ASTALOY™ PC/ABS ALLOY
ENGINEERING THERMOPLASTIC
ASTALOY™ IS A REGISTRED TRADEMARK OF MARPLEX AUSTRALIA PTY. LTD.

ASTALOY™ PC/ABS EHA

ASTALOY™ PC/ABS EHA is an electroplatable alloy of Polycarbonate & ABS which is designed for injection moulding applications requiring a balance of easy electoplatability, impact toughness, product rigidity, heat resistance and mouldability. Typical applications in the automotive field include electroplated grilles, garnishes and doorhandles.
Note: The letters "U" or "W" indicate UV stabilisation has been added [ie: ASTALOY™ PC/ABS EHAW].

	CONDITIONS	UNITS	TYPICAL VALUES	TESTING METHODS
1. Mechanical Properties				
Notched Izod Impact Strength	12.7 mm x 3.2 mm	J/m	500	ASTM D256
Falling Dart Impact Strength	3.2 mm plaque	J	45	ASTM D3029
Tensile Strength	12.7 mm x 3.2 mm @ 5.0 mm/min	MPa	51	ASTM D638
Elongation to Fail	12.7 mm x 3.2 mm @ 5.0 mm/min	%	100	ASTM D638
Flexural Strength	12.7 mm x 3.2 mm @ 1.3 mm/min	MPa	88	ASTM D790
Flexural Modulus	12.7 mm x 3.2 mm @ 1.3 mm/min	MPa	2450	ASTM D790
2. Thermal Properties				
Heat Deflection Temperature	12.7 mm x 12.7 mm @ 1.82 Mpa	°C	106	ASTM D648
	12.7 mm x 6.4 mm @ 1.82 Mpa	°C	101	ASTM D648
	12.7 mm x 3.2 mm @ 1.82 MPa	°C	96	ASTM D648
VICAT Softening Temperature	1 kg	°C	125	ASTM D1525
Coefficient of Linear Thermal Expansion		cm/cm/°C	7.00E-05	ASTM D696
3. Flammability Properties				
UL Flammability	1.6 mm	Rating	HB	UL 94
Glow Wire Temperature	1.6 mm	°C	550	AS/NZS 60695
4. Physical Properties				
Melt Flow Rate	250°C, 3.8 kg	g/10 min	7.0	ASTM D1238
	260°C, 5.0 kg	g/10 min	17	ASTM D1238
Specific Gravity		-	1.09	ASTM D792
Rockwell Hardness	R Scale	R	113	ASTM D785
Water Absorption	24 hours	%	0.15	ASTM D570
Mould Shrinkage	3.0 mm plaque	%	0.60	ASTM D955

All test results were obtained using uncoloured material.   *Issued: May 2016*

TYPICAL PROCESSING CONDITIONS

ASTALOY™ PC/ABS EHA

The following typical guidelines are offered as initial processing conditions for   ASTALOY™ PC/ABS EHA
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			95 - 100°C
Minimum drying time at desired pellet bed temp			3 - 6 hours
Mould temperature			60 - 100°C
Nozzle temperature			Do not exceed stock temperature
Melt temperature			240 - 290°C
Cylinder temperatures		Rear	225 - 265°C
		Middle	235 - 275°C
		Front	245 - 285°C
Fill speed			Slow
Screw speed			40 - 60 rpm
Screw back pressure			0.1 - 0.5 MPa
Injection pressure			Minimum
Clamp pressure			4 - 8 kN/cm²

Comment(s):

1 Cleanliness of the dryer, machine hopper and machine screw/barrel/nozzle assembly are essential for processing ASTALOY™ PC/ABS alloy and producing contamination free moulded components.

2 ASTALOY™ PC/ABS alloys are not compatible during moulding with other polymers - this also includes ASTALAC™ ABS.

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