VARIETY AND CHARACTER

GENERAL RESIN

zABS for general applications

zABS comes in five colors: green, white, gray, amber and ivory. It has strong advantages in rapid forming and durability. Its properties mirror that of ABS plastic, but instead prints with smooth and matte surfaces that are more pleasing to touch and paint.

zABS IVORY					
	METRIC[1]		IMPERIAL[1]		METHOD
	Green[2]	Post-Cured[3]	Green[2]	Post-Cured[3]	
Tensile Properties					
Tensile Strength	30.38 MPa	53.75MPa	4405.1psi	7793.75psi	ASTM D 638-14
Elongation at Break	53.55 %	25.84%	53.55 %	25.84%	ASTM D 638-14
Modulus	205.39 MPa	367.15MPa	29781.55psi	53236.75psi	ASTM D 638-14
Flexural Properties					
Flexural Strength	23.04 MPa	59.41MPa	3340.8psi	8614.45psi	ASTM D 790-15
Flexural modulus	823.9 MPa	1887.88MPa	119.47ksi	273.74ksi	ASTM D 790-15
Impact properties					
Notched izod (Machined)	34.49J/m	22.3 J/m	0.65 ft-lbf/in	0.42 ft-lbf/in	ASTM-D256-10

NOTES:
1. Material properties can vary with part geometry, print orientation, print settings and temperature.
2. Data was obtained form green parts, printed using, 100 µm, Clear settings, without additional treatment.
3. Data was obtained form green parts, printed using, 100 µm, Clear settings and post-cured with 600 mW/cm2 of 405 nm LED light at 25℃ for 10 min.

zABS GREEN					
	METRIC[1]		IMPERIAL[1]		METHOD
	Green[2]	Post-Cured[3]	Green[2]	Post-Cured[3]	
Tensile Properties					
Tensile Strength	32.6 MPa	38.4 MPa	4727 psi	5569psi	ASTM D 638-14
Elongation at Break	21.1 %	14.5 %	21.1 %	14.5 %	ASTM D 638-14
Modulus	252.7MPa	342.3 MPa	36641.5psi	49633.5psi	ASTM D 638-14
Flexural Properties					
Flexural Strength	26.96 MPa	61.05 MPa	3909.2 psi	8852.25 psi	ASTM D 790-15
Flexural modulus	829.76 MPa	2502.29 MPa	120.32 ksi	362.83 ksi	ASTM D 790-15
Impact properties					
Notched izod (Machined)	33.45 J/m	16.16 J/m	0.63 ft-lbf/in	0.30 ft-lbf/in	ASTM-D256-10

NOTES:
1. Material properties can vary with part geometry, print orientation, print settings and temperature.
2. Data was obtained form green parts, printed using, 100 µm, Clear settings, without additional treatment.
3. Data was obtained form green parts, printed using, 100 µm, Clear settings and post-cured with 600 mW/cm2 of 405 nm LED light at 25℃ for 10 min.

zABS GRAY					
	METRIC[1]		IMPERIAL[1]		METHOD
	Green[2]	Post-Cured[3]	Green[2]	Post-Cured[3]	
Tensile Properties					
Tensile Strength	24.85 MPa	55.51 MPa	3603.25psi	8048.95psi	ASTM D 638-14
Elongation at Break	45.5 %	26.17%	45.5%	26.17%	ASTM D 638-14
Modulus	169.42 MPa	377.66 MPa	24565.9psi	54760.7psi	ASTM D 638-14
Flexural Properties					
Flexural Strength	25.91 MPa	53.08 MPa	3756.95psi	7696.6psi	ASTM D 790-15
Flexural modulus	899.96 MPa	1812.55 MPa	130.49 ksi	262.82ksi	ASTM D 790-15
Impact properties					
Notched izod (Machined)	30.28 J/m	17.47 J/m	0.57 ft-lbf/in	0.33 ft-lbf/in	ASTM-D256-10

NOTES:
1. Material properties can vary with part geometry, print orientation, print settings and temperature.
2. Data was obtained form green parts, printed using, 100 µm, Clear settings, without additional treatment.
3. Data was obtained form green parts, printed using, 100 µm, Clear settings and post-cured with 600 mW/cm2 of 405 nm LED light at 25℃ for 10 min.

zABS WHITE					
	METRIC[1]		IMPERIAL[1]		METHOD
	Green[2]	Post-Cured[3]	Green[2]	Post-Cured[3]	
Tensile Properties					
Tensile Strength	25.69 MPa	44.89MPa	3725.05psi	6509.05psi	ASTM D 638-14
Elongation at Break	51.85 %	30.9%	51.85 %	30.9%	ASTM D 638-14
Modulus	160.06 MPa	326.39MPa	23208.7psi	47326.55psi	ASTM D 638-14
Flexural Properties					
Flexural Strength	24.91 MPa	48.77MPa	3611.95psi	7071.65psi	ASTM D 790-15
Flexural modulus	887.73 MPa	1677.68MPa	128.72ksi	243.26ksi	ASTM D 790-15
Impact properties					
Notched izod (Machined)	30.28J/m	21.08 J/m	0.57 ft-lbf/in	0.40 ft-lbf/in	ASTM-D256-10

NOTES:
1. Material properties can vary with part geometry, print orientation, print settings and temperature.
2. Data was obtained form green parts, printed using, 100 µm, Clear settings, without additional treatment.
3. Data was obtained form green parts, printed using, 100 µm, Clear settings and post-cured with 600 mW/cm2 of 405 nm LED light at 25℃ for 10 min.

zABS AMBER					
	METRIC[1]		IMPERIAL[1]		METHOD
	Green[2]	Post-Cured[3]	Green[2]	Post-Cured[3]	
Tensile Properties					
Tensile Strength	28.72 MPa	48.33MPa	4164.4psi	7007.85psi	ASTM D 638-14
Elongation at Break	42.95 %	22.22%	42.95 %	22.22%	ASTM D 638-14
Modulus	208.85 MPa	364.62MPa	30283.25psi	52869.9psi	ASTM D 638-14
Flexural Properties					
Flexural Strength	21.97 MPa	58.09MPa	3185.65psi	8423.05psi	ASTM D 790-15
Flexural modulus	861.49 MPa	1899.05MPa	124.92ksi	275.36ksi	ASTM D 790-15
Impact properties					
Notched izod (Machined)	39.49J/m	17.46 J/m	0.74 ft-lbf/in	0.33 ft-lbf/in	ASTM-D256-10

NOTES:
1. Material properties can vary with part geometry, print orientation, print settings and temperature.
2. Data was obtained form green parts, printed using, 100 µm, Clear settings, without additional treatment.
3. Data was obtained form green parts, printed using, 100 µm, Clear settings and post-cured with 600 mW/cm2 of 405 nm LED light at 25℃ for 10 min.