

Geloy* Resin XTWFR15

Americas: COMMERCIAL

XTWFR15 is a Flame Retardant ASA grade, offering good indoor UV performance and heat aging properties. This product typically offers better UV performance than most FR ABS grades.

Property

TYPICAL PROPERTIES ⁽¹⁾			
MECHANICAL	Value	Unit	Standard
Tensile Stress, yld, Type I, 50 mm/min	46	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	34	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	2.7	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	11	%	ASTM D 638
Tensile Modulus, 5 mm/min	2220	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	64	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2070	MPa	ASTM D 790
Tensile Stress, yield, 50 mm/min	44	MPa	ISO 527
Tensile Stress, break, 50 mm/min	36	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	2.6	%	ISO 527
Tensile Strain, break, 50 mm/min	5	%	ISO 527
Tensile Modulus, 1 mm/min	2150	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	62	MPa	ISO 178
Flexural Modulus, 2 mm/min	2100	MPa	ISO 178
IMPACT	Value	Unit	Standard
Izod Impact, notched, 23°C	70	J/m	ASTM D 256
Izod Impact, notched, -30°C	20	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	7	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	7	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	3	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	8	kJ/m ²	ISO 179/1eA
THERMAL	Value	Unit	Standard
Vicat Softening Temp, Rate B/50	85	°C	ASTM D 1525
HDT, 1.82 MPa, 3.2mm, unannealed	76	°C	ASTM D 648
CTE, -40°C to 60°C, flow	9.8E-05	1/°C	ASTM E 831
CTE, -40°C to 60°C, xflow	9.8E-05	1/°C	ASTM E 831
CTE, 23°C to 60°C, flow	9.7E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	9.9E-05	1/°C	ISO 11359-2
Ball Pressure Test, approximate maximum	90	°C	IEC 60695-10-2
Vicat Softening Temp, Rate A/50	102	°C	ISO 306
Vicat Softening Temp, Rate B/50	89	°C	ISO 306
Vicat Softening Temp, Rate B/120	90	°C	ISO 306
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	86	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	77	°C	ISO 75/Af
PHYSICAL	Value	Unit	Standard
Specific Gravity	1.2	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.4 - 0.7	%	SABIC Method
Melt Flow Rate, 220°C/10.0 kgf	30	g/10 min	ASTM D 1238

Density	1.2	g/cm ³	ISO 1183
Water Absorption, (23°C/sat)	0.45	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.16	%	ISO 62
Melt Volume Rate, MVR at 220°C/10.0 kg	27	cm ³ /10 min	ISO 1133
ELECTRICAL	Value	Unit	Standard
Dielectric Strength, in oil, 0.8 mm	41	kV/mm	ASTM D 149
Dielectric Strength, in oil, 1.6 mm	24	kV/mm	ASTM D 149
Dielectric Strength, in oil, 3.2 mm	18	kV/mm	ASTM D 149
Relative Permittivity, 1 kHz	3.4	-	ASTM D 150
Relative Permittivity, 1 MHz	3.2	-	ASTM D 150
Dissipation Factor, 1 kHz	0.008	-	ASTM D 150
Dissipation Factor, 1 MHz	0.029	-	ASTM D 150
Volume Resistivity	>1.E+15	Ohm-cm	IEC 60093
Surface Resistivity, ROA	>1.E+16	Ohm	IEC 60093
Comparative Tracking Index, M	600	V	IEC 60112
FLAME CHARACTERISTICS	Value	Unit	Standard
UL Recognized, 94V-0 Flame Class Rating (3)	1.5	mm	UL 94
UL Recognized, 94-5VA Rating (3)	3	mm	UL 94
UL Recognized, 94-5VB Rating (3)	1.5	mm	UL 94
Glow Wire Flammability Index 960°C, passes at	2	mm	IEC 60695-2-12
Glow Wire Ignitability Temperature, 1.0 mm	750	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 2.0 mm	700	°C	IEC 60695-2-13
Oxygen Index (LOI)	25	%	ISO 4589

Source GMD, last updated:03/26/2007

Processing

Parameter	Value	Unit
Injection Molding		
Drying Temperature	75 - 85	°C
Drying Time	3 - 4	hrs
Drying Time (Cumulative)	6	hrs
Maximum Moisture Content	0.04	%
Melt Temperature	210 - 230	°C
Nozzle Temperature	200 - 220	°C
Front - Zone 3 Temperature	210 - 230	°C
Middle - Zone 2 Temperature	200 - 220	°C
Rear - Zone 1 Temperature	190 - 210	°C
Mold Temperature	60 - 70	°C
Back Pressure	0.3 - 1	MPa
Screw Speed	30 - 80	rpm
Shot to Cylinder Size	40 - 80	%
Vent Depth	0.038 - 0.076	mm

Source GMD, last updated:03/26/2007

THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

PLEASE CHECK WITH YOUR [\(LOCAL SALES OFFICE\)](#) FOR AVAILABILITY IN YOUR REGION

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. 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) Internal measurements according to UL standards.

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