

Semi-finished products faigle Industrieplast GmbH +43 5574 6811 industrieplast@faigle.com

Semi-finished products CH/LI faigle Igoplast AG +41 71 747 41 41 igoplast@faigle.com Injection moulded parts faigle Kunststoffe GmbH +43 5574 6811 kunststoffe@faigle.com

Material datasheet Material: Vespel ® SP1

mechanical characteristics

Characteristic	Standard	Unit	Value
Tensile strength (+23°C, dry)	ISO 527-1/-2 DIN 53455 ASTM D 638	MPa (N/mm²)	86.2
Elongation at break (+23°C, dry)	ISO 527-1/-2 DIN 53455 ASTM D 638	96	7.5
Tensile E-modulus (+23°C, dry)	ISO 527-1/-2 DIN 53455 ASTM D 638	MPa (N/mm²)	2413
Max. permissible pressure load (continuous)	Faigle	MPa (N/mm²)	21
Coefficient of sliding friction (p = $0.3N/mm^2$ / $0.6N/mm^2$, v = $0.27m/s$, against steel hardened and ground, dry)			0.29

thermal characteristics

Characteristic	Standard	Unit	Value
min. Operating temperature (continuous)		°C	-200
max. service temperature (continuous)		°C	300
max. service temperature (short-term)		°C	500
Coefficient of linear thermal expansion (23 - 60°C)	ISO 11359	10^-6/K	54

combustibility characteristics

Characteristic	Standard	Unit	Value
UL94 flammability	IEC 60695-11-10	class	V0

These data are guideline values which are subject to change depending on the type of manufacture of the test specimens and stress. These data are based on our own experience and on manufacturer's data. However, they are provided without guarantee, since each application is different and must be considered with reference to its specific influence parameters.

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electrical characteristics

Characteristic	Standard	Unit	Value
Dielectric constant, relative permittivity (1 MHz, dry)	DIN IEC 60250 (DIN VDE 0303-4) ASTM D 150		3.55
Dielectric loss factor (1 MHz, dry)	DIN IEC 60250 (DIN VDE 0303-4) ASTM D 150		0.0034
Surface resistivity (dry)	DIN IEC 60093 (DIN VDE 0303-30) ASTM D 257	Ω	10^15

physical characteristics

Characteristic	Standard	Unit	Value
Density, Gross density	ISO 1183 DIN 53479 ASTM D 792	g/cm³	1.43

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