



Cycolac* Resin FXS680SK

Americas: COMMERCIAL

Clear ABS with VisualFx Sparkle Metallic

TYPICAL PROPERTIES ¹	TYPICAL VALUE	UNIT	STANDARD
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	390	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	290	kgf/cm ²	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	3.2	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	35	%	ASTM D 638
Tensile Modulus, 5 mm/min	21700	kgf/cm ²	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	660	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	22200	kgf/cm ²	ASTM D 790
Tensile Stress, yield, 5 mm/min	38	MPa	ISO 527
Tensile Stress, break, 5 mm/min	28	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	3	%	ISO 527
Tensile Strain, break, 5 mm/min	29	%	ISO 527
Tensile Modulus, 1 mm/min	2120	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	62	MPa	ISO 178
Flexural Modulus, 2 mm/min	2170	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	5	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -30°C	4	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	142	cm-kgf	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	5	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	4	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	5	kJ/m ²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	87	°C	ASTM D 1525
HDT, 1.82 MPa, 3.2mm, unannealed	72	°C	ASTM D 648



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TYPICAL PROPERTIES ¹	TYPICAL VALUE	UNIT	STANDARD
THERMAL			
HDT, 1.82 MPa, 3.2mm, unannealed	72	°C	ASTM D 648
CTE, -40°C to 40°C, flow	1.6E-04	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	1.6E-04	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	1.6E-04	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	1.6E-04	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	87	°C	ISO 306
Vicat Softening Temp, Rate B/120	90	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	73	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.1	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.5 - 0.8	%	GE Method
Melt Flow Rate, 200°C/3.8 kgf	1.5	g/10 min	ASTM D 1238
Density	1.1	g/cm ³	ISO 1183
Water Absorption, (23°C/sat)	1	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.4	%	ISO 62
Melt Volume Rate, MVR at 220°C/5.0 kg	8	cm ³ /10 min	ISO 1133



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PROCESSING PARAMETERS	TYPICAL VALUE	UNIT
Injection Molding		
Drying Temperature	70 - 75	°C
Drying Time	2 - 4	hrs
Drying Time (Cumulative)	8	hrs
Maximum Moisture Content	0.01	%
Melt Temperature	205 - 245	°C
Nozzle Temperature	205 - 245	°C
Front - Zone 3 Temperature	215 - 240	°C
Middle - Zone 2 Temperature	205 - 225	°C
Rear - Zone 1 Temperature	195 - 215	°C
Mold Temperature	50 - 70	°C
Back Pressure	0.3 - 0.7	MPa
Screw Speed	30 - 60	rpm
Shot to Cylinder Size	50 - 70	%
Vent Depth	0.038 - 0.051	mm