

Substructure elements for plastic balcony doors

PVC Veka	Symbol	Test method	Unit	Value
Gross density	ρ_a	DIN EN ISO 1183	kg/m ³	1400–1460
Thermal conductivity	λ_D	DIN 52612	W/mK	0.160
Tensile elastic modulus		ISO 527	MPa	3000
Impact resistance		ISO 179/1eU	kJ/m ²	No breakage
Notch impact resistance		ISO 179/1eA	kJ/m ²	9.0
Tensile strength		ISO 527	MPa	52
Bending strength		ISO 178	MPa	77.8
Shore hardness D		ISO 868		81
Surface resistance		DIN IEC 60167	ROE [Ω]	>2.00E + 14
Contact resistance		DIN IEC 60093	RD [Ω cm]	1.74E + 16
Dielectric strength		DIN IEC 243	[kV/mm]	16.8
Dielectric constant ϵ_r		DIN 53483		3.0–3.6
Expansion coefficient		DIN 53752	[10 ⁴ /K]	7 · 10 ⁻⁵
Compressive strength		DIN 53421	N/mm ²	70
Vicat softening point		ISO 306 (B50)	°C	72
Heat deflection temperature		ISO 75-2 (1.8 MPa)	°C	60
Water absorption		ISO 62 (after 216 hrs)	%	0.1

Intensely expanded polystyrene rigid foam (EPS perimeter)	Symbol	Test method	Unit	Value
Gross density	ρ_a	1602	kg/m ³	30
Thermal conductivity	λ_D	279	W/mK	0.033
Specific thermal capacity	c		Wh/(kg·K)	0.39
Water vapour diffusion resistance factor	μ	12086		70
Thermal length expansion coefficient			K ⁻¹	5–7·10 ⁻⁵
Water absorption after long-term submersion	W_{it}	12087	%	≥3
Water absorption through diffusion	W_{dv}	12088	%	≥5
Fire behaviour classification in acc. with EN		13501-1		E
Fire behaviour group		VKF		RF3 (cr)
Compression stress at 10% compression	σ_{10}	826	kPa ²⁾	≥150
Top application limit temperature, non-weight-bearing			°C	75
Cell content				Air

Plywood	Symbol	Test method	Unit	Value
Gross density	ρ_a	EN 323	kg/m ³	~420
Thermal conductivity	λ_D		W/mK	0.130
Emission category		UNI EN 717/2	mg HCHO/m ² h	E1
Bending strength (longitudinal)		EN 310	N/mm ²	24
Bending strength (lateral)		EN 310	N/mm ²	30
Elasticity modulus (longitudinal)		EN 310	N/mm ²	2800
Elasticity modulus (lateral)		EN 310	N/mm ²	3800

PVC	Symbol	Test method	Unit	Value
Thickness			mm	10
Thermal conductivity	λ_D	DIN 52612	W/mK	0.051
Sound insulation values		DIN ISO 717-1	dB	27
Gross density	ρ_a	DIN EN ISO 1183	kg/m ³	~430–500
Fire behaviour		DIN 4102		B2
Tensile elastic modulus		ISO 527 (50 mm/min.)	MPa	1050
Impact resistance		ISO 179/1eU	kJ/m ²	20
Tensile strength		ISO 527 (50 mm/min.)	MPa	11
Bending strength		ISO 178 (2 mm/min.)	MPa	21
Shore hardness D		ISO 868		50–70
Surface resistance		DIN IEC 60 167	ROE [Ω]	2.00E + 14
Contact resistance		DIN IEC 60 093	RD [Ω cm]	1.86E + 14
Dielectric constant	ϵ_r	DIN 53 483		1.6–1.8
Expansion coefficient		DIN 53 752	10 ⁴ /K	6.10 ⁻⁵
Compressive strength		DIN 53 421	N/mm ²	~3.5
Vicat softening point		ISO 306 (B50)	°C	49
Heat deflection temperature		ISO 75-2 (1.8 MPa)	°C	57
Water absorption		ISO 62 (after 216 hrs)	%	4.9
Water-vapour-diffusion-equivalent air layer thickness sd		DIN 52 615	m	157 (for 10 mm)