

# LEXANTM VISUALFXTM RESIN FXD1413T

## **REGION EUROPE**

#### DESCRIPTION

Clear PC-siloxane copolymer with excellent processability, in special light diffusion colors. Medium flow. Improved toughness compared to medium flow standard PC in same color. Color package may affect performance.

## TYPICAL PROPERTY VALUES

PROPERTIES **TYPICAL VALUES** UNITS **TEST METHODS** MECHANICAL<sup>(1)</sup> Tensile Stress, yld, Type I, 50 mm/min 60 MPa ASTM D638 Tensile Stress, brk, Type I, 50 mm/min 66 MPa ASTM D638 Tensile Strain, yld, Type I, 50 mm/min 6 % ASTM D638 Tensile Strain, brk, Type I, 50 mm/min 130 % ASTM D638 Tensile Modulus, 50 mm/min 2270 MPa ASTM D638 Flexural Stress, yld, 1.3 mm/min, 50 mm span ASTM D790 87 MPa Flexural Modulus, 1.3 mm/min, 50 mm span 2270 MPa ASTM D790 57 ISO 527 Tensile Stress, vield, 50 mm/min MPa Tensile Stress, break, 50 mm/min 58 MPa ISO 527 Tensile Strain, yield, 50 mm/min 56 % ISO 527 Tensile Strain, break, 50 mm/min 116 % ISO 527 Tensile Modulus, 1 mm/min 2310 MPa ISO 527 Flexural Stress, yield, 2 mm/min 91 MPa ISO 178 Flexural Modulus, 2 mm/min 2190 MPa ISO 178 IMPACT (1) Izod Impact, notched, 23°C 890 J/m ASTM D256 Izod Impact, notched, -30°C 795 J/m ASTM D256 Instrumented Dart Impact Total Energy, 23°C 82 ASTM D3763 Izod Impact, unnotched 80\*10\*3 +23°C ISO 180/1U NB kJ/m² Izod Impact, unnotched 80\*10\*3 -30°C NB kJ/m² ISO 180/1U Izod Impact, notched 80\*10\*3 +23°C 65 ISO 180/1A kJ/m<sup>2</sup> Izod Impact, notched 80\*10\*3 -30°C ISO 180/1A 55 kJ/m² Charpy 23°C, V-notch Edgew 80\*10\*3 sp=62mm 70 kJ/m² ISO 179/1eA Charpy -30°C, V-notch Edgew 80\*10\*3 sp=62mm 60 ISO 179/1eA kJ/m² Charpy 23°C, Unnotch Edgew 80\*10\*3 sp=62mm NB kJ/m² ISO 179/1eU Charpy -30°C, Unnotch Edgew 80\*10\*3 sp=62mm kJ/m² ISO 179/1eU NB THERMAL (1) °C Vicat Softening Temp, Rate A/50 141 ASTM D1525 °C HDT, 1.82 MPa, 3.2mm, unannealed 124 ASTM D648 CTE, -40°C to 95°C, flow 7.15E-05 1/°C ASTM E831 CTE, -40°C to 95°C, xflow 7.93F-05 1/°C ASTM F831 CTE, 23°C to 80°C, flow 7.15E-05 1/°C ISO 11359-2 CTE, 23°C to 80°C, xflow 7.93E-05 1/°C ISO 11359-2 Ball Pressure Test, 125°C +/- 2°C IEC 60695-10-2 PASS

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## CHEMISTRY THAT MATTERS

Revision 20241028



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Vicat Softening Temp, Rate B/50	141	°C	ISO 306
Vicat Softening Temp, Rate B/120	143	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	119	°C	ISO 75/Af
Relative Temp Index, Elec <sup>(2)</sup>	80	°C	UL 746B
Relative Temp Index, Mech w/impact <sup>(2)</sup>	80	°C	UL 746B
Relative Temp Index, Mech w/o impact <sup>(2)</sup>	80	°C	UL 746B
PHYSICAL <sup>(1)</sup>			
Specific Gravity	1.19		ASTM D792
Mold Shrinkage on Tensile Bar, flow <sup>(3)</sup>	0.4 - 0.8	%	SABIC method
Mold Shrinkage, flow, 3.2 mm <sup>(3)</sup>	0.4 - 0.8	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm <sup>(3)</sup>	0.4 - 0.8	%	SABIC method
Melt Flow Rate, 300°C/1.2 kgf	10	g/10 min	ASTM D1238
Density	1.19	g/cm <sup>3</sup>	ISO 1183
Water Absorption, (23°C/saturated)	0.13	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.09	%	ISO 62
Melt Volume Rate, MVR at 220°C/5.0 kg	9	cm³/10 min	ISO 1133
ELECTRICAL <sup>(1)</sup>			
Comparative Tracking Index (UL) {PLC}	3	PLC Code	UL 746A
Hot-Wire Ignition (HWI), PLC 2	≥3	mm	UL 746A
Hot-Wire Ignition (HWI), PLC 3	≥1.5	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 1	≥1.5	mm	UL 746A
FLAME CHARACTERISTICS (2)			
UL Yellow Card Link	<u>E45329-512791</u>	-	
UL Recognized, 94HB Flame Class Rating	≥1.5	mm	UL 94
Glow Wire Ignitability Temperature, 3.0 mm	825	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 1.5 mm	825	°C	IEC 60695-2-13
Glow Wire Flammability Index, 3.0 mm	960	°C	IEC 60695-2-12
Glow Wire Flammability Index, 1.5 mm	850	°C	IEC 60695-2-12
INJECTION MOLDING <sup>(4)</sup>			
Drying Temperature	120	°C	
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	48	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	295 – 315	°C	
Nozzle Temperature	290 - 310	°C	
Front - Zone 3 Temperature	295 – 315	°C	
Middle - Zone 2 Temperature	280 - 305	°C	
Rear - Zone 1 Temperature	270 – 295	°C	
Mold Temperature	70 – 95	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	40 – 70	rpm	
Shot to Cylinder Size	40 - 60	%	
Vent Depth	0.025 - 0.076	mm	



- (1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.
- (2) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.
- (3) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article. The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.
- (4) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

## **MORE INFORMATION**

For curve data and CAE cards, please visit and register at https://materialfinder.sabic-specialties.com

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