

ProteQ™

POLYPROPYLENE ENGINEERING THERMOPLASTIC

ProteQ™ IS A REGISTERED TRADEMARK OF MARPLEX AUSTRALIA PTY. LTD.

PROTEQ™ SPM206

PROTEQ™ Compound SPM206 is a 20% talc filled polypropylene compound that has been specifically formulated to pass the demanding Australian Standards requirements for water filter housings. The material is food contact approved.

	<u>CONDITIONS</u>	<u>UNITS</u>	<u>TYPICAL VALUES</u>	<u>TESTING METHODS</u>
<u>1. Mechanical Properties</u>				
Notched Izod Impact Strength	12.7 mm x 3.2 mm	J/m	49	ASTM D256
Unnotched Izod Impact Strength	12.7 mm x 3.2 mm	J/m	-	ASTM D256
Tensile Strength	12.7 mm x 3.2 mm @ 50 mm/min	MPa	35	ASTM D638
Elongation to Fail	12.7 mm x 3.2 mm @ 50 mm/min	%	-	ASTM D638
Flexural Modulus	12.7 mm x 3.2 mm @ 10 mm/min	MPa	2800	ASTM D790
<u>2. Thermal Properties</u>				
Heat Deflection Temperature	12.7 mm x 3.2 mm @ 0.455 Mpa	°C	130	ASTM D648
	12.7 mm x 3.2 mm @ 1.82 MPa	°C	70	ASTM D648
Coefficient of Linear Thermal Expansion		cm/cm/°C	8.00E-05	ASTM D696
<u>3. Flammability Properties</u>				
UL Flammability	1.6 mm	Rating	HB	UL 94
<u>4. Physical Properties</u>				
Melt Flow Rate	230°C, 2.16 kg	g/10 min	3.5	ASTM D1238
Rockwell Hardness			107	ISO 868
Specific Gravity		-	1.04	ASTM D792
Mould Shrinkage		%	1.20	ASTM D955

All test results were obtained using uncoloured material.

Issued: May 2016

Material Safety Data Sheet (MSDS): Code 17957

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TYPICAL PROCESSING CONDITIONS

PROTEQ™ SPM206

The following typical guidelines are offered as initial processing conditions for **PROTEQ™ SPM206**. 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		70 - 80°C
Minimum drying time at desired pellet bed temp		2 - 4 hours
Mould temperature		30 - 70°C
Nozzle temperature		Do not exceed stock temperature
Melt temperature		220 - 270°C
Cylinder temperatures	Rear	190 - 250°C
	Middle	210 - 260°C
	Front	220 - 280°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

Comment(s):

- 1 Cleanliness of the dryer, machine hopper and machine screw/barrel/nozzle assembly are essential for processing PROTEQ™ and producing contamination free moulded components.
- 2 PROTEQ™ is not compatible with other polymers.
- 3 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 = 145 psi
- = 10.2 kg/cm²
- = 10 bar
- °C = 5(F-32)/9
- 1 kN/cm² = 0.65 ton/in²