



Material Data Sheet: **DURAFORM FLEX**

Properties: Outstanding mechanical properties with extreme stiffness and strength. Well suited for high finish proto-types and for wind tunnel testing.

TECHNICAL DATA

Powder Properties

MEASUREMENT	CONDITION	VALUE
Density (tap)	ASTM D4164	0.44 g/cm ³
Melting Point: T _m	DSC	192 °C (378 °F)

Sintered Properties

MEASUREMENT	METHOD/CONDITION	AS SINTERED		INFILTRATED WITH FLEXSEAL (8-DIP PROCESS)	
		METRIC	US	METRIC	US
Tensile Strength, Ultimate	ASTM D638	1.8 MPa	262 psi	2.3 MPa	335 psi
Tensile Modulus	ASTM D638	7.4 MPa	1080 psi	9.2 MPa	1340 psi
Elongation at Break	ASTM D638	110%	110%	151%	151%
Flexural Modulus (@ 23 °C)	ASTM D790	5.9 MPa	860 psi	7.8 MPa	1130 psi
Initial Tear Resistance (Die C @ 23 °C)	ASTM D624	15.1 kN/m	86 lb/in	15.4 kN/m	88 lb/in
Abrasion Resistance Taber, CS-17 wheel, 1 kg load	ASTM D4060	83.5 mg (per 1000 cycles)		For applications requiring abrasion resistance, infiltration is not recommended	
Bursting Strength (Straight) @ 23 °C (25 mm ID x 2 mm thick x 300 mm long hose)	No Infiltration	0 MPa	0 psi		
	Two-Part Polyurethane Infiltration FlexSeal Infiltration			0.21 MPa 0.076 MPa	>30 psi 11 psi
Shore A Hardness @ 23 °C	ASTM D2240	45-75		55-80	

Chemical Resistance - Material does not dissolve in hydrocarbons, ketones, ethers or alcohols, but may lose some mechanical properties. May swell in some solvents or solvent mixtures.

Data was generated by building parts under typical default parameters. DuraForm Flex plastic was processed on a base-level HiQ™ SLS system at 9 watts laser power, 200 inches/sec (5 m/sec) scan speed, and a powder layer thickness of 0.004 inches (0.1mm).