

Polyvinyl alcohol (PVA)

General

PVA is a polyvinyl alcohol that dissolves easily in cold water. When dissolved in water, it is biodegradable and can therefore be disposed of in normal wastewater. It combines well with other plastics such as PLA, ABS or PETG and is therefore ideal as a support material in dual extrusion printing. Support structures detach from the printed object within 24 hours without leaving any residue.

PVA is very sensitive to moisture and should always be stored in closed bags. If bubbles appear during processing, the filament must be pre-dried.

advantage

- Dissolves excellently in cold water
- Biodegradable when dissolved in water
- good adhesion to PLA, ABS and PETG

disadvantage

- sensitive to moisture
- more difficult to process than other soluble support materials
- short residence times until decomposition

Processing data

Printing temperature

190-220 °C

Heated bed temperature

not absolutely necessary, recommended 60-90°C

Technical specifications

Shrinkage	-	%
MFR (ISO 1133)	60	g/10min
Yield stress (ISO 527)	28.5	MPa
Elongation at yield	-	%
Elongation at break	-	%
Tensile modulus	-	MPa
Heat deflection temperature	-	°C
0.45 MPa		
Vicat softening temperature A	-	°C
Thermal conductivity 23°C	-	W/(K*m)
Flammability (UL 94)		HB
Density (ISO 1183)	1.258	g/cm ³