

TECAVINYL PVC

Chemical Designation: Polyvinyl chloride (unplasticised)

DIN Abbreviation: PVC (uPVC)

Colour, Filler: Grey, red, black

TECAVINYL PVC is an amorphous thermoplastic for general purposes. It is a rigid, hard material with good electrical properties in the low voltage, low frequency range.

Main characteristics:

- Tough
- Very low water absorption
- Good chemical resistance
- Easily thermoformed
- Very good electrical insulation
- Easy to bond
- Easily welded
- Economic

Preferred fields: Mechanical engineering, chemical apparatus, electrical engineering, general engineering, household appliances, advertising and signs, prototype modelling

Applications:

- Chemical apparatus
- Plugs
- Tank linings
- Battery separators
- Insulators
- Signs
- Pallets
- Prototype models

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The following information corresponds with our current knowledge and indicates our products and possible applications. We cannot give a legally binding guarantee of certain properties or the suitability for a specific application. Existing commercial patents must be observed. A definitive quality guarantee is given in our general conditions of sales. Unless otherwise stated, these values represent averages taken from injection moulding samples. We reserve the right of technical alterations.

Properties	Unit	Test method DIN EN ISO / ASTM	
Mechanical			
Density	g/cm ³	527 / D 792	1.44
Tensile strength at yield	MPa	527 / D 638	58
Tensile strength at break	MPa	527 / D 638	
Elongation at break	%	527 / D 638	15
Modulus of elasticity in tension	MPa	527 / D 638	3000
Modulus of elasticity in flexure	MPa	178 / D 790	
Shore hardness	D	ISO 868	82
Impact strength	kJ/m ²	179 / D 256	no br
Creep rupture strength after 1000 hrs with static load	MPa		
Time yield limit for 1% elongation after 1000 hrs.	MPa		0.6
Coefficient of friction against hardened and ground steel p = 0,05 N/mm ² , v = 0,6 m/s	-		
Wear conditions as above	µm/km		
Thermal			
Crystalline melting point	°C	DIN 53 736	
Glass transition temperature	°C	DIN 53 736	~70
Heat distortion temperature Method A Method B	°C °C	R 75 R 75	

Properties	Unit	Test method DIN EN ISO / ASTM	
Thermal			
Max. service temperature short term long term	°C °C		60
Coefficient of thermal conductivity	W/(m · K)	DIN 52612	0.159
Specific heat	J/(g · K)		1.7-2
Coefficient of thermal expansion	10 ⁻⁵ /K	DIN 53 752	8
Electrical			
*Dielectric constant at 10 ⁵ Hz		DIN 53 483	
*Dielectric loss factor at 10 ⁵ Hz		DIN 53 483	
Specific volume resistance	Ω · cm	DIN 60093	10 ¹³
Surface resistance	Ω	DIN 60093	
Dielectric strength 1 mm	kV/mm	ASTM 149	39
Tracking resistance		53 480	
Miscellaneous			
Moisture absorption: Equilibrium in standard atmosphere (23 °C / 50 % relative humidity)	%		
Water absorption at saturation at 23 °C	%		
Resistance to hot water, washing soda			
Flammability		DIN 4102	B1
Resistance to weathering			Black is resistance

** Electrical values not valid for black

ENSINGER: Production and stock programme

- Semi-finished product, finished parts, injection moulded parts and profiles in more than 500 materials and modifications.
- Engineering plastics: PA extruded or cast, POM, PC, PET, PBT, PPE, PP, PE
- High temperature plastics: PI, TPI, PEEK, PPS, PES, PPSU, PEI, PSU, PVDF, PCTFE, PTFE
- Stock length: Standard 3 metres. Cast rod and sheet 2 mts. Tube up to 3.5 mts. PE, PP, PVC, and PTFE 2 mts
- Pressed/sintered semi-finished product: PI, PEEK, PPS, PTFE/PI and modifications, as well as PCTFE in special sizes ie, large discs, tubes and rings with diameters up to about 1400 mm
- Material modifications: eg. glass, carbon and aramid fibre, talc, MoS₂, graphite, PTFE, PE, silicone oil, internal lubrication