

PROTEQ™ C4K2

PROTEQ™ C4K2 is a medium flow, flame retardant grade of Polypropylene copolymer which meets the stringent UL94 V-2 and AS/NZS 60695.2.12 (IEC 60695-2-12) 960°C Glow Wire flammability test. Typical applications: Electrical appliances where a high level of flame retardancy is required.

	CONDITIONS	UNITS	TYPICAL VALUES	TESTING METHODS
1. Mechanical Properties				
Unnotched Izod Impact Strength	12.7 mm x 3.2 mm	J/m	>850	ASTM D256
Notched Izod Impact Strength	12.7 mm x 3.2 mm	J/m	180	ASTM D256
Falling Dart Impact Strength	3.2 mm plaque	J	28	ASTM D3029
Tensile Strength	12.7 mm x 3.2 mm @ 5.0 mm/min	MPa	25	ASTM D638
Flexural Strength	12.7 mm x 3.2 mm @ 1.3 mm/min	MPa	30	ASTM D790
Elongation to Fail	12.7 mm x 3.2 mm @ 5.0 mm/min	%	>180	ASTM D638
Flexural Modulus	12.7 mm x 3.2 mm @ 1.3 mm/min	MPa	1100	ASTM D790
2. Thermal Properties				
Heat Deflection Temperature	12.7 mm x 3.2 mm @ 0.455 MPa	°C	100	ASTM D648
	12.7 mm x 3.2 mm @ 1.82 MPa	°C	-	ASTM D648
VICAT Softening Temperature	1 kg	°C	150	ASTM D1525
Coefficient of Linear Thermal Expansion		cm/cm/°C		ASTM D696
3. Flammability Properties				
UL Flammability	1.6 mm	Rating	V-2	UL 94
Glow Wire Temperature	1.6 mm	°C	960	AS/NZS 60695
4. Physical Properties				
Melt Flow Rate	230°C, 2.16 kg	g/10 min	15	ASTM D1238
Shore D Hardness	instantaneous		-	ISO 868
	15 seconds			ISO 868
Specific Gravity		-	0.93	ASTM D792
Mould Shrinkage	3.0 mm plaque	%	-	ASTM D955

All test results were obtained using uncoloured material.

Issued: March 2011

Material Safety Data Sheet (MSDS) Code: 17324

Marplex Australia Pty. Ltd. makes no representation with regard to the completeness or accuracy of the information and any recommendations contained in this data sheet, and accepts no responsibility for loss or damage whatsoever resulting from the use of, or reliance upon, the information and any recommendation herein. Marplex Australia Pty. Ltd. products are sold on standard terms and conditions, a copy of which is available on request.

TYPICAL PROCESSING CONDITIONS

PROTEQ™ C4K2

The following typical guidelines are offered as initial processing conditions for PROTEQ™ C4K2

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		85 - 90°C
Minimum drying time at desired pellet bed temp		2-4 hours
Mould temperature		20 - 60°C
Nozzle temperature		Do not exceed stock temperature
Melt temperature		200 - 220°C
Cylinder temperatures	Rear	190 - 200°C
	Middle	200 - 210°C
	Front	200 - 220°C
Fill speed		Medium
Screw speed		40 - 60 rpm
Screw back pressure		0.1 - 0.5 MPa
Injection pressure		60 - 140 MPa
Clamp pressure		3 - 6 kN/cm ²

Comments:

01. Cleanliness of the dryer, machine hopper and machine screw/barrel/nozzle assembly are essential for processing Astaprop PP and producing contamination free moulded components.
02. PROTEQ™ is not compatible with other polymers.
03. It is suggested that the pre-drying, moulding die 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