dalau™
Specialists in P.T.F.E.

DALCON 021

Issued 02/04/07

PHYSICAL PROPERTIES (Typical)

Ingredients: 75 % Virgin P.T.F.E.
Filler / Pigment: 25 % Carbon Coke (by weight)
Colour: Black

MECHANICAL PROPERTIES		Value	Units	Standard
Tensile Strength	(Moulding Direction)	12 - 25	MPa	BS2782:Pt3
Elongation at Break	(Moulding Direction)	50 - 250	%	BS2782:Pt3
Density		2.05 - 2.13	g/cc	BS2782:Pt6
Hardness		70 - 72	Shore D	ASTM D2240
Deformation under Load	@ 1Hr,23℃,14.2MPa @ 24Hrs,23℃,14.2MPa @ Permanent Deformation @ 1Hr,150℃,5MPa	4.8 6.6 - 6.6	% % % %	ASTM D621
Flexural Yield Strength	@ 0.2% Offset, 23℃	10.3	MPa	ASTM D790
Flexural Modulus	@ 23℃	1090	MPa	ASTM D790
Compressive Strength	@ 0.2% Offset, 23℃ @ 0.2% Offset, 150℃	9.16 2.3	MPa MPa	ASTM D695
ELECTRICAL PROPERTIES		**Value**	**Units**	**Standard**
Dielectric Strength	@ Air @ Oil	- -	KV/mm KV/mm	ASTM D149
Proof Test	(Dielectric Strength)	-	KV/mm	BS6564 (E)
Dielectric Constant	@ 60 Hz @ 10^6 Hz	- -	- -	ASTM D150
Dissipation Factor	@ 60 Hz @ 10^6 Hz	- -	- -	ASTM D150
Resistivity	@ Surface @ Volume	- -	Ω Ω cm	ASTM D257
THERMAL PROPERTIES		**Value**	**Units**	**Standard**
Point of Fusion DSC		327	℃	ASTM D3417
Max. Working Temperature		260	℃	-
Max. Working Temperature	@ Short Periods	300	℃	-
Min. Working Temperature		- 200	℃	-
Thermal Conductivity	@ Moulding Direction (MD)	0.58	W/(m.K)	ASTM C177
Coefficient of Linear Thermal Expansion TMA (23 - 200℃)				
	@ Moulding Direction (MD) @ Right Angles to MD	- -	10^{-6}/℃ 10^{-6}/℃	ASTM D696
Flammability		-	-	UL94V(0)
Flash Point		630	℃	ASTM D1929
Limiting Oxygen Index		98 - 100	%	ASTM D2863
WEAR PROPERTIES		**Value**	**Units**	**Standard**
Coefficient of Friction	@ Dry sliding Static Dynamic	 - -	 - -	ASTM D1894

The above properties are typical and are only intended to be used as a guide

DALCON 021

PHYSICAL PROPERTIES (Typical)

Ingredients:	75 % Virgin P.T.F.E.
Filler / Pigment:	25 % Carbon Coke (by weight)
Colour:	Black

CHEMICAL RESISTANCE

The strength of the carbon - fluorine bond and the shielding of the carbon chains by the fluorine atoms result in a chemical inertness which is virtually universal, except alkali metals, fluorine under certain conditions, some fluorine compounds & halogen gases at elevated temperatures.
Carbon / Coke is a good inert filler, except in oxidising environments where glass performs better. Resistant to hydrofluoric acid.

APPLICATIONS & INDUSTRIES

General:

Carbon / Coke (soft) filler is good in dry running conditions, adds to the creep resistance, increases the hardness and raises the thermal conductivity of PTFE.
Carbon / Coke (soft) compounds have good wear properties, but has low tool wear during machining, thus allowing machining to very close tolerances.
Carbon / Coke (soft) compounds have some electrical conductivity and are therefore antistatic.
Carbon filled compounds when combined with graphite, have excellent wear properties. The combination of the above properties makes carbon / graphite compounds the preferred material for non - lubricated piston rings.

Chemical:

Dynamic & shaft seals.
Seals & gaskets. Flat gaskets are used to seal flanges in pipelines.

Construction:

Bridge bearings. Slide bearings.

Electrical:

None.

Engineering:

Anti - friction bearing cages & bearing plates.
Bearings, bushes, shaft bearings / seals (in combustion engines).
Film bearings. Multi - layer composite bearings. Fabric bearings.
Laboratory equipment. Measuring & control technology.
Pipe supports. Expansion bellows. Glandless valves & pumps, valve seats.
Piston rings in hydraulic systems and compressors.
Piston rod packings used in compressor plunger pumps & valves.

Food:

None.

The above properties are typical and are only intended to be used as a guide