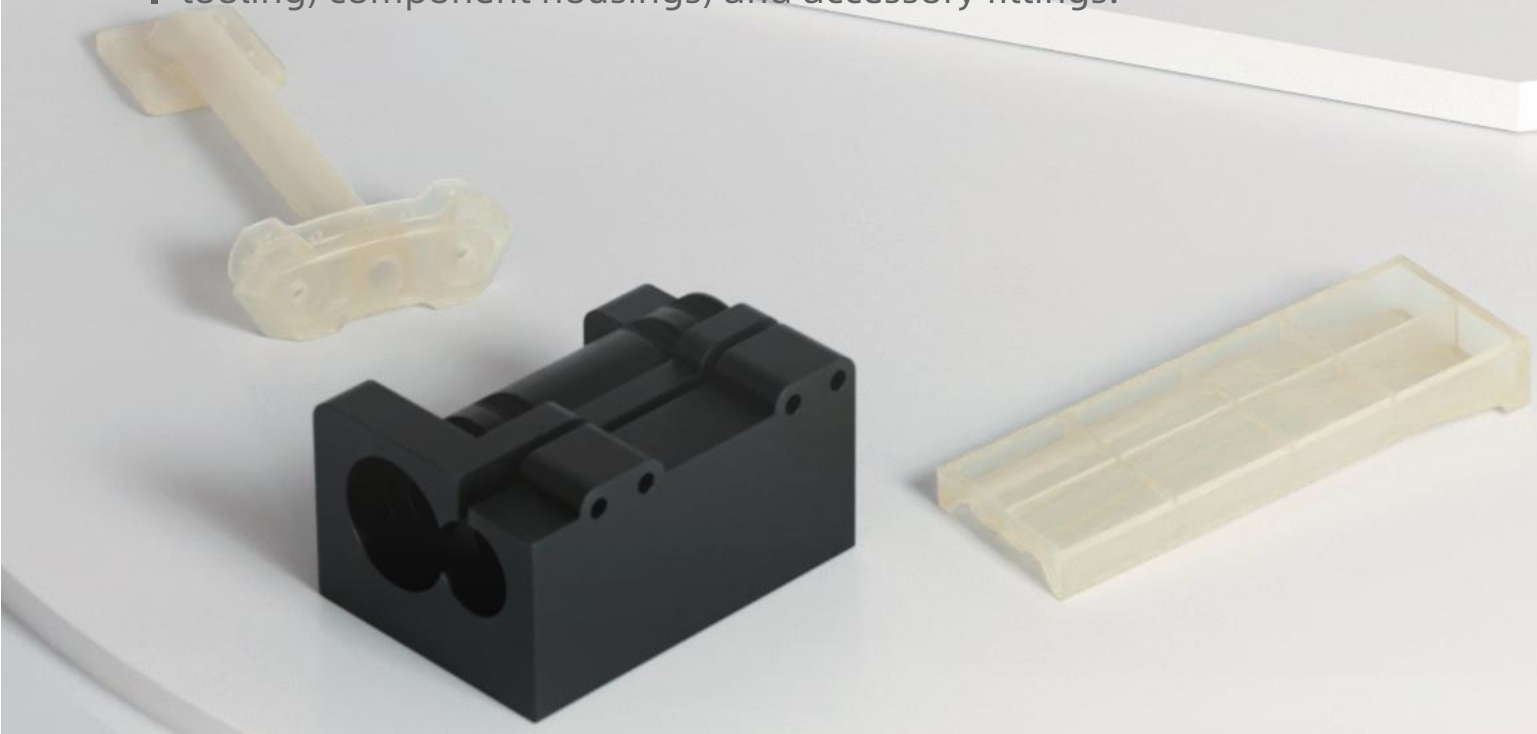
HeyGears

ULTRAPRINT MOLDING

PAH10 High-Temperature Resistance Resin

PAH10 Clear Tan features a heat deflection temperature (HDT) rating of 110 °C / 230 °F (at 0.455 MPa), making it suitable for silicone molding, prototyping, and end-use products with moderate heat-resistance requirements.

PAH10 Black is a high-stiffness, high-precision resin. It features a tensile modulus of 3150 MPa, offering exceptional long-term deformation resistance. It is ideal for industrial load-bearing structures, silicone mold tooling, component housings, and accessory fittings.



- High stiffness & deformation resistance
- High strength
- ±0.05 mm printed part tolerance*
- 110 °C (230 °F) heat resistance**

Color	Specification
Clear Tan	1000g/ Bottle
Black	

*Test data for PAH10 Black color resin. **Test data for PAH10 Clear Tan color resin.

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Ver 2.0
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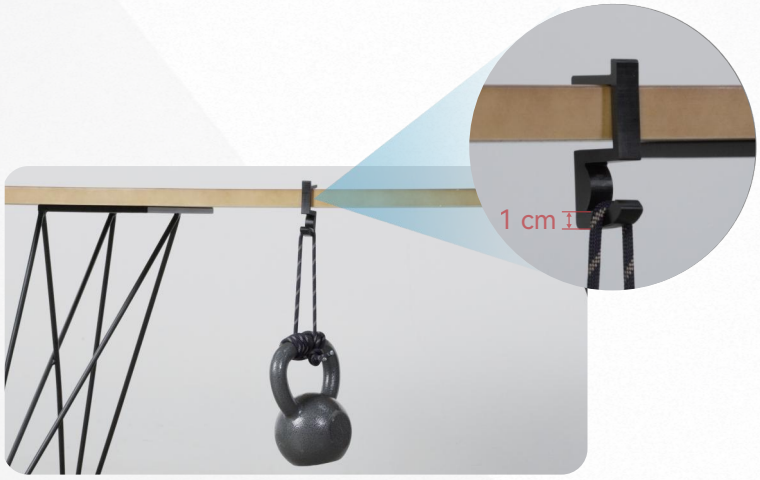
Basic Performance[1]

	Property	Standard	Results (Clear Tan)	Results (Black)	Unit
Thermal Resistance	Heat Deflection Temperature @0.455 MPa	ASTM D648	110（230）	95（203）	℃ (℉)
Toughness	Impact Strength (Notched)	ASTM D256	35	30	J/m
	Elongation at Break	ASTM D638	6	7	%
	Work of Fracture	ISO 20795.1	3550	3050	J/m^2
Stiffness	Tensile Modulus	ASTM D638	3330	3150	MPa
	Flexural Modulus	ASTM D790	3350	3050	MPa
Strength	Tensile Strength	ASTM D638	81	75	MPa
	Flexural Strength	ASTM D790	140	136	MPa
Others	Hardness	ASTM D2240	87	89	Shore D
	Water Sorption	ASTM D570	0.6	0.6	%
	Viscosity	ASTM D4212	660	750	mPa·s
Additional Passed Tests	UV Light Aging Test	ASTM G154	600	600	h
	Thermal Accelerated Aging Test	YY/T 0681.1	1600	1600	h
	Damp Heat Test	IEC 60068-2-78	✓	/	/

Exceptional Results

3D Printed Engine Intake Manifold for Remote Controlled Car*



High Stiffness**

Sample Request

*Utilized in the engine modification project by 九月流转 , a renowned Bilibili content creator.
**Model created by Tosh.
[1] Data from HeyGears Lab. The material results are the average values from testing, with a deviation of ±10%.
[2] Equivalent to 8 years of indoor use or 1 year of outdoor use, the material's properties degrade by less than 30%, with a non-significant color change (△E < 2) and a dimensional deviation of ±0.1 mm.
[3] Equivalent to 1 years of outdoor use, the material's properties degrade by less than 30%, with a non-significant color change (△E < 2) and a dimensional deviation of ±0.1 mm.