

DUROMER

Duralon N6 30G HS BK-106

hydrocarbons.

DESCRIPTION

Duralon N6 30G HS BK106 is a 30% glass reinforced, heat stabilised, weather resistant, pigmented black, nylon 6 injection moulding compound offering excellent strength, stiffness and dimensional stability. This balance in engineering properties combined with excellent processability make it ideal in applications replacing metal, resulting in an overall cost and weight saving.

PROPERTIES

The addition of glass fibre reinforcement to a nylon moulding compound enhances its performance characteristics. Duralon N6 30G HS BK106 exhibits high strength, rigidity and heat deflection temperature. Its resistance to creep under load is excellent. Like conventional nylons, Duralon N6 30G HS BK106 EG maintains its inherent chemical resistance, particularly to greases, oils and

TYPICAL PROPERTIES

	DAM	ASTM Test
MECHANICAL		
Tensile Strength, Yield MPa	149	D-638
Flexural Strength, MPa	237	D-790
Flexural Modulus	8400	D-790
Notched Izod Impact, J/m	120	D-256
PHYSICAL		
Specific Gravity	1.36	D-792
Mould Shrinkage (3.17mm bar)	0.003	-
THERMAL		
Melting Point, °C	215	D-789
Heat Deflection @ 264 psi °C	210min	D-648

The data listed here fall within the normal range of product properties, but they should not be used to establish specification limits nor used alone as the basis of design.

Duralon N6 30G HS BK-106

PROCESSING GUIDELINES

MELT TEMPERATURE

Duralon N6 30G HS BK106 exhibits a crystalline melting point of 215°C and a melt temperature range of 271°-293°C is recommended for most applications.

TYPICAL TEMPERATURE PROFILE

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Rear Zone 250-270

Middle Zone 260-280

Front Zone 270-290

Nozzle Zone 270-290

MOULD TEMPERATURE

Duralon N6 30G HS BK106 can be processed over a wide range of mould temperatures, however for applications where aesthetics are critical, a mould surface temperature of 80-95°C is required.

PRESSURES

Injection and packing pressures are generally within the limits of 35-120 bar. Injection pressure controls the filling of the part and should be applied for 90% of ram travel. Packing pressure affects the final dimensions and can be effectively used in controlling sink marks and warpage caused by differential shrinkage. It should be applied and maintained until the gate area is completely frozen off. Back pressure can be utilised to provide uniform melt consistency and reduce trapped air and gas. A maximum back pressure of 8 bar is recommended to minimise glass fibre breakage.

FILL RATE

Fast fill rates are recommended to ensure uniform melt delivery to the cavity and prevent premature freezing. Surface appearance is directly affected by injection rate. The fast fill enables the glass fibres to become displaced by resin-rich surface at the mould interface. Injection speeds of 25mm ram travel per second are generally required for obtaining good surface qualities.

REGRIND

Recommended regrind levels are no more than 25-30%. Higher levels may affect part performance due to excessive glass fibre damage.

MATERIAL HANDLING

Duralon N6 30G HS BK106 is supplied in sealed containers and drying prior to moulding is not generally required. If drying becomes necessary a dehumidifying or desiccant drier operating at 82°C is recommended. Drying time is dependent upon moisture level and resin should be dried to less than 0.2% moisture. Further information concerning safe handling procedures can be obtained from the Product Material Safety Data Sheet.

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