

Ultem* Resin 2212EPR

Americas: COMMERCIAL

20% Milled glass filled, high flow Polyetherimide (Tg 217C) with internal mold release and enhanced electroplatability. ECO Conforming, UL94 V0 and 5VA lising.

Property

TYPICAL PROPERTIES ⁽¹⁾			
MECHANICAL	Value	Unit	Standard
Tensile Stress, yld, Type I, 5 mm/min	107	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	107	MPa	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	3	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	3	%	ASTM D 638
Tensile Modulus, 5 mm/min	5790	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	172	MPa	ASTM D 790
Flexural Stress, brk, 2.6 mm/min, 100 mm span	172	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	5510	MPa	ASTM D 790
Flexural Modulus, 2.6 mm/min, 100 mm span	5100	MPa	ASTM D 790
IMPACT	Value	Unit	Standard
Izod Impact, unnotched, 23°C	480	J/m	ASTM D 4812
Izod Impact, notched, 23°C	58	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	12	J	ASTM D 3763
THERMAL	Value	Unit	Standard
Vicat Softening Temp, Rate B/50	210	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	210	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	205	°C	ASTM D 648
HDT, 0.45 MPa, 6.4 mm, unannealed	212	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	207	°C	ASTM D 648
CTE, -40°C to 40°C, flow	3.6E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	7.2E-05	1/°C	ASTM E 831
Relative Temp Index, Elec	105	°C	UL 746B
Relative Temp Index, Mech w/impact	105	°C	UL 746B
Relative Temp Index, Mech w/o impact	105	°C	UL 746B
PHYSICAL	Value	Unit	Standard
Specific Gravity	1.4	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.5 - 0.7	%	SABIC Method
Mold Shrinkage, xflow, 3.2 mm	0.5 - 0.7	%	SABIC Method
Melt Flow Rate, 337°C/6.6 kgf	15	g/10 min	ASTM D 1238
ELECTRICAL	Value	Unit	Standard
Arc Resistance, Tungsten {PLC}	5	PLC Code	ASTM D 495
Hot Wire Ignition {PLC}	1	PLC Code	UL 746A
High Voltage Arc Track Rate {PLC}	4	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	4	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	4	PLC Code	UL 746A
FLAME CHARACTERISTICS	Value	Unit	Standard
UL Recognized, 94V-0 Flame Class Rating (3)	0.4	mm	UL 94

Source GMD, last updated:04/30/2002

Parameter	Value	Unit
Injection Molding		
Drying Temperature	150	°C
Drying Time	4 - 6	hrs
Drying Time (Cumulative)	24	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	350 - 400	°C
Nozzle Temperature	345 - 400	°C
Front - Zone 3 Temperature	345 - 400	°C
Middle - Zone 2 Temperature	340 - 400	°C
Rear - Zone 1 Temperature	330 - 400	°C
Mold Temperature	135 - 165	°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

Source GMD, last updated:04/30/2002

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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