

Eastalloy DA003-8999K

Polycarbonate + Polyester
Eastman Chemical Company

Message:

Eastalloy™ DA003-8999K is a clear copolyester/polycarbonate alloy. This product has good impact strength, chemical resistance, dimensional stability and low shrinkage rates. DA003-8999K can be molded into thick-walled parts with essentially no crystalline haze generation.

General Information	
Features	Good dimensional stability Impact resistance, good Good chemical resistance Low shrinkage
Uses	Thick wall fittings (parts)
Agency Ratings	ISO 10993-Part I
Appearance	Available colors Clear/transparent

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.20	g/cm ³	ASTM D792, ISO 1183
Molding Shrinkage - Flow (3.20 mm)	0.50 - 0.70	%	ASTM D955
Water Absorption			
24 hr	0.13	%	ASTM D570
23°C, 24 hr	0.13	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	117		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			
Yield	56.0	MPa	ASTM D638
Yield, 4.00mm	56.0	MPa	ISO 527-2
Fracture	60.0	MPa	ASTM D638
Fracture, 4.00mm	56.0	MPa	ISO 527-2
Tensile Elongation			
Yield	6.0	%	ASTM D638
Yield, 4.00mm	5.4	%	ISO 527-2
Fracture	150	%	ASTM D638
Fracture, 4.00mm	130	%	ISO 527-2
Flexural Modulus			
--	2140	MPa	ASTM D790
4.00 mm	2100	MPa	ISO 178

Flexural Stress			
4.00 mm	81.0	MPa	ISO 178
Yield	86.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
-40°C	75	J/m	ASTM D256
23°C	No Break		ASTM D256
-40°C	8.3	kJ/m ²	ISO 180
23°C	10	kJ/m ²	ISO 180
Unnotched Izod Impact			
-40°C	No Break		ASTM D4812
23°C	No Break		ASTM D4812
Instrumented Dart Impact			
-40°C, Energy at Peak Load	46.0	J	ASTM D3763
23°C, Energy at Peak Load	51.0	J	ASTM D3763
-40°C, peak energy to power	23.0	J	ISO 6603-2
23°C, energy to peak power	19.0	J	ISO 6603-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, not annealed	103	°C	ASTM D648, ISO 75-2/B
1.8 MPa, not annealed	90.0	°C	ASTM D648, ISO 75-2/A
Vicat Softening Temperature			
--	118	°C	ASTM D1525, ISO 306/A 2 ¹
--	110	°C	ISO 306/B
Specific Heat			
60°C	1380	J/kg/°C	DSC
240°C	2180	J/kg/°C	DSC
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+16	ohms	ASTM D257
Volume Resistivity	1.0E+15	ohms · cm	ASTM D257
Dielectric Strength ²	17	kV/mm	ASTM D149
Dielectric Constant			
1 kHz	2.30		ASTM D150
1 MHz	2.10		ASTM D150
Dissipation Factor			
1 kHz	2.0E-3		ASTM D150
1 MHz	8.0E-3		ASTM D150
Arc Resistance	143	sec	ASTM D495
Comparative Tracking Index	> 600	V	ASTM D3638
High Voltage Arc Tracking Rate (HVTR)	38.0	mm/min	UL 746
Flammability	Nominal Value	Unit	Test Method

Flame Rating			UL 94
1.6 mm	HB		UL 94
3.2 mm	V-2		UL 94
Optical	Nominal Value	Unit	Test Method
Transmittance			ASTM D1003
Conventional	77.0	%	ASTM D1003
Total	81.0	%	ASTM D1003
Haze	3.6	%	ASTM D1003
Injection	Nominal Value	Unit	
Drying Temperature	93	°C	
Drying Time	4.0 - 6.0	hr	
Processing (Melt) Temp	271 - 293	°C	
Mold Temperature	32 - 66	°C	
NOTE			
1.	压力1 (10N)		
2.	500V/sec, method A (short time)		

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

