MARPLEX

IXOM OPERATIONS PTY LTD
ACN 600 546 512

IXOM

ProteQ™ POLYPROPYLENE ENGINEERING THERMOPLASTIC

PROTEQ™ H10T4

PROTEQ™ H10T4 is a medium flow 20% Talc filled grade of polypropylene homopolymer.
Note: The letter U in the product name indicates that UV stabiliser has been added (PROTEQ™ H16UT4)

	CONDITIONS	UNITS	TYPICAL VALUES	TESTING METHODS
1. Mechanical Properties				
Unnotched Izod Impact Strength	12.7 mm x 3.2 mm	J/m	395	ASTM D256
Notched Izod Impact Strength	12.7 mm x 3.2 mm	J/m	40	ASTM D256
Tensile Strength	12.7 mm x 3.2 mm @ 5.0 mm/min	MPa	31	ASTM D638
Elongation to Fail	12.7 mm x 3.2 mm @ 5.0 mm/min	%	30	ASTM D638
Flexural Strength	12.7 mm x 3.2 mm @ 1.3 mm/min	MPa	48	ASTM D790
Flexural Modulus	12.7 mm x 3.2 mm @ 1.3 mm/min	MPa	2100	ASTM D790
2. Thermal Properties				
Heat Deflection Temperature	12.7 mm x 3.2 mm @ 0.455 MPa	℃	135	ASTM D648
	12.7 mm x 3.2 mm @ 1.82 MPa	℃	70	ASTM D648
Coefficient of Linear Thermal Expansion		cm/cm/℃	8.00E-05	ASTM D696
3. Flammability Properties				
UL Flammability	1.6 mm	Rating	HB	UL 94
Glow Wire Temperature	1.6 mm	℃	550	AS/NZS 60695
4. Physical Properties				
Melt Flow Rate	230℃, 2.16 kg	g/10 min	10	ASTM D1238
Shore D Hardness	instantaneous		78	ISO 868
	15 seconds		73	ISO 868
Specific Gravity		-	1.04	ASTM D792
Mould Shrinkage	3.0 mm plaque	%	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™ H10T4

The following typical guidelines are offered as initial processing conditions for PROTEQ™ H10T4
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℃
Minimum drying time at desired pellet bed temp		2-4 hours
Mould temperature		50 - 80℃
Nozzle temperature		Do not exceed stock temperature
Melt temperature		220 - 270℃
Cylinder temperatures	Rear	195 - 215℃
	Middle	205 - 225℃
	Front	215 - 235℃
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/cm²

Comment(s):

1 Cleanliness of the dryer, machine hopper and machine screw/barrel/nozzle assembly are essential for processing ASTALAC™ ABS 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
℃ = 5(F-32)/9
1 kN/cm² = 0.65 ton/in²