



## TECHNICAL DATA SHEET

<b>CMC TYPES</b> colourless polyester films, no coatings	<b>CMC 29190</b> <b>190 µm</b> <b>CMC 29250</b> <b>250 µm</b> <b>CMC 29350</b> <b>350 µm</b>
Film material	PET (polyethylene terephthalate)
Density	1.4 g/cm <sup>3</sup>
<b>Mechanical properties</b>	
Tensile strength (machine direction)	ranging from about 150 to 190 MPa or N/mm <sup>2</sup>
Tensile strength (cross machine direction)	ranging from about 190 to 220 MPa or N/mm <sup>2</sup>
Elongation at break (machine direction)	ranging from about 190 to 240%
Elongation at break (cross machine direction)	ranging from about 140 to 200%
Young's module (machine direction)	ranging from about 2.95 to 3.6 GPa or kN/mm <sup>2</sup>
<b>Electrical properties</b>	
Breakdown voltages according to ASTM D 149 (manufacturers' data)	CMC 29190    about 17,5 kV <sub>eff.</sub> CMC 29250    about 19 kV <sub>eff.</sub> CMC 29350    about 20 kV <sub>eff.</sub>
Breakdown voltages based on IEC 60243-1 (CMC method in ambient air and temperature, electrode shapes: hemispherical vs. plate, 50 Hz)	PET films of 190 µm and above will not show any breakdown during the following voltage curve: ramp up from 0 to 12 kV <sub>eff</sub> at 0.5 kV <sub>eff</sub> /s 15 s voltage hold at 12 kV <sub>eff</sub> ramp down from 12 to 0 kV <sub>eff</sub> at 0.5 kV <sub>eff</sub> /s
<b>Thermal properties</b>	
Insulation class according to UL510 and IEC 60454-2	B (130°C)
RTI based on UL746 according to suppliers' UL files	A (105°C)
Shrinkage (machine direction, 30 min 150°C)	ca. 1.0 - 1.3%
Shrinkage (cross machine direction, 30 min 150°C)	ca. 0.3 - 1.3%
<b>Other properties</b>	 

Storage conditions: cool and dry (15 - 25°C, &lt; 65% rel. humidity)

03/19

Quality guarantee: 12 months

Information transferred from the original data sheets of our suppliers (except where marked).

The technical data are average values and subject to change without notice. They are not intended to replace user's testing.

 Note on REACH: Some of our products do contain substances from the so-called candidate list. Please visit <https://en.cmc.de/page/reach> and check whether or not a purchased product is listed in our REACH statement and therefore does contain one or more SVHCs.