

Data Sheet

KIMYA ASA-S 3D FILAMENT

UV resistant ASA additive manufacturing filament

DESCRIPTION

Kimya ASA-S is a 3D printing filament made from ASA (Acrylonitrile Styrene Acrylate), a thermoplastic terpolymer from the styrenic polymer family. Like ABS in terms of mechanical properties, ASA stands out for its excellent resistance to UV rays and weathering, making it ideal for long-term outdoor applications. Its durability under harsh environmental conditions makes it a popular choice in the automotive industry and for any parts exposed to sunlight or the elements.

BENEFITS

- UV and Weather Resistant.
- Strong and Stable.
- Ideal for Outdoor Applications.

TECHNICAL DATA

Properties	Values	Test Methods
Diameter	1.75 ± 0.1 mm 2.85 ± 0.1 mm	INS-6712
Density	1.056 g/cm ³	ISO 1183-1
Moisture rate	< 0.5 %	INS-6711
Melt flow index (MFI)	4 - 10 g/10min	ISO 1133-1 (@220°C-10kg)
Glass transition temperature (Tg)	108°C (226°F)	ISO 11357-1 DSC (10°C/min-20-300°C)
Properties	Values	Test Methods
Tensile Modulus	1,685 MPa (244.3 ksi)	ISO 527-2/5A/50
Tensile Strength	38.8 MPa (5.6 ksi)	ISO 527-2/5A/50
Tensile Strain at Strength	2.4 %	ISO 527-2/5A/50
Tensile Stress at Break	34.6 MPa (5.0 ksi)	ISO 527-2/5A/50
Tensile Strain at Break (type A)	4.3 %	ISO 527-2/5A/50
Flexural Modulus	1,662 MPa (241.1 ksi)	ISO 178
Deformation at Flexural Strain	> 5 %	ISO 178
Flexural Stress at Conventional Deflection (3.5% Strain)*	57.3 MPa (8.3 ksi)	ISO 178
Charpy Impact Resistance	13 kJ/m ² (6.2 ft-lbs/in ²)	ISO 179-1/1eA
Shore Hardness	74 D	ISO 868

PROCESSING

Printing Direction	XY
Printing Speed	Initial layers: 20-35 mm/s, further layers 45-65 mm/s
Nozzle Temperature	240°C - 260°C (464°F - 500°F)
Bed Temperature	90°C - 100°C (194°F - 212°F)

SUSTAINABILITY



NOTES

- *According to ISO 178, end of the test at 5% deformation even if there is no specimen break.
- The data should be considered as indicative values - Properties can be influenced by production conditions.