



Technical Data Sheet

PolySupport™ for PA12

www.polymaker.com

V5.4



PolySupport™ for PA12

PolySupport™ for PA12 is a break away support for Polymaker PA12 based filaments, such as PolyMide™ PA12-CF. It has a perfect interface with long-chain Polyamide, strong enough to support it and easily removable by hand.

PHYSICAL PROPERTIES

Property	Testing Method	Typical Value
Density	ISO1183, GB/T1033	1.29 g/cm ³ at 23°C
Melt index	260°C, 2.16kg	12 g/10min
Light transmission	N/A	N/A
Flame retardancy	N/A	N/A

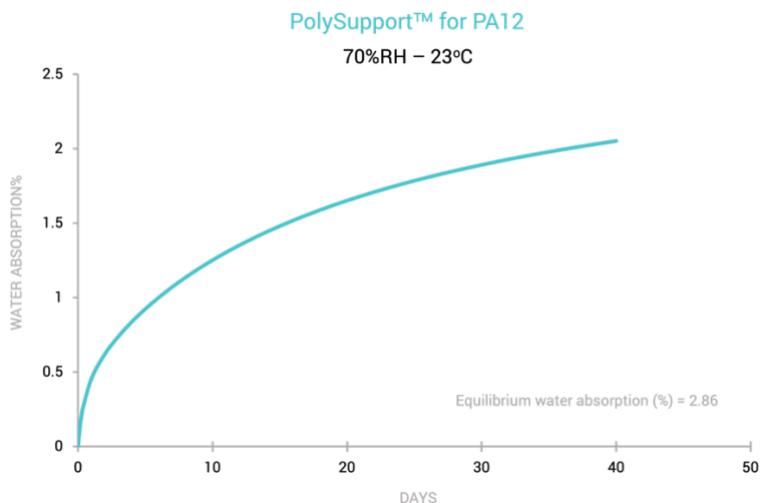
CHEMICAL RESISTANCE DATA

Property	Typical Value
Effect of weak acids	Good
Effect of strong acids	Poor
Effect of weak alkalis	Fair
Effect of strong alkalis	Poor
Effect of oils and grease	Good

Note:

- Good: Material may get minor attack after long periods of storage with chemical at ambient temperature
- Fair: Material can be used for short time contact with chemical at ambient temperature
- Poor: Material becomes unstable on contact with chemical at ambient temperature

MOISTURE ABSORPTION CURVE



THERMAL PROPERTIES

Property	Testing Method	Typical Value
Glass transition temperature	DSC, 10°C/min	N/A
Melting temperature	DSC, 10°C/min	N/A
Crystallization temperature	DSC, 10°C/min	N/A
Decomposition temperature	TGA, 20°C/min	371 °C
Vicat softening temperature	ISO 306, GB/T 1633	171 °C
Heat deflection temperature	ISO 75 1.8MPa	53 °C
Heat deflection temperature	ISO 75 0.45MPa	43 °C

Material Compatibility

Material	Adhesion with PolySupport™
PLA based material from Polymaker's portfolio	NA
PETG based material from Polymaker's portfolio	NA
ABS based material from Polymaker's portfolio	NA
PC based material from Polymaker's portfolio	NA
PVB based material from Polymaker's portfolio	NA
TPU based material from Polymaker's portfolio	NA
Short-chain Nylon based material from Polymaker's portfolio	NA
Long-chain Nylon based material from Polymaker's portfolio	++

Note:

- ++ support the model very well
- + generally, support the model depending on its geometry
- generally, doesn't support the model depending on its geometry
- do not support the model

RECOMMENDED PRINTING CONDITIONS

Parameter	
Nozzle temperature	270 – 300 (°C)
Build surface treatment	PC and Texture PEI (Glue when needed)
Build plate temperature	50 – 80 (°C)
Cooling fan	OFF
Printing speed	50 – 150 (mm/s)
Retraction distance	1 - 3 (mm)
Retraction speed	20 - 40 (mm/s)
Closure Chamber	Needed (ambient temperature)
Recommended support material	-
Drying setting	100°C for 8h

* Based on 0.4 mm nozzle. Printing conditions may vary with different nozzle diameters

Note:

- Abrasion of the brass nozzle happens when printing PolySupport™ for PA12. Normally, the life of a brass nozzle would be approximately 9h. A wear-resistance nozzle, such as hardened steel and ruby nozzle, is highly recommended to be used with PolySupport™ for PA12.
- PolySupport™ for PA12 is sensitive to moisture and should always be stored and used under dry conditions (relative humidity below 20%).

DISCLAIMER:

The typical values presented in this data sheet are intended for reference and comparison purposes only. They should not be used for design specifications or quality control purposes. Actual values may vary significantly with printing conditions. End- use performance of printed parts depends not only on materials, but also on part design, environmental conditions, printing conditions, etc. Product specifications are subject to change without notice.

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