

ABS-LIKE

MATERIAL DATASHEET

Vacuum Casting Materials

Measurement	PUR17	PUR21	PUR23	PUR26	PUR31	PUR523
Main Properties	Thermal Resistance above 120°C Good Impact and flexural resistance	Can be pigmented High Impact resistance	Thermal Resistance above 120°C Good Impact and flexural resistance	Can be pigmented High thermal resistance Good Impact and flexural resistance	Can be pigmented Good thermal resistance Flame retardant	High Transparency Can be pigmented Good UV resistance
Thermoplastic Similarity	ABS	ABS	ABS	PS/ABS(filled)	ABS	PS/ABS/PMMA
Flexural Modulus	1600 MPa	2100 MPa	2300 MPa	2500 MPa	3700 MPa	2100 MPa
Flexural Strenght	87 MPa	105 MPa	80 MPa	105 MPa	133 MPa	100 MPa
Tensile Modulus	1650 MPa	2800 MPa	- MPa	- MPa	4500 MPa	2600 MPa
Tensile Strenght	54 MPa	60 MPa	60 MPa	70 MPa	55 MPa	68 MPa
Elongation at Break	11 %	7.5 %	11 %	15 %	4 %	6 %
Shore D/A-hardness	D80	D81	D80	D82	D86	D86
Charpy Impact Resist.	56 kJ/m ²	71 kJ/m ²	60 kJ/m ²	70 kJ/m ²	26 kJ/m ²	42 kJ/m ²
Heat Deflection Temp.	120 °C	- °C	110 °C	92 °C	90 °C	85 °C
Glass Transition Temp.	- °C	95 °C	120 °C	105 °C	110 °C	100 °C

Actual values may vary with build condition

Mentioned information and mechanical properties in our datasheets are optimum values according to our manufacturing partners and are believed to be accurate, though is provided for your guidance only. All guarantees with respect to the information contained herein are explicitly denied.



PP/PE-LIKE

MATERIAL DATASHEET

Vacuum Casting Materials

Measurement	PUR12	PUR34	PUR3490	PUR45
Main Properties	Excellent impact resistance	Good Thermal resistance good impact resistance Can be pigmented	Good abrasion resistance Good shock resistance	High flexural modulus Can be pigmented
Thermoplastic Similarity	PP/HDPE	PPS/PA/PEEK	PP/PE	PA/POM
Flexural Modulus	1200 MPa	1850 MPa	450 MPa	4500 MPa
Flexural Strength	80 MPa	80 MPa	28 MPa	150 MPa
Tensile Modulus	- MPa	1800 MPa	530 MPa	- MPa
Tensile Strength	40 MPa	61 MPa	27 MPa	85 MPa
Elongation at Break	25 %	13 %	120 %	3 %
Shore D/A-hardness	D76	D80	D76	D76
Charpy Impact Resist.	50 kJ/m ²	41 kJ/m ²	unbreakable	30 kJ/m ²
Heat Deflection Temp.	78 °C	192 °C	- °C	92 °C
Glass Transition Temp.	90 °C	220 °C	100 °C	95 °C

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MATERIAL DATASHEET

Vacuum Casting Materials

RUBBER-LIKE

Measurement	PUR3420	PUR3440	PUR3450	PUR3460	PUR8400
Main Properties	Low moisture sensitivity Good ageing resistance	Low moisture sensitivity Good ageing resistance Good abrasion resistance	Good Tear resistance High abrasion resistance Hydrolysis resistance	Good Tear resistance High abrasion resistance Hydrolysis resistance	Can be pigmented
Tensile Strenght	3 MPa	3 MPa	12 MPa	17 MPa	6-20 MPa
Shore D/A-hardness	A50	A60	A80	A85	A30-95
Elongation at Break	950 %	1000 %	620 %	810 %	680 %
Tear Strenght	15 kN/m	24 kN/m	67 kN/m	83 kN/m	9-61 kN/m
Bashore Resilience	47 %	44 %	44 %	42 %	- %
Abrasion Resistance	47 mm ³ /100U	16 mm ³ /100U	41 mm ³ /100U	18 mm ³ /100U	- mm ³ /100U
Working Temperature	-40 +80 °C	-40 +80 °C	-40 +80 °C	-40 +80 °C	+70 °C
Glass Transition Temp.	-80 °C	-60 °C	-60 °C	-65 °C	- °C

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