

AUSTLON® (PA6G)

SPECIFICATIONS SHEET

DETAILS

AustLon® (PA6 G) is a high grade engineering plastic manufactured exclusively by McNeall Plastics Pty Ltd, a wholly owned Australian company.

An engineering plastic used in a vast number of industries for its superior mechanical, physical, chemical and electrical properties, it is replacing aluminum, copper, bronze, steel, brass and other metals in many applications with superior advantages.

AustLon® (PA6 G) is a monomer cast nylon produced by a unique process known as activated anionic adiabatic polymerisation. This method of nylon production results in a highly crystalline engineering plastic, which means a tougher, wear resistant engineering plastic. AustLon® (PA6 G) is the preferred material where issues stemming from abrasive wear, impact strength, bearing strength, noise, weight and corrosion have been difficult to resolve.

AustLon® (PA6 G) provides superior performance – with and without lubrication – in a range of applications, in particular as a bearing material. AustLon® (PA6 G) is lightweight, offers extremely good wear and abrasion resistance, high mechanical strength and high modulus of elasticity when compared to other industrial plastics.

KEY BENEFITS

- Proven to outlast brass, bronze & steel options
- Custom Formula + Custom Casting Based on Your Needs
- Unsurpassed mechanical properties
- Excellent impact resistance
- Resistance to brittleness and UV deterioration
- Self-lubricating
- Resistance to chemicals and corrosion
- Low friction due to high lubricity
- Exceptional machinability
- Light weight
- Flexibility of design
- Suitable for the food industry

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MECHANICAL PROPERTIES

MECHANICAL PROPERTIES	S.I. UNITS	C100 NATURAL	C100 BLACK	C100 OIL FILLED	C90 BLACK	C90 NATURAL	C80 NATURAL
Density	g/cm ³	1.15	1.16	1.14	1.14	1.14	1.12
Tensile Strength	N/mm ²	78	80	65	67	65	60
Yield Strength	N/mm ²	78	80	65	67	65	50
Modulus of Elasticity – Bend	N/mm ²	2900	2950	2400	2100	2000	1800
Modulus of Elasticity – Tensile	N/mm ²	3350	3250	2600	2350	2300	2000
Impact Strength (Charpy) – 23°C	kJ/mm ²	54	50	63	NO BREAK	NO BREAK	NO BREAK
Notched Impact Strength – 23°C	kJ/mm ²	9	7	11	12-20	10-20	15-20
Ball Indentation Hardness – 30"	N/mm ²	124	128	120	110	110	90
Creep Rate Stress for 1% elongation	N/mm ²	20	17	15			
Creep rate stress for 2% elongation	N/mm ²	24	22	20			
Shore D. Hardness		79	81	81	80	80	76

Whilst all care has been taken to provide accurate & up to date information, we cannot provide legal certification of properties. We recommend that this information be used as a design guide only. Actual testing should be undertaken to confirm data if certification is required.

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THERMAL PROPERTIES

THERMAL PROPERTIES	S.I. UNITS	C100 NATURAL	C100 BLACK	C100 OIL FILLED	C90 BLACK	C90 NATURAL	C80 NATURAL
Melting Point	°C	216	216	216	208-210	208-210	202-206
Thermal Conductivity	W/M°C	0.25	0.25	0.25	0.25	0.25	0.25
Specific Heat	kJ/kg°C	1.67	1.67	1.67	1.67	1.67	1.67
Co-efficient of Linear Expansion	106/°	70-80	70-80	75-95	75-95	75-95	80-115
Safe Temperature – Short Period	°C	180	180	180	160	160	150
Safe temperature – Continuous	°C	-40-110	-40-110	-40-110	-40-110	-40-110	-40-110
Heat Distortion Temperature (Martens)	°C	80	80	80	80	80	65

ELECTRICAL PROPERTIES

ELECTRICAL PROPERTIES	S.I. UNITS	C100 NATURAL	C100 BLACK	C100 OIL FILLED	C90 BLACK	C90 NATURAL	C80 NATURAL
Dielectric Constant – 50Hz		3.7	3.7	3.7	3.7	3.7	3.7
Dielectrical Strength – Dry	kV/mm	35	35	35	25	25	25
Dielectrical Strength – Immersed H2O	kV/mm	15	15	15	15	15	15

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