

## Mechanical properties\*)

Type	Biomer® P209/P209E	Biomer® P226/P226E	Biomer® P263/P263E
Modulus (MPa)(1mm/min)	840-1200/830	1140-1900/1240	1730-1760/1820-1860
Tensile strength (MPa)(50 mm/min)	15-20/18,7	24-27/25,5	28-29
Elongation (%)(50 mm/min)	8-15/16	6-9/8,5	5,4/3,7-4,3
Flexural strength (N/mm <sup>2</sup> )	18	35	-
Deformation at bending break (%)	4,7	6,6	-
Flexural strength at 3,5% (N/mm <sup>2</sup> )	16	29	-
Impact strength 23°C (KJ/m) (ISO 179/1eU)	no break/111,8	no break/82,9	-
Impact strength -30°C KJ/m <sup>2</sup> (ISO 179/1eU)	70	30	-
Notched impact strength 23°C (ISO 179/1eA)	4,7/6,2	2,7/6,6	2,5/2,4
Notched impact strength -30°C (ISO 179/1eA)	3,4	1,4	-

MFR 180°C	10 (2,16 kg)	10 (5 kg)	-
MVR 180°C	10 (2,16 kg)	9,5 (5 kg)	-
Vicat temperature °C (ISO 306/A/120)	134;54 (B/50)	147	-
HDT °C (ISO 75/A)	50	59	-
Density (g/cm <sup>3</sup> )	1,20	1,25	1,3
Moisture absorption (%)	0,75	0,4	-
Hardness (Shore D)	57	67	-
Shrinkage (%)	1,2-1,3	1,2-1,3	1,2-1,3

\*) means of tests done at least 4 weeks after preparing test specimens

Werte Data for most parts from University of Applied Sciences Hannover: P304, P209E, and P226E single values

## Comparison

Polymer	Tensile strength	Elongation	Modulus
Biomer®P226	24-27	6-9	1140-1900
PP	22	12-20	600-1200
Biomer®P209	15-20	8-15	600-1200
PE-LD	15-20	600	150-450
PE-HD	25-32	600-900	700-1200