PROFORM
RAPID PROTOTYPING

PROFORM AG
Rte de Chésalles 60
Case postale 269
CH-1723 Marly 1

Tel. +41 (0)26 436 43 83
Fax +41 (0)26 436 43 29
proform@proform.ch
www.proform.ch

Material Properties			Stereolithography				
Name			Accura 60	ProtoTherm 12120	Accura 25	Accura Xtreme	XC 11122
Supplier			3D Systems	DSM SOMOS	3D Systems	3D Systems	DSM SOMOS
Material type			Epoxy	Epoxy	Epoxy	Epoxy	Epoxy
Base colour			colourless	red / orange*	off-white	grey	colourless
			clear	HT*	opaque	opaque	clear
Characterisation			PC - like	hard / high temp*	"plastic"	impact resistant	biocompatible
Physical properties	unit	ASTM					
Density	g/cm^3		1.21	1.2	1.19	1.19	1.2
Shore hardness	Shore	D2240	D 86	D 85 / D 87*	D 80	D 83	D 85
Tensile modulus	MPa	D638M	2900	3520 / 3250*	1625	1900	2765
Flexural modulus	MPa	D790M	2850	3320 / 3060*	1520	1800	2200
Tensile strength	MPa	D638M	63	70 / 77*	38	41	50
Flexural strength	MPa	D790M	94	109 / 103*	56.5	61	68
Elongation to break	%	D638M	5 - 13	4 / 4.5*	13 - 20	14 - 22	11 - 20
Impact resistance (notched)	kJ/m^2	D256A	1.5 - 2.5	1.2 / 1.7*	1.9 - 2.4	3.5 - 5.2	2 - 3
Glass transition (Tg)	oC	E1545-00	58	74 / 111*	60		39 - 46
Heat deflection temp @ 0.46 MPa	oC	D648-98c	54	57 / 126*	58 - 63	62	50
Heat deflection temp @ 1.81 Mpa	oC	D648-98c	49	52 / 111*	51 - 55	54	45
Coeff. of linear expansion (0-100 C)	$10^{-4}\ K^{-1}$	E831-00	0.7 - 1	0.7 - 1.1	1 - 1.5		0.9 - 1.9
Dielectric constant @ (kHz)		D150-98		4 / 3.8*			3.5 - 3.9
Dielectric strength	kV/mm	D149-97a		15.5 / 16.4*			16
Water absorption	%	D570-98		0.37 / 0.24*			0.35
Processing			Viper	SLA-3500 / Viper	Viper	HD7000 / Viper	Viper
Minimum wall thickness	mm		0.12	0.12	0.12	0.12	0.12
Typical layer thickness	mm		0.05 - 0.1	0.05 - 0.15	0.05 - 0.1	0.025 - 0.1	0.05 - 0.1
Build envelope	mm^3		254^3	350^2 x 400	254^3	380^2 x 250	254^3
Turnover (typical) #:	days		1 - 3	1 - 3	1 - 3	1 - 3	1 - 3
Remarks:	# from receipt of correct 3D data			* after thermal treatment			