



Technical Data Sheet

PolySupport™ for PA12

www.polymaker.com

V5.3



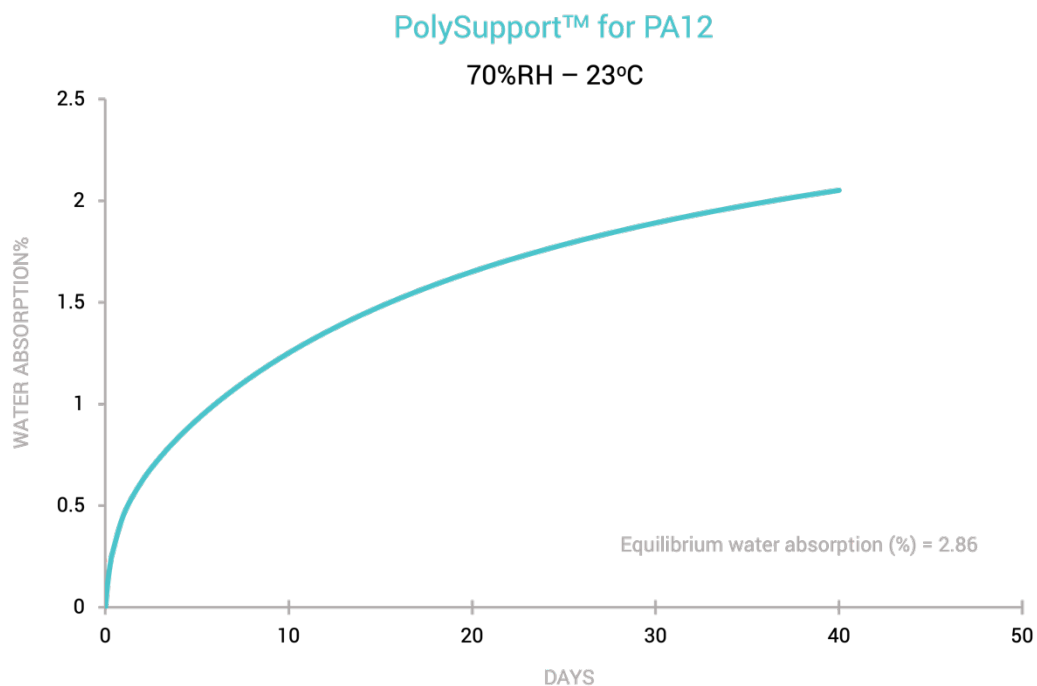
PolySupport™ for PA12

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 |

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 |
| Thermal conductivity | N/A | N/A |
| Heat shrinkage rate | N/A | N/A |

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 | ++ |

++ 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 material | BuildTak®, Glass, Blue Tape |
| Build surface treatment | Glue |
| Build plate temperature | 50-80 (°C) |
| Cooling fan | OFF |
| Printing speed | 30-60 (mm/s) |
| Raft separation distance | 0 (mm) |
| Retraction distance | 1 (mm) |
| Retraction speed | 20 (mm/s) |
| Environmental temperature | Room temperature |
| Drying temperature | 100 (°C) |
| Drying time | 8 (h) |

* Based on 0.4 mm nozzle and Simplify 3D v.4.0. 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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