



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

1) Typical values only. Variations within normal tolerances are possible for various colours. All values are measured at least after 48 hours storage at 23°C/50% relative humidity.
All properties, except the melt volume rate are measured on injection moulded samples.
All samples are prepared according to ISO 294.

2) Only typical data for material selection purpose. Not to be used for part or tool design.
3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.
4) Own measurement according to UL.



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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

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