

LayrrAM PA12 - Polyamide 12

Formula

$(C_{12}H_{23}NO)_n$

Description

Layrr PA12 is a premium nylon powder optimized for Selective Laser Sintering (SLS) and Multi Jet Fusion (MJF). Engineered for high process stability and mechanical reliability, it is the industry standard for bridging the gap between functional prototyping and end-use production. Our powder is chemically precipitated to achieve a semi-spherical morphology, ensuring superior surface finishes and injection-molded quality.

Material Behavior & Microstructure

- **The "12" Advantage:** The long hydrocarbon chain (12 carbons) reduces the concentration of amide groups, resulting in significantly lower hydrogen bonding density compared to PA6.
- **Environmental Stability:** PA12 is exceptionally low-hygroscopic. While other nylons swell or lose accuracy due to moisture absorption, Layrr PA12 maintains strict dimensional tolerances even in high-humidity environments.
- **Mechanical Ductility:** Features a ductile failure mode with an elongation at break of >15%, making it the premier choice for living hinges and snap-fit assemblies.

Powder Properties

Part number	LayrrAM PA12 - Polyamide 12
Application	SLS parts
Median particle size	75 μm
Bulk density (g/cm³)	0.5
Density of sintered parts (g/cm³)	0.85
Melting temperature	176-185°C