# ASTATAL<sup>™</sup> F30

### Acetal (POM) Homopolymer

Marplex Australia Pty. Ltd.

#### Message:

ASTATAL<sup>™</sup> F3001 / F3002 / F3003 are the low viscosity (high melt flow) grades in the ASTATAL<sup>™</sup> range and are suited to general purpose injection moulding applications. Offering an exceptional combination of processability, rigidity, frictional wear, heat and chemical resistance, typical applications include camera components, fountain pen nibs and electronic calculator buttons. Note: [No mould release = 01] / [Standard mould release = 02] / [Low mould deposit = 03].

Note: [No moduli release = 01]/[ Standard moduli release = 02]/[ Low moduli deposit = 05].

Note: The letters "UV" or "W" indicate UV stabilisation has been added [ ie: ASTATAL™ F3003W ].

General Information				
Features	General Purpose			
	Good Chemical Resistance			
	Good Processability			
	Good Stiffness			
	Good Wear Resistance			
	High Flow			
	Low Viscosity			
	Medium Heat Resistance			
Uses	Camera Applications			
	Electrical/Electronic Applications			
	General Purpose			
	Writing Instruments			
Processing Method	Injection Molding			
3				
Physical	Nominal Value	Unit	Test Method	
Physical Specific Gravity	Nominal Value	Unit g/cm <sup>3</sup>	Test Method ASTM D792	
Physical Specific Gravity Melt Mass-Flow Rate (MFR) (190°C/2.16	Nominal Value 1.41	Unit g/cm³	Test Method ASTM D792	
Physical Specific Gravity Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	Nominal Value 1.41 27	Unit g/cm <sup>3</sup> g/10 min	Test Method ASTM D792 ASTM D1238	
Physical         Specific Gravity         Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)         Molding Shrinkage - Flow (3.00 mm)	Nominal Value           1.41           27           2.0	Unit g/cm <sup>3</sup> g/10 min %	Test Method         ASTM D792         ASTM D1238         ASTM D955	
Physical         Specific Gravity         Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)         Molding Shrinkage - Flow (3.00 mm)         Water Absorption (24 hr)	Nominal Value           1.41           27           2.0           0.22	Unit g/cm <sup>3</sup> g/10 min % %	Test MethodASTM D792ASTM D1238ASTM D955ASTM D570	
Physical         Specific Gravity         Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)         Molding Shrinkage - Flow (3.00 mm)         Water Absorption (24 hr)         Hardness	Nominal Value1.41272.00.22Nominal Value	Unit g/cm <sup>3</sup> g/10 min % % Vnit	Test Method ASTM D792 ASTM D1238 ASTM D955 ASTM D570 Test Method	
Physical         Specific Gravity         Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)         Molding Shrinkage - Flow (3.00 mm)         Water Absorption (24 hr)         Hardness         Rockwell Hardness (M-Scale)	Nominal Value           1.41           27           2.0           0.22           Nominal Value           80	Unit g/cm <sup>3</sup> g/10 min % % Unit	Test MethodASTM D792ASTM D1238ASTM D955ASTM D570Test MethodASTM D785	
Physical         Specific Gravity         Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)         Molding Shrinkage - Flow (3.00 mm)         Water Absorption (24 hr)         Hardness         Rockwell Hardness (M-Scale)         Mechanical	Nominal Value1.41272.00.22Nominal Value80Nominal Value	Unit g/cm <sup>3</sup> g/10 min % % Unit Unit	Test MethodASTM D792ASTM D1238ASTM D955ASTM D570Test MethodASTM D785Test Method	
Physical         Specific Gravity         Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)         Molding Shrinkage - Flow (3.00 mm)         Water Absorption (24 hr)         Hardness         Rockwell Hardness (M-Scale)         Mechanical         Tensile Strength <sup>1</sup> (3.20 mm)	Nominal Value1.41272.00.22Nominal Value80Nominal Value62.3	Unit g/cm <sup>3</sup> g/10 min % % 0 % Unit Unit Unit MPa	Test MethodASTM D792ASTM D1238ASTM D955ASTM D570Test MethodASTM D785Test MethodASTM D638	
Physical         Specific Gravity         Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)         Molding Shrinkage - Flow (3.00 mm)         Water Absorption (24 hr)         Hardness         Rockwell Hardness (M-Scale)         Mechanical         Tensile Strength <sup>1</sup> (3.20 mm)         Tensile Elongation <sup>2</sup> (Break, 3.20 mm)	Nominal Value           1.41           27           2.0           0.22           Nominal Value           80           Anno Value           62.3           50	Unit g/cm <sup>3</sup> g/10 min % % Unit Unit Unit MPa %	Test MethodASTM D792ASTM D1238ASTM D1238ASTM D955ASTM D570Test MethodASTM D785Test MethodASTM D638ASTM D638	
Physical         Specific Gravity         Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)         Molding Shrinkage - Flow (3.00 mm)         Water Absorption (24 hr)         Hardness         Rockwell Hardness (M-Scale)         Mechanical         Tensile Strength <sup>1</sup> (3.20 mm)         Tensile Elongation <sup>2</sup> (Break, 3.20 mm)         Flexural Modulus <sup>3</sup> (6.40 mm)	Nominal Value           1.41           27           2.0           0.22           Nominal Value           80           Nominal Value           62.3           50           2620	Unit g/cm <sup>3</sup> g/10 min % % Unit Unit Unit MPa %	Test MethodASTM D792ASTM D1238ASTM D1238ASTM D955ASTM D570Test MethodASTM D785Test MethodASTM D638ASTM D638ASTM D790	
Physical         Specific Gravity         Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)         Molding Shrinkage - Flow (3.00 mm)         Water Absorption (24 hr)         Hardness         Rockwell Hardness (M-Scale)         Mechanical         Tensile Strength <sup>1</sup> (3.20 mm)         Flexural Modulus <sup>3</sup> (6.40 mm)         Flexural Strength <sup>4</sup> (6.40 mm)	Nominal Value         1.41         27         2.0         0.22         Nominal Value         80         Nominal Value         62.3         50         2620         91.2	Unit g/cm <sup>3</sup> g/10 min % % Unit Unit Unit MPa % MPa MPa	Test MethodASTM D792ASTM D1238ASTM D1238ASTM D955ASTM D570Test MethodASTM D785Test MethodASTM D638ASTM D638ASTM D790ASTM D790	
Physical         Specific Gravity         Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)         Molding Shrinkage - Flow (3.00 mm)         Water Absorption (24 hr)         Hardness         Rockwell Hardness (M-Scale)         Mechanical         Tensile Strength <sup>1</sup> (3.20 mm)         Flexural Modulus <sup>3</sup> (6.40 mm)         Flexural Strength <sup>4</sup> (6.40 mm)         Shear Strength (2.00 mm)	Nominal Value         1.41         27         2.0         0.22         Nominal Value         80         S0         62.3         50         2620         91.2         54.9	Unitg/cm³g/10 min%%UnitUnitMPa%MPaMPaMPaMPaMPaMPaMPaMPa	Test MethodASTM D792ASTM D1238ASTM D1238ASTM D955ASTM D955ASTM D570Test MethodASTM D785Test MethodASTM D638ASTM D638ASTM D790ASTM D790ASTM D732	
Physical         Specific Gravity         Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)         Molding Shrinkage - Flow (3.00 mm)         Water Absorption (24 hr)         Hardness         Rockwell Hardness (M-Scale)         Mechanical         Tensile Strength <sup>1</sup> (3.20 mm)         Flexural Modulus <sup>3</sup> (6.40 mm)         Flexural Strength <sup>4</sup> (6.40 mm)         Shear Strength (2.00 mm)	Nominal Value         1.41         27         27         2.0         0.22         Nominal Value         80         S0         62.3         50         2620         91.2         54.9         Nominal Value	Unitg/cm³g/10 min%%UnitUnitMPa%MPaMPaMPaMPaUnitUnitMPaUnit	Test MethodASTM D792ASTM D1238ASTM D1238ASTM D955ASTM D955ASTM D570Test MethodASTM D785Test MethodASTM D638ASTM D638ASTM D790ASTM D790ASTM D732Test Method	
Physical         Specific Gravity         Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)         Molding Shrinkage - Flow (3.00 mm)         Water Absorption (24 hr)         Hardness         Rockwell Hardness (M-Scale)         Mechanical         Tensile Strength <sup>1</sup> (3.20 mm)         Flexural Modulus <sup>3</sup> (6.40 mm)         Flexural Strength <sup>4</sup> (6.40 mm)         Shear Strength (2.00 mm)         Impact         Notched Izod Impact (3.20 mm)	Nominal Value         1.41         27         2.0         0.22         Nominal Value         80         Nominal Value         62.3         50         2620         91.2         54.9	Unit g/cm <sup>3</sup> g/10 min g/10 min % Unit Unit Unit Unit MPa % MPa MPa MPa Unit Unit J/m	Test MethodASTM D792ASTM D1238ASTM D1238ASTM D955ASTM D955ASTM D570Test MethodASTM D785Test MethodASTM D638ASTM D638ASTM D790ASTM D790ASTM D732Test MethodASTM D256	

Tensile Impact Strength (1.60 mm)	98.0	kJ/m²	ASTM D1822
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed, 6.40 mm	158	°C	
1.8 MPa, Unannealed, 6.40 mm	110	°C	
Melting Temperature	165	°C	DSC
CLTE - Flow	1.3E-4	cm/cm/°C	ASTM D696
Flammability	Nominal Value		Test Method
Flame Rating (0.800 mm)	НВ		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	80.0 to 90.0	°C	
Drying Time	2.0 to 3.0	hr	
Rear Temperature	165 to 185	°C	
Middle Temperature	175 to 195	°C	
Front Temperature	185 to 205	°C	
Processing (Melt) Temp	190 to 210	°C	
Mold Temperature	50.0 to 90.0	°C	
Injection Pressure	60.0 to 130	MPa	
Injection Rate	Moderate-Fast		
Back Pressure	0.500 to 2.50	MPa	
Screw Speed	40 to 60	rpm	
Clamp Tonnage	3.0 to 5.0	kN/cm²	
NOTE			
1.	20 mm/min		
2.	20 mm/min		
3.	2.8 mm/min		
4.	2.8 mm/min		

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