



VALOX® 420SE0

North America: Commercial

30% GR, UL94V-0/5V rated. Numerous applications; edge trimmers, food mixer motor stator and commutator, cooling fan, connectors, bobbins, switches etc

Properties

MECHANICAL

Property	Typical Data	Unit	Method
Tensile Str, brk, Type I, 0.2 in/min	17000	psi	ASTM D 638
Flex Stress, brk, 0.05 in/min, 2" span	27000	psi	ASTM D 790
Flex Mod, 0.05 in/min, 2" span	1100000	psi	ASTM D 790
Hardness, Rockwell R	119	-	ASTM D 785

IMPACT

Property	Typical Data	Unit	Method
Izod Impact, unnotched, 73F	12.0	ft-lb/in	ASTM D 4812
Izod Impact, notched, 73F	1.3	ft-lb/in	ASTM D 256

THERMAL

Property	Typical Data	Unit	Method
HDT, 66 psi, 0.125", unannealed	415	deg F	ASTM D 648
HDT, 66 psi, 0.250", unannealed	420	deg F	ASTM D 648
HDT, 264 psi, 0.125", unannealed	375	deg F	ASTM D 648
HDT, 264 psi, 0.250", unannealed	400	deg F	ASTM D 648
CTE, flow, -40F to 100F	1.4 E-5	1/F	ASTM E 831
CTE, flow, 140F to 280F	1.4 E-5	1/F	ASTM E 831
Thermal Index, Elec Prop	130	deg C	UL 746B
Thermal Index, Mech Prop with impact	130	deg C	UL 746B
Thermal Index, Mech prop without impact	140	deg C	UL 746B

PHYSICAL

Property	Typical Data	Unit	Method
Specific Gravity, solid	1.58	-	ASTM D 792
Specific Volume	17.20	in ³ /lb	ASTM D 792
Water Absorption, 24 hours @ 73F	0.060	%	ASTM D 570
Mold Shrinkage, flow, 60-125 mil	3-5	in/in E-3	ASTM D 955
Mold Shrinkage, flow, 125-180 mil	5-8	in/in E-3	ASTM D 955
Mold Shrinkage, xflow, 60-125 mil	4-6	in/in E-3	ASTM D 955
Mold Shrinkage, xflow, 125-180 mil	6-9	in/in E-3	ASTM D 955

ELECTRICAL

Property	Typical Data	Unit	Method
Volume Resistivity	>3.4E16	ohm-cm	ASTM D 257
Dielectric Strength, in air, 125 mils	490	V/mil	ASTM D 149
Dielectric Strength, in oil, 62 mils	610	V/mil	ASTM D 149
Dielectric Constant, 100 Hz	3.80	-	ASTM D 150
Dielectric Constant, 1 MHz	3.70	-	ASTM D 150
Dissipation Factor, 100 Hz	0.0020	-	ASTM D 150
Dissipation Factor, 1 MHz	0.0200	-	ASTM D 150
Arc Resistance, Tungsten (+/- 0.125")	6	PLC Code	ASTM D 495
Hot Wire Ignition (+/- 0.125")	2	PLC Code	UL 746A
High Voltage Arc Track Rate (+/- 0.125")	4	PLC Code	UL 746A
High Amp Arc Ign, surface (+/- 0.125")	0	PLC Code	UL 746A
Comparative Track Index (+/- 0.125")	3	PLC Code	UL 746A

FLAME CHARACTERISTICS

Property	Typical Data	Unit	Method
UL File Number, USA	E121562	-	-
V-0 Rated (tested thickness)	0.029	inch	UL 94
5VA Rating (tested thickness)	0.079	inch	UL 94
CSA (See File for complete listing)	LS88480	File No.	CSA LISTED
Oxygen Index (LOI)	32.0	%	ASTM D 2863
UV-light, water exposure/immersion	F2	-	UL746C