PARAGON
AM Technologies

Carbon® DLS™ at Paragon: Materials Comparison Chart

Material	CE 221	EPU 41	EPU 43	EPU 45	EPX 82	EPX 86FR	FPU 50	MPU 100	RPU 70	RPU 130	SIL 30	LOCTITE® IND405 Clear	LOCTITE® IND147
ULTIMATE TENSILE STRENGTH	85 MPa	15 MPa	17 MPa	24 MPa	80 MPa	90 MPa	25 MPa	35 MPa	40 MPa	35 MPa	3.5 MPa	42 MPa	67 MPa
ELONGATION AT BREAK	3%	250%	380%	290%	5%	5%	200%	25%	100%	100%	350%	120%	2.4%
TENSILE MODULUS	3900 MPa	N/A	10 MPa	17 MPa	2800 MPa	3300 MPa	700 MPa	1200 MPa	1700 MPa	900 MPa	N/A	1500 MPa	3190 MPa
SHORE HARDNESS	92D	73A	76A	77A	89D	88D	71D	81D	80D	77D	35A	78D	94D
IMPACT STRENGTH	15 J/m	N/A	N/A	N/A	45 J/m	30 J/m	40 J/m	30 J/m	15 J/m	75 J/m	N/A	50 J/m	14.6 J/m
HEAT DEFLECTION TEMPERATURE	230 ºC	N/A	N/A	N/A	130 ºC	135 ºC	70 ºC	50 ºC	60 ºC	120 ºC	N/A	53 ºC	291 ºC
BIOCOMPATIBILITY: CYTOTOXICITY	✓	✓	-	-	✓	✓	✓	✓	✓	✓	✓	-	-

POINTS TO NOTE:

- **The materials listed above are available to Paragon customers. Other materials listed on Carbon's website are available on request, on the proviso that your project is for production and the probability of proceeding is >90%.**
- **The higher the Heat Deflection Temperature, the higher the tensile modulus. In other words, very high temperature materials can be brittle and therefore wall thickness is a major design consideration**
- **All Paragon customers have access to design advice from experienced Carbon technicians. They also have access to the Carbon Design Engine, an all powerful latticing software that empowers designers to make highly tuned, high-performance products.**

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