

### Polymid Vespel SP 1

Properties	Norm	Value	Unit
<b>Mechanical properties</b>			
Ball pressure hardness	DIN 53 456	--	N/mm <sup>2</sup>
Tensile strength (23°C)	DIN 53 455	70	N/mm <sup>2</sup>
Elongation at break (23°C)	DIN 53 455	7	%min
Tensile modulus	DIN 53 457	3100	N/mm <sup>2</sup>
Coëff. of friction v-steel – dynamic	--	0,29	--
<b>Physical properties</b>			
Water absorption	DIN 53 495	0,24	%
Water absorption in air 50%rh	DIN 53 715	1,3	
Compr. strength at 0,1% deformation (23°C)	DIN 53 454	51	N/mm <sup>2</sup>
<b>Electrical properties</b>			
Dielectric strength	DIN 53 481	22	KV/mm
<b>Thermal properties</b>			
Coefficient of thermal expansion (150-260°C)	--	5,5	1/K.10 <sup>-5</sup>
Thermal conductivity (23°C)	DIN 52 612	0,29	W/K.m
Maximum Continuous operating temperature	--	255	°C
Minimum Continuous operating temperature	--	-273	°C
Maximum operating temperature	--	480	°C
Wear in air-dry PV=0,875 mPa m/s	--	17	M/S.10 <sup>-10</sup>

**Disclaimer:** Information contained in this data sheet is up-to-date and correct as at the date of issue. The given information is only informative and we cannot guarantee the accuracy nor can we take any accountability for the use of this information. The customer is responsible for the quality of products and has to test usage and processing to use. Some values are based on the datasheet of the supplier, internal tests and research. The values are guideline values that can be used for comparison for material selection.

### Polymid Vespel SP 21

Properties	Norm	Value	Unit
<b>Mechanical properties</b>			
Ball pressure hardness	DIN 53 456	--	N/mm <sup>2</sup>
Tensile strength (23°C)	DIN 53 455	65	N/mm <sup>2</sup>
Elongation at break (23°C)	DIN 53 455	4,5	%min
Tensile modulus	DIN 53 457	3800	N/mm <sup>2</sup>
Coëff. of friction v-steel – dynamic	--	0,3	--
<b>Physical properties</b>			
Water absorption	DIN 53 495	0,19	%
Water absorption in air 50%rh	DIN 53 715	1,1	
Compr. strength at 0,1% deformation (23°C)	DIN 53 454	46	N/mm <sup>2</sup>
<b>Electrical properties</b>			
Dielectric strength	DIN 53 481	10	KV/mm
<b>Thermal properties</b>			
Coefficient of thermal expansion (150-260°C)	--	5	1/K.10 <sup>-5</sup>
Thermal conductivity (23°C)	DIN 52 612	0,87	W/K.m
Maximum Continuous operating temperature	--	275	°C
Minimum Continuous operating temperature	--	-273	°C
Maximum operating temperature	--	480	°C
Wear in air-dry PV=0,875 mPa m/s	--	6,3	M/S.10 <sup>-10</sup>

**Disclaimer:** Information contained in this data sheet is up-to-date and correct as at the date of issue. The given information is only informative and we cannot guarantee the accuracy nor can we take any accountability for the use of this information. The customer is responsible for the quality of products and has to test usage and processing to use. Some values are based on the datasheet of the supplier, internal tests and research. The values are guideline values that can be used for comparison for material selection.

### Polymid Vespel SP 22

Properties	Norm	Value	Unit
<b>Mechanical properties</b>			
Ball pressure hardness	DIN 53 456	--	N/mm <sup>2</sup>
Tensile strength (23°C)	DIN 53 455	50	N/mm <sup>2</sup>
Elongation at break (23°C)	DIN 53 455	3	%min
Tensile modulus	DIN 53 457	4800	N/mm <sup>2</sup>
Coëff. of friction v-steel – dynamic	--	0,3	--
<b>Physical properties</b>			
Water absorption	DIN 53 495	--	%
Water absorption in air 50%rh	DIN 53 715	1,15	
Compr. strength at 0,1% deformation (23°C)	DIN 53 454	41	N/mm <sup>2</sup>
<b>Electrical properties</b>			
Dielectric strength	DIN 53 481	--	KV/mm
<b>Thermal properties</b>			
Coefficient of thermal expansion (150-260°C)	--	4	1/K.10 <sup>-5</sup>
Thermal conductivity (23°C)	DIN 52 612	1,73	W/K.m
Maximum Continuous operating temperature	--	290	°C
Minimum Continuous operating temperature	--	-273	°C
Maximum operating temperature	--	480	°C
Wear in air-dry PV=0,875 mPa m/s	--	4,2	M/S.10 <sup>-10</sup>

**Disclaimer:** Information contained in this data sheet is up-to-date and correct as at the date of issue. The given information is only informative and we cannot guarantee the accuracy nor can we take any accountability for the use of this information. The customer is responsible for the quality of products and has to test usage and processing to use. Some values are based on the datasheet of the supplier, internal tests and research. The values are guideline values that can be used for comparison for material selection.

### Polymid Vespel SP 211

Properties	Norm	Value	Unit
<b>Mechanical properties</b>			
Ball pressure hardness	DIN 53 456	--	N/mm <sup>2</sup>
Tensile strength (23°C)	DIN 53 455	44	N/mm <sup>2</sup>
Elongation at break (23°C)	DIN 53 455	3,5	%min
Tensile modulus	DIN 53 457	3100	N/mm <sup>2</sup>
Coëff. of friction v-steel – dynamic	--	0,12	--
<b>Physical properties</b>			
Water absorption	DIN 53 495	0,21	%
Water absorption in air 50%rh	DIN 53 715	1	
Compr. strength at 0,1% deformation (23°C)	DIN 53 454	37	N/mm <sup>2</sup>
<b>Electrical properties</b>			
Dielectric strength	DIN 53 481	--	KV/mm
<b>Thermal properties</b>			
Coefficient of thermal expansion (150-260°C)	--	5,5	1/K.10 <sup>-5</sup>
Thermal conductivity (23°C)	DIN 52 612	0,76	W/K.m
Maximum Continuous operating temperature	--	265	°C
Minimum Continuous operating temperature	--	-273	°C
Maximum operating temperature	--	400	°C
Wear in air-dry PV=0,875 mPa m/s	--	4,9	M/S.10 <sup>-10</sup>

**Disclaimer:** Information contained in this data sheet is up-to-date and correct as at the date of issue. The given information is only informative and we cannot guarantee the accuracy nor can we take any accountability for the use of this information. The customer is responsible for the quality of products and has to test usage and processing to use. Some values are based on the datasheet of the supplier, internal tests and research. The values are guideline values that can be used for comparison for material selection.