Polymid Vespel SP 1

Properties	Norm	Value	Unit
Mechanical properties			
Ball pressure hardness	DIN 53 456	--	N/mm²
Tensile strength (23°C)	DIN 53 455	70	N/mm²
Elongation at break (23°C)	DIN 53 455	7	%min
Tensile modulus	DIN 53 457	3100	N/mm²
Coëff. of friction v-steel – dynamic	--	0,29	--
Physical properties			
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/mm²
Electrical properties			
Dielectric strength	DIN 53 481	22	KV/mm
Thermal properties			
Coefficient of thermal expansion (150-260°C)	--	5,5	$1/K.10^{-5}$
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	$M/S.10^{-10}$

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Polymid Vespel SP 21

Properties	Norm	Value	Unit
Mechanical properties			
Ball pressure hardness	DIN 53 456	--	N/mm²
Tensile strength (23°C)	DIN 53 455	65	N/mm²
Elongation at break (23°C)	DIN 53 455	4,5	%min
Tensile modulus	DIN 53 457	3800	N/mm²
Coëff. of friction v-steel – dynamic	--	0,3	--
Physical properties			
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/mm²
Electrical properties			
Dielectric strength	DIN 53 481	10	KV/mm
Thermal properties			
Coefficient of thermal expansion (150-260°C)	--	5	$1/K.10^{-5}$
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	$M/S.10^{-10}$

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Polymid Vespel SP 22

Properties	Norm	Value	Unit
Mechanical properties			
Ball pressure hardness	DIN 53 456	--	N/mm²
Tensile strength (23°C)	DIN 53 455	50	N/mm²
Elongation at break (23°C)	DIN 53 455	3	%min
Tensile modulus	DIN 53 457	4800	N/mm²
Coëff. of friction v-steel – dynamic	--	0,3	--
Physical properties			
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/mm²
Electrical properties			
Dielectric strength	DIN 53 481	--	KV/mm
Thermal properties			
Coefficient of thermal expansion (150-260°C)	--	4	$1/K.10^{-5}$
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	$M/S.10^{-10}$

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Polymid Vespel SP 211

Properties	Norm	Value	Unit
Mechanical properties			
Ball pressure hardness	DIN 53 456	--	N/mm²
Tensile strength (23°C)	DIN 53 455	44	N/mm²
Elongation at break (23°C)	DIN 53 455	3,5	%min
Tensile modulus	DIN 53 457	3100	N/mm²
Coëff. of friction v-steel – dynamic	--	0,12	--
Physical properties			
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/mm²
Electrical properties			
Dielectric strength	DIN 53 481	--	KV/mm
Thermal properties			
Coefficient of thermal expansion (150-260°C)	--	5,5	$1/K.10^{-5}$
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	$M/S.10^{-10}$

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