



## Clyrell RC213M

### Polypropylene, Specialty Products

#### Product Description

Clyrell RC213M is a alpha olefin modified polypropylene random copolymer especially designed for cast film technology. It offers an excellent clarity and gloss, a very low haze, a wide hot tack range and a low seal-initiation temperature of 120°C. It is designed for quality packaging applications, either as monolayer film or as welding layer in coextruded structures and is in particular suitable for printing and metallisation purpose.

Clyrell RC213M is easy processable on commercial cast film equipment and it contains antiblock additives.

For regulatory information please refer to *Clyrell* RC213M Product Stewardship Bulletin (PSB).

#### Product Characteristics

<b>Status</b>	Commercial: Active
<b>Test Method used</b>	ISO ASTM
<b>Availability</b>	Europe
<b>Processing Methods</b>	Cast Film
<b>Features</b>	Unspecified Antiblocking , High Clarity, Random Copolymer, High Gloss , Good Processability
<b>Typical Customer Applications</b>	Barrier Film, Cast Film, Film, Food Packaging Film, Twist Wrap Film

Typical Properties	Method	Value	Unit
<b>Physical</b>			
Density	ISO 1183	0.900	g/cm <sup>3</sup>
Melt flow rate (MFR) (230°C/2.16Kg)	ISO 1133	10	g/10 min
<b>Mechanical</b>			
Tensile Modulus (1 mm/min)	ISO 527-1, -2	1050	MPa
Tensile Stress at Yield (50 mm/min)	ISO 527-1, -2	27.0	MPa
Tensile Strain at Break (50 mm/min)	ISO 527-1, -2	600	%
Tensile Strain at Yield (50 mm/min)	ISO 527-1, -2	10	%
<b>Impact</b>			
Charpy notched impact strength	ISO 179		
(23 °C, Type 1, Edgewise, Notch A)		3.40	kJ/m <sup>2</sup>
(-30 °C, Type 1, Edgewise, Notch A)		1.50	kJ/m <sup>2</sup>
<b>Hardness</b>			
Shore hardness (Shore D)	ISO 868	66	
<b>Thermal</b>			
Heat deflection temperature B (0.45 MPa) Unannealed	ISO 75B-1, -2	65.0	°C
Vicat softening temperature (A50 (50°C/h 10N))	ISO 306	130	°C

#### Additional Properties

Typical film properties of laboratory casting line:

Gloss, ASTM D 2457, 50 µm: 90

Haze, ASTM D 1003, 50 µm: <1%

Tensile Young modulus, ASTM D 882, 25 mm/min, 50 µm: 660 MPa

Stress at Yield, ASTM D 882, 500 mm/min, 50 µm, 22 MPa

Elongation at Yield, ASTM D 882, 500 mm/min, 50 µm: 10%

Stress at break, ASTM D 882, 500 mm/min, 50 µm, 35 MPa

Elongation at break, ASTM D 882, 500 mm/min, 50 µm: 750%

Coefficient of friction, ASTM D 1894, Static: 1

Coefficient of friction, ASTM D 1894, Dynamic: 1

#### Notes

Typical properties; not to be construed as specifications.