MITSUBISHI CHEMICAL ADVANCED MATERIALS

QUADRANT ENGINEERING PLASTIC PRODUCTS

CHEMPLAST®

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MA APPROVAL NUMBER	MAC-SAL-00031
FORM NUMBER	N/A
REVISION NUMBER	01
REVISION DATE	13/06/2014
MD SIGNATURE	

KEYLON® PV1000/1

KEYLON® PTFE is a unique thermoplastic and is resistant to almost all corrosive chemicals, except for alkali metals. PTFE has the lowest coefficient of all materials and is ideal in applications where lubricants are not desirable as KEYLON® PTFE functions without any lubricants. PTFE has the widest working temperature range of all plastics, from -260°C to 260°C. PTFE is excellent for use in cryogenic applications as shows no embrittlement. KEYLON® PTFE has very good sealing properties. PTFE is not flammable unless in 94% oxygen environment. KEYLON® PTFE is an excellent insulating material. KEYLON® PTFE is not ideal in high wear abrasive applications or in high loading applications. Here filled PTFE is used to improve resistance to load and wear.

APPLICATIONS:
Chemical applications, sealing applications, insulating materials in demanding electrical applications, and low friction applications.

MAJOR APPLICATIONS:
Gaskets, bearing pads, chemical equipment, valve seats, valves in gas cylinders, bellows etc.

MECHANICAL PROPERTIES:

Property	Specified	Units	Method
Specific Gravity	2.13-2.19	-	ASTM D792
Tensile Strength	25-40	MPa	ASTM D1708
Elongation at Break	280-450	%	ASTM D1708
Flexural Modulus	490	MPa	ASTM D790
Hardness	54-59	Shore D	ASTM D2240
Deformation @ 14.2 MPa, 1hr	12-13	%	ASTM D621
Deformation @ 14.2 MPa, 24hrs	14-15	%	ASTM D621
Impact Strength, 23°C	185	J/m	ASTM D256
Impact Strength, -54°C	107	J/m	ASTM D256
Coefficient of Friction - Static (500psi)	0.05-0.08	-	ASTM D1894
Coefficient of Friction - Dynamic (10 fpm)	0.1	-	ASTM D1894
Wear Factor	0.5 - 2 x 10-3	mm3/Nm	PIN ON DISC
Thermal Conductivity @ 35°C	0.24	W/(mK)	ASTM C177
Flame Rating	94 V-0	-	UL-94
Limiting Oxygen Index	>95	%	ASTM D2863
Heat of Combustion	5.1	MJ/kg	ASTM D240
Relative Permittivity	2.1	103-106Hz	ASTM D150
Dielectric Strength, in air	59	kV/mm	ASTM D150
Dielectric Constant	2.1	106Hz	ASTM D150
Dissipation Factor	0.0002	106Hz	ASTM D150
Arc Resistance	>300	s	ASTM D495
Volume Resistivity	ohm.m	>1016	ASTM D257
Surface Resistivity	ohm	>1016	ASTM D257
Weather Resistance	No effect	2000hr	Weather-O-meter
Solvent Resistance	Excellent	-	ASTM D543
Chemical Resistance	Excellent	-	ASTM D543
Water Absorption	0.0	%	ASTM D570
Melting Point	327	°C	ASTM D3418
Continuous Service in Air (min)	-260	°C	Without Load
Continuous Service in Air (max)	260	°C	Without Load

This informa□on corresponds to our current informa□on on the subject. It is offered solely to provide sugges□ons for your own experimenta□on. It is not intended, however, to subs□tute for any tes□ng you may need to conduct to determine for yourself the suitability of our products for your par□cular purposes. We cannot an□cipate all varia□ons in actual end-use condi□ons; Quadrant Chemplast (Pty) Ltd makes no warran□es and assumes no liability in connec□on with any use of this informa□on.