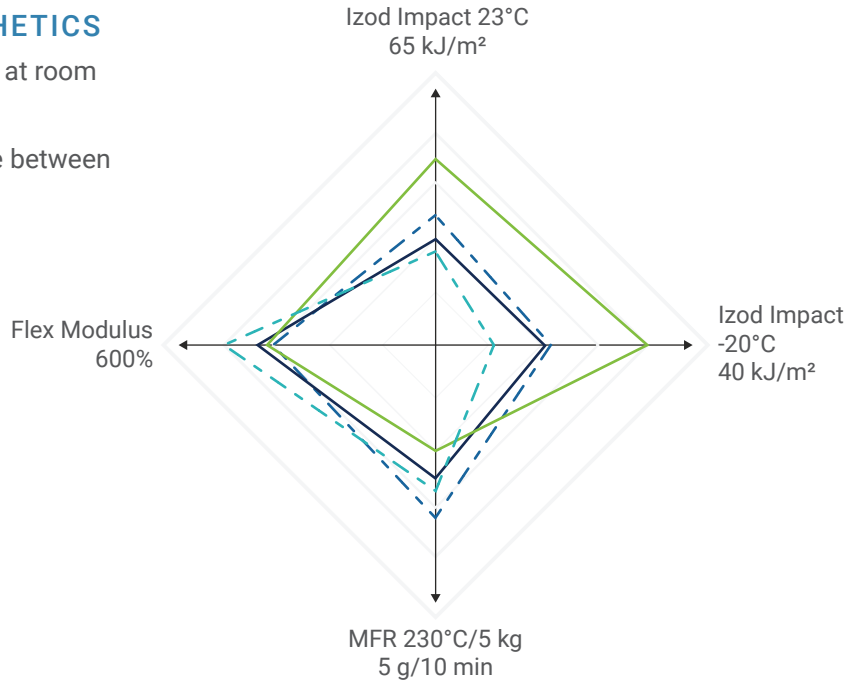
- Increased post-consumer and post-industrial content
- Improved product design recyclability
- Positive environmental impact with lower CO and plastic waste reduction

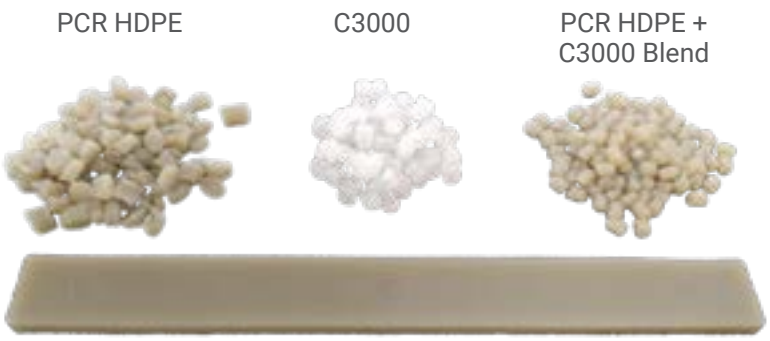
MULTI-MATERIAL DESIGN FLEXIBILITY

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

- Polyolefins and polyolefinic blends: PP, HDPE, MDPE, LLDPE and LDPE, metallocenes
- Polystyrene and high impact polystyrene

PCR HDPE Performance Enhancement Benchmarking





Injection molded PCR HDPE with 6% C3000