

LEXAN™ FR RESINS FL905

REGION ASIA

DESCRIPTION

LEXAN™ FL905 resin is a 5% glass fiber filled, 3.2 MFR foamable polycarbonate, MVR of 3. Non-chlorinated and non-brominated flame retardant, UL94 V0 rated. Injection moldable.

TYPICAL PROPERTY VALUES

Revision 20201125

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	58	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	47	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	5.7	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	30	%	ASTM D638
Tensile Modulus, 50 mm/min	2810	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	98	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2670	MPa	ASTM D790
Tensile Stress, yield, 50 mm/min	57	MPa	ISO 527
Tensile Stress, break, 50 mm/min	44	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	5.9	%	ISO 527
Tensile Strain, break, 50 mm/min	25	%	ISO 527
Tensile Modulus, 1 mm/min	2790	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	91	MPa	ISO 178
Flexural Modulus, 2 mm/min	2680	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	520	J/m	ASTM D256
Izod Impact, notched, -30°C	137	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	53	J	ASTM D3763
Instrumented Dart Impact Total Energy, -30°C	46	J	ASTM D3763
Izod Impact, unnotched 80*10*3 +23°C	171	kJ/m²	ISO 180/1U
Izod Impact, unnotched 80*10*3 -30°C	172	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*3 +23°C	27	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	12	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	31	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	16	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm	335	kJ/m²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm	313	kJ/m²	ISO 179/1eU
THERMAL			
Vicat Softening Temp, Rate A/50	148	°C	ASTM D1525
HDT, 0.45 MPa, 3.2 mm, unannealed	146	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	140	°C	ASTM D648
CTE, -40°C to 95°C, flow	5.4E-05	1/°C	ASTM E831
CTE, -40°C to 95°C, xflow	8E-05	1/°C	ASTM E831
CTE, 23°C to 80°C, flow	5.2E-05	1/°C	ISO 11359-2

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, 23°C to 80°C, xflow	7.6E-05	1 / °C	ISO 11359-2
Vicat Softening Temp, Rate B/50	147	°C	ISO 306
Vicat Softening Temp, Rate B/120	149	°C	ISO 306
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	145	°C	ISO 75 /Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	134	°C	ISO 75 /Af
PHYSICAL			
Specific Gravity	1.2	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm	0.6	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm	0.5	%	SABIC method
Melt Flow Rate, 300°C/ 1.2 kgf	3.2	g/ 10 min	ASTM D1238
Density	1.2	g/cm³	ISO 1183
Melt Volume Rate, MVR at 300°C/ 1.2 kg	3	cm³/ 10 min	ISO 1133
FLAME CHARACTERISTICS			
FOAM - Flame Class Minimum Density	0.9	g/cm³	-
UL Recognized, 94V-0 Flame Class Rating	3	mm	UL 94
UL Recognized, 94-5VA Flame Class Rating	6	mm	UL 94
INJECTION MOLDING			
Drying Temperature	120	°C	
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	48	Hrs	
Maximum Moisture Content	.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	.3 – .7	MPa	
Screw Speed	40 – 70	rpm	
Shot to Cylinder Size	40 – 60	%	
Vent Depth	.025 – .076	mm	

DISCLAIMER

Any sale by SABIC, its subsidiaries and affiliates (each a "seller"), is made exclusively under seller's standard conditions of sale (available upon request) unless agreed otherwise in writing and signed on behalf of the seller. While the information contained herein is given in good faith, SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY AND NONINFRINGEMENT OF INTELLECTUAL PROPERTY, NOR ASSUMES ANY LIABILITY, DIRECT OR INDIRECT, WITH RESPECT TO THE PERFORMANCE, SUITABILITY OR FITNESS FOR INTENDED USE OR PURPOSE OF THESE PRODUCTS IN ANY APPLICATION. Each customer must determine the suitability of seller materials for the customer's particular use through appropriate testing and analysis. No statement by seller concerning a possible use of any product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right.