



**3D Systems COVID-19
Material Technology Overview Chart**

[Link to Certification Documents](#)

<http://infocenter.3dsystems.com/materials/classvi>
<https://nextdent.com/materials/>

DISCLAIMER:

It is the responsibility of each customer to determine that its use of any USP Class VI or ISO 10993 certified material and/or sterilization method is safe, lawful and technically suitable to the customer's intended applications. Customers should conduct their own testing to ensure that this is the case.

Materials and technologies identified in the table by 'X' are best candidates for printer-material combinations for which either Class VI and/or ISO10993 certifications are possible for COVID-19 applications.

Materials and technologies identified in the table by 'O' are potential solutions to the COVID-19 applications in emergency situations though the materials are not Class VI and/or ISO10993 certified. Customers should conduct their own testing to determine whether certification is possible.

The best candidates below may change based on continued results. The table will be updated regularly to reflect these changes.

X - Best Candidate in given technology
O - Emergency use candidates

		Application					* Tested and certified for intended use										
		Face Shield Frame	Ventilator parts	Test Kit Swab	Surgical Mask Non-N95	Surgical Mask N95 Comp	**Users may pursue ETO, Gamma, or other methods but must self certify										
Technology	Printer Systems	Material	USP Certification	Best Candidate Technology->	SLS Figure 4 MJP	SLS Figure 4 MJP	Figure 4 SLA	SLS	SLS	Chemical Compatibility Data	Steam Sterilization Compatibility **	General Mechanical Properties (ASTM)					
				ISO Certification	Tensile Strength MPa	Elongation @ Break %	Flexural Modulus MPa	Notch Impact J/m	HDT @0.455MPa °C								
Selective Laser Sintering (SLS) Industrial grade laser sintering producing nylon powder sintered parts	sPRO 60 HD-HS, sPRO 140, sPRO 230	DuraForm® PA	Class VI		X	X		X	X		X	43	14	1387	32	180	
		DuraForm® HST			O	O		O	O		X	51	4.5	4400-4550	37	184	
		DuraForm® EX BLK-NAT				O	O		O	O	X	48	47	1310	74	188	
		DuraForm® GF				O	O		O	O	X	26	1.4	3100	41	179	
	ProX® SLS 6100	DuraForm® ProX PA		ISO 10993-5 ISO 10993-10		X	X		X	X		X	50	14	1650	45	182
		DuraForm® ProX HST				O	O		O	O		X	44	4.3	3430	55	183
		DuraForm® ProX EX BLK				O	O	O	O	O		X	43	27-60 Z-XY	1360	75	193
		DuraForm® ProX EX NAT				O	O	O	O	O		X	51	9-61 Z-XY	1436	91	192
		DuraForm® ProX AF+				O					X	37	3	3710	54	182	
		DuraForm® ProX GF			O			O	O		X	45	2.8	3120	48	180	
Figure 4® High speed direct digital projector-film based technology with production grade materials	Figure 4 Standalone Figure 4 Modular	Figure 4 PRO-BLK 10		ISO 10993-5 ISO 10993-10	X	X	X			X	X	63	12	2300	24	70	
		Figure 4 RUBBER-BLK 10		ISO 10993-5 ISO 10993-10						X		19	80	2900	125	25	
		Figure 4 MED-AMB-10		ISO 10993-5 ISO 10993-10			X	X			X	X	69	4	2800	18	118
		Figure 4 FLEX-BLK 20			O	O	O			X		36	76	680	91	41	
		Figure 4 HI TEMP 300-AMB								X	X	66	2	4200	10	>300	
		Figure 4 TOUGH-BLK 20			O	O	O			X		40	36	1646	27	55	
	Figure 4 Standalone	Figure 4 MED-WHT 10		ISO 10993-5 ISO 10993-10			X	X		X	X	60	3	3300	17	102	
				MDD/FDA* certification	Tested on biocompatibility acc.*							Steam Sterilization Compatibility **	Tensile Strength MPa	Flexural Strength MPa	Flexural Modulus MPa	Charpy Impact J/m	HDT @0.455MPa °C
		NextDent SG (Surgical Guide)	class I / class I		ISO10993-1 ISO10993-3 ISO10993-5 ISO10993-10		X					X		85	2118	12	103
		NextDent C&B MFH	class IIa/class I		ISO10993-1 ISO10993-3 ISO10993-5 ISO10993-10		O					X		92	2330	11	
		NextDent Ortho Rigid	class IIa/class I		ISO10993-1 ISO10993-3 ISO10993-5 ISO10993-10		O					X		80	2075	10	118
		NextDent Ortho IBT	class I/class I		ISO10993-1 ISO10993-3 ISO10993-5 ISO10993-10		X						15				
		NextDent Model 2.0	n.a.		n.a.		O							52	1610		108
	NextDent Try-In	class I / class I		ISO10993-1 ISO10993-3 ISO10993-5 ISO10993-10		O					X		91	2180		103	



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					SLS Figure 4 MJP	SLS Figure 4 MJP	Figure 4 SLA	SLS	SLS			Tensile Strength MPa	Elongation @ Break %	Flexural Modulus MPa	Notch Impact J/m	HDT @0.455MPa °C	
Stereolithography Printers (SLA) Industrial grade stereolithography providing repeatable, accurate, resin based end use parts	ProJet® 6000, ProJet® 7000, ProX 800, ProX 950	Accura® ClearVue	Class VI		O	X	X	O	O			38-42	10-22	1940-2250	23-51	48	
		Accura® ABS Black (SL 7820)					O	O	O	O			47	6-13	2300	39-56	51
		Accura® Xtreme						O	O	O			41	18	1850	44	62
		Accura® Xtreme White 200						O	O	O			48	14	2390	65	47
		Accura® 25						O	O	O			38	16	1420	22	61
	ProX 800, ProX 950	Accura® ABS White (SL 7810)		ISO 10993-5 ISO 10993-10	O	X	X	O	O				47	8-14	2100	24-47	51
		Accura® 55					O	O	O				68	5-8	2700-3240	12-22	58
		Accura® 60					O	O	O				68	5-13	2700-3000	15-25	55
		Accura® CastPro											53	4-8.3	2340	43-50	51
	ProX 800	Accura® PP White (SL 7811)				O	O	O	O			42	7-13	2000	42-59	47	
ProX 800	Accura® SL Y-C 9300	Class VI										45	7			~50	
Multijet Printing (MJP) Multijet printing technology produces high fidelity parts with a variety of materials	ProJet MJP 2500 Projet MJP 2500 Plus	VisiJet® M2R-WT	Class VI	ISO 10993-5 ISO 10993-10	X	X	X	X	X			45	30	2200	25	51	
		VisiJet® M2S-HT90	Class VI								X		80	4-9	3000	17	105
		VisiJet® M2R-BK						O					55	12	3000	18	61
		VisiJet® M2G-DUR* ProFlex											20	75		80	25
	ProJet MJP 2500 Plus	VisiJet® M2R-GRY	Class VI			X	X	X	X	X			45	30	2200	25	51
		VisiJet® M2R-CL	Class VI	ISO 10993-5 ISO 10993-10	X	X	X	X	X				45	30	2500	25	51
		VisiJet® M2R-CL w/ clear coat		ISO10993-5 ISO 10993-10			X	O					-	-	-	-	-
		VisiJet® M2R-TN	Class VI				X	X	O	O		X	70	12	3000	17	71
	ProJet MJP 5600	VisiJet® M2G-CL* Armor				O	O	O	O	O			35	55-65	1200	50	47
		VisiJet® CR-BK	Class VI					O	O				37-48	5-11	1800-2300	17-24	54-61
VisiJet® CR-CL 200		Class VI					X	X	O	O		30-43	14-22	1100-2000	21-30	42-50	
VisiJet® WHT-CL 200		Class VI					X	X	O	O		33-40	12-22	1200-1700	21-24	42-47	