MARPLEX

IXOM

ASTALAC™ABS ENGINEERING THERMOPLASTIC

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ASTALAC™ ABS M22

ASTALAC™ ABS M22 is a high impact strength grade of ABS and is designed for injection moulding applications requiring excellent toughness and abuse resistance whilst maintaining a balance of product rigidity, heat resistance and mouldability. Typical applications include telecommunications and appliance housings.
Note: The letters "UV" or "W" indicate UV stabilisation has been added [ie: ASTALAC™ ABS M22UV].

	CONDITIONS	UNITS	TYPICAL VALUES	TESTING METHODS
1. Mechanical Properties				
Notched Izod Impact Strength	12.7 mm x 3.2 mm	J/m	350	ASTM D256
Falling Dart Impact Strength	3.2 mm plaque	J	30	ASTM D3029
Tensile Strength	12.7 mm x 3.2 mm @ 5.0 mm/min	MPa	41	ASTM D638
Elongation to Fail	12.7 mm x 3.2 mm @ 5.0 mm/min	%	40	ASTM D638
Flexural Strength	12.7 mm x 3.2 mm @ 1.3 mm/min	MPa	68	ASTM D790
Flexural Modulus	12.7 mm x 3.2 mm @ 1.3 mm/min	MPa	2200	ASTM D790
2. Thermal Properties				
Heat Deflection Temperature	12.7 mm x 12.7 mm @ 1.82 Mpa	°C	87	ASTM D648
	12.7 mm x 6.4 mm @ 1.82 Mpa	°C	81	ASTM D648
	12.7 mm x 3.2 mm @ 1.82 MPa	°C	76	ASTM D648
VICAT Softening Temperature	1 kg	°C	104	ASTM D1525
Coefficient of Linear Thermal Expansion		cm/cm/°C	9.00E-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	230°C, 3.8 kg	g/10 min	5.0	ASTM D1238
	220°C, 10 kg	g/10 min	19	ASTM D1238
Specific Gravity		-	1.04	ASTM D792
Rockwell Hardness	R Scale	R	102	ASTM D785
Water Absorption	24 hours	%	0.25	ASTM D570
Mould Shrinkage	3.0 mm plaque	%	0.60	ASTM D955

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

Material Safety Data Sheet (MSDS): Code 17305

TYPICAL PROCESSING CONDITIONS

ASTALAC™ ABS M22

The following typical guidelines are offered as initial processing conditions for **ASTALAC™ ABS M22**
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		3 - 6 hours
Mould temperature		40 - 70°C
Nozzle temperature		Do not exceed melt temperature
Melt temperature		220 - 250°C
Cylinder temperatures	Rear	205 - 225°C
	Middle	215 - 235°C
	Front	225 - 245°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/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   ASTALAC™ ABS is not compatible during moulding with other polymers - this also includes ASTALOY™ PC/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
$$= 10.2 \text{ kg/cm}^2$$
$$= 10 \text{ bar}$$
$$°C = 5(F-32)/9$$
1 kN/cm² = 0.65 ton/in²