

ASTALON™ K2000G2

ASTALON™ K2000G2 is a 10% Glass Filled flame retardant Polycarbonate that is designed to meet the stringent Underwriter's Laboratory UL94 V-0 test whilst offering improved rigidity, heat resistance, indoor colour stability and balance of impact toughness, product rigidity and mouldability. Typical applications include assemblies for electrical appliance and equipment. Other applications include metal substitution such as industrial electrical switch housings, electrical power tool casings and mounting chassis for electronics devices such as computer printers, laptop computers and VTR units.

	CONDITIONS	UNITS	TYPICAL VALUES	TESTING METHODS
1. Mechanical Properties				
Notched Izod Impact Strength	12.7 mm x 3.2 mm	J/m	80	ASTM D256
Falling Dart Impact Strength	3.2 mm plaque	J	25	ASTM D3029
Tensile Strength	12.7 mm x 3.2 mm @ 5.0 mm/min	MPa	73	ASTM D638
Elongation to Fail	12.7 mm x 3.2 mm @ 5.0 mm/min	%	7	ASTM D638
Flexural Strength	12.7 mm x 6.4 mm @ 1.3 mm/min	MPa	114	ASTM D790
Flexural Modulus	12.7 mm x 6.4 mm @ 1.3 mm/min	MPa	3350	ASTM D790
2. Thermal Properties				
Heat Deflection Temperature	12.7 mm x 3.2 mm @ 0.455 Mpa	°C	144	ASTM D648
	12.7 mm x 3.2 mm @ 1.82 Mpa	°C	136	ASTM D648
Vicat Softening Temperature	1Kg	°C	158	ASTM D1525
Coefficient of Linear Thermal Expansion		cm/cm/°C	3.50E-05	ASTM D696
3. Flammability Properties				
UL Flammability	3.0 mm	Rating	V-0	UL94
Glow Wire Flammability	1.6mm	°C	960	AS/NZS 60695
4. Physical Properties				
Melt Flow Rate	300°C, 1.20 kg	g/10 min	15	ASTM D1238
Specific Gravity		-	1.28	ASTM D792
Rockwell Hardness	R Scale	R	121	ASTM D785
Water Absorption	24 hours	%	0.13	ASTM D570
Total Light Transmittance	3.0 mm	%	-	ASTM D1003
Reinforcement Level	By mass	%	-	n/a
Mould Shrinkage	3.0 x Ø100 mm disc	%	0.40	ASTM D955

All test results were obtained using uncoloured material.

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Material Safety Data Sheet (MSDS) Code: 17313

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TYPICAL PROCESSING CONDITIONS

ASTALON™ K2000G2

The following typical guidelines are offered as initial processing conditions for ASTALON™ K2000G2

In practice, processing parameters may need to be varied to give commercially acceptable performance in conjunction with optimum physical properties. For specific technical advice on part design or processing conditions, contact the Marplex Technical Service Department.

Temperature of pellet bed in dehumidifying drier		120 - 125°C
Minimum drying time at desired pellet bed temp		4 - 6 hours
Mould temperature		60 - 110°C
Nozzle temperature		Do not exceed stock temperature
Melt temperature		265 - 280°C
Cylinder temperatures	Rear	245 - 260°C
	Middle	255 - 270°C
	Front	265 - 280°C
Fill speed		Medium
Screw speed		30 - 50 rpm
Screw back pressure		0.1 - 0.5 MPa
Injection pressure		60 - 140 MPa
Clamp pressure		4 - 8 kN/cm ²

Comments:

01. Cleanliness of the dryer, machine hopper and machine screw/barrel/nozzle assembly are essential for processing Astalon™ Polycarbonate and producing contamination free profile, rodstock and sheeting.
02. Astalon™ Polycarbonate is not compatible with other polymers.
03. It is suggested that the pre-drying, die head, roller and material temperatures are manually confirmed using a hand held temperature measuring device.

Conversions:

1 MPa = 145psi
1 MPa = 10.2kg/cm²
1 MPa = 10 bar
°C = 5(°F-32)/9
1 kN/cm² = 0.85 ton/in²