

## Technical Data Sheet

**Circulen EP448T Plus**

Polypropylene, Impact Copolymer

**Product Description**

*Circulen EP448T Plus* is a circular polymer, which contains building blocks from non-mechanical recycling processes converting renewables and organic wastes into new cracker feedstock.

The bio content of recycled cracker feedstock is measured and certified on the Certificate of Analysis.

*Circulen EP448T Plus* is a nucleated heterophasic copolymer with antistatic additivation used in injection moulding applications.

*Circulen EP448T Plus* has a high flow, good impact/stiffness balance.

*Circulen EP448T Plus* is typically used by customers in opaque containers, housewares, toys and closures.

This grade is not intended for medical and pharmaceutical applications.

<b>Status</b>	Commercial: Active
<b>Availability</b>	Africa-Middle East; Europe
<b>Application</b>	Caps & Closures; Housewares; Opaque Containers; Sports, Leisure & Toys
<b>Market</b>	Consumer Products; Rigid Packaging
<b>Processing Method</b>	Injection Molding
<b>Attribute</b>	Contains Antistat; High Flow; Impact Copolymer; Medium Impact Resistance; Medium Stiffness; Nucleated

Typical Properties	Nominal Value	Units	Test Method
<b>Physical</b>			
Melt Flow Rate, (230 °C/2.16 kg)	48	g/10 min	ISO 1133-1
Density, (23 °C)	0.90	g/cm <sup>3</sup>	ISO 1183-1
<b>Mechanical</b>			
Tensile Modulus	1250	MPa	ISO 527-1, -2
Tensile Stress at Yield	27	MPa	ISO 527-1, -2
Tensile Strain at Break		%	ISO 527-1, -2
Tensile Strain at Yield	5	%	ISO 527-1, -2
<b>Impact</b>			
Charpy Impact Strength - Notched			
(23 °C, Type 1, Edgewise, Notch A)	5	kJ/m <sup>2</sup>	ISO 179
(0 °C, Type 1, Edgewise, Notch A)	3.5	kJ/m <sup>2</sup>	ISO 179
(-20 °C, Type 1, Edgewise, Notch A)	2.5	kJ/m <sup>2</sup>	ISO 179
<b>Thermal</b>			
Vicat Softening Temperature, (A50)	151	°C	ISO 306
Heat Deflection Temperature B, (0.45 MPa, Unannealed)	90	°C	ISO 75B-1, -2