

Mechanical properties*)

Type	Biomer® P209/P209E	Biomer® P226/P226E	Biomer® P304**)
Modulus (MPa) (1mm/min)	840-1200/830	1140-1900/1240	1300-1500
Tensile strength (MPa)(50 mm/min)	15-20/18,7	24-27/25,5	25-28
Elongation (%) (50 mm/min)	8-15/16	6-9/8,5	8-15
Flexural strength (N/mm ²)	18	35	31
Deformation at bending break (%)	4,7	6,6	2,5
Flexural strength at 3,5% (N/mm ²)	16	29	
Impact strength 23°C (KJ/m) (ISO 179/1eU)	no break/111,8	no break/82,9	50-60
Impact strength -30°C KJ/m ² (ISO 179/1eU)	70	30	
Notched impact strength 23°C (ISO 179/1eA)	4,7/6,2	2,7/6,6	
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	150
HDT °C (ISO 75/A)	50	59	80-100
Density (g/cm ³)	1,20	1,25	1,2
Moisture absorption (%)	0,75	0,4	
Hardness (Shore D)	57	67	69
Shrinkage (%)	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
