

PPS (nPOWER)

Polyphenylsulfone

nPOWER is a PPS-based polymer compound developed by 3ntr to meet all harsh and aggressive chemical environments. It is resistant to many chemical compounds and is also self-extinguishing (UL94 V0): perfect, for example, for battery housings. nPower is an excellent alternative when standard polymers (ABS, PC, PETG, PS, PA) won't do the job and can often replace high-cost polymers, such as PEEK and ULTEM. nPower has been specially formulated for 3ntr industrial 3D printers.

Mechanical Properties	Standard	Value	Unit
Ultimate Tensile Strength	ASTM D638	34.6	MPa
Tensile Modulus	ASTM D638	1966	MPa
Elongation at Break	ASTM D638	7.4	%
Flexural Strength			MPa
Flexural Modulus			MPa
Hardness Shore	Standard	Value	Unit
Hardness			

Thermal Properties	Standard	Value	Unit
HDT @ 0.45 MPa			°C
Glass Transition Temp			°C
Physical Properties	Standard	Value	Unit
Density		1.26	g/cm ³
Certifications and Tests	Standard	Value	Unit
Flammability (UL 94)		V0	
USP Class VI Certified			

Characteristics

- Outstanding resistant to chemicals. Unaffected by the most widely-used industrial solvents, acids and fuels. See chemical resistance table in Printing Guide.
- Thermal Resistance: Up to 210° C
- Self-Extinguishing: Meets UL94 V0 standards
- PPS is the top choice when dealing with leaded/unleaded and diesel fuel.

Applications

- Engine manifolds
- Semiconductor manufacturing
- Solvent, acid, and fuel tanks

Considerations

- Requires very high printing temperatures
- Recommended: A dedicated extruder assembly
- Refer to chemical resistance chart in Printing Guide to validate the fitness and resistance against certain reagents.

Printing Skill & Experience: Beginner Intermediate Advanced Expert

- See printing guide for more information.

Printer Compatibility

<input checked="" type="checkbox"/> 3ntr A2v4	<input checked="" type="checkbox"/> 3ntr A4v4	<input type="checkbox"/> EVO-T	<input type="checkbox"/> EVO22-T
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Available Colors from [TRAK](#): **Natural**
Available Colors from [Plural AM](#): **Natural**