東鼉有限公司
East Dragon Precise Transmission Co., LTD

物理性質 PHYSICAL PROPERTIES (TYPICAL VALUES TABLE)

	ASTM (UL)	UNITS	CAST NYLON	CAST NYLON	CAST NYLON	NYLON 6
MATERIAL DESCRIPTION 材料種類	—	—	MC901	MC801 MoS_2	MC908 stabilizer	PA6
Colour description 顏色種類	—	—	blue Natural /Black	Grev-Black MoS_2	Blue impact resistance	Natural (white) /Black
Densitly of product 產品比重	D792	G/cm^3	1.15	1.16	1.15	1.14
MECHANICAL PROPERTIES at 23℃ 23℃時機械性質						
Tensile test (1) 抗張測試						
- tensile stress at yieid(2) 屈服抗張應力	D 638M	N/mm^2	85	94	85	78
- tensile strength at break(2) 斷裂抗張強度	D 638M	%	—	—	—	—
- elongation at break(2) 斷裂伸度	D 638M	N/mm^2	25	25	50	＞50
- tensile modulus of elasticity 彈性抗張係數	D 638M	N/mm^2	3300	3400	3000	3100
Tensile creep test : stress to produce 1% elongation in 1,000h(	D 2990	N/mm^2	22	23	22	18
抗張潛變測試: 1%應力拉伸 1000hr						
- at 23℃	D2990	N/mm^2				
- at 60/100℃	D2990	N/mm^2				
- at 125/150℃〔250℃〕	D2990	N/mm^2				
Compression test -max. allow. short. term load of 2% deformat	D 695	N/mm^2	44	46	44	33
壓縮測試－最大、允許、負載條件2%變形						
Notched impact strength 切痕衝擊強度						
- Izod	D-256	KJ/m^2; J/m	3; 30	3. 30	6. 60	5.5; 55
- Charpy	—	KJ/m^2	4	4	5	4
Impact strength -Charpy(4) 衝擊強度-Charpy	—	KJ/m^2	no break	no break	no break	no break
Hardness - Shore 蕭式	D 2240	—	—	—	—	—
硬度 - Rockwell(5) 勞氏	D 785	—	M 98	M 90	M 85	M 85
Coefficient of friction(dry vs. steel), dynamic 動態摩擦係數(乾 vs 鋼)	—	—	0.25-0.50	0.15-0.35	0.20-0.45	0.25-0.50
THERMAL PROPERTIES 熱的性質						
Melting point 溶點	—	℃	220	220	220	220
Glass transition temperature 玻璃轉移溫度	—	℃	—	—	—	—
Thermal conductivity at 23℃ 23℃ 時熱導電性	—	W/(K.m.)	0.29	0.30	0.29	0.28
Coefficient of linear thermal expansion 線形熱膨脹係數						
- average value between 23 and 60℃ 介於23℃~60℃平均標準		$m/(m.k)\times10^6$	80	75	80	90
- average value between 23 and 100℃ 介於23℃~100℃平均標	—	$m/(m.k)\times10^6$	90	85	90	105
- average value above 150℃ 150℃平均標準	—	$m/(m.k)\times10^6$				
Deflection temperature under flexural load-method A:1.8 N/mm²	D648	℃	95	95	95	80
在1.8N/mm2彎曲負載下之溫度						
Min. service temperature(6) 最低使用溫度	—	℃	-40	-30	-40	-40
Max. allowable service temperature in air 在空氣中最大允許溫度						
-for short periods(7) 短時間	—	℃	170	170	180	160
-contlnuously. For 5000/20000h (8) 連續5000hr/20000hr	—	℃	105/90	105/90	120/105	85/70
Flammability 燃燒性 -Oxygen index 氧指數	D 2863	%	25	25	25	25
- according to UL 94(3.0 mm thickness) 依照 UL94(厚度3.0mm	-94	—	V.2	V.2	V-2	V-2
ELECTRICAL PROPERTIES AT 23℃ 23℃時電氣性質						
Dielectric strength(9) 介電強度	D149	KV/mm	25	24	25	25
Volume resistivity 體積抵抗率	D257	Ohm.cm	10^{15}	10^{14}	10^{15}	10^{15}
Surface resistivity 表面抵抗率	D257	Ohm	10^{15}	10^{14}	10^{15}	10^{15}
Dielectric constant 介電常數 - at 50 Hz	D150	—	3.6	3.6	3.6	3.9
- at 1 MHz	D150	—	3.2	3.2	3.2	3.3
Dissipation factor tan 電阻摩耗因素 - at 50 Hz	D150	—	0.012	0.012	0.012	0.019
- at 1 MHz	D150	—	0.016	0.016	0.016	0.021
Resistance to tracking 耐泄漏電阻強度	—	—	CTI 600	CTI 600	CTI 600	CTI 600
MISCELLANEOUS 各式各樣的						
Water absorption 吸水率						
- at saturation in air of 23℃/50℃ RH直至飽和	—	%	2.20	2.10	2.20	2.60
- at saturation in water of 23℃ 23℃吸水直至飽和	—	%	6.50	6.10	6.50	9.00
CHEMICAL RESISTANCE AT 23℃ 23℃時耐化學性質						
Acids 酸 - Weak 弱	—	—	B	B	B	B
- Strong 強	—	—	C	C	C	C
Alkalies 鹼 - Weak 弱	—	—	A	A	A	A
- Strong 強	—	—	B-C	B-C	B-C	B-C
Aromatic hydrocarbons 芳香烴	—	—	A	A	A	A
Aliphatic hydrocarbons 脂肪烴	—	—	A	A	A	A
Ketones、 esters 酮類、酯類	—	—	A	A	A	A
Ethers 醚類	—	—	A	A	A	A
Chlorinated solvents 氯化溶劑	—	—	B	B	B	B
Alcohols 醇類	—	—	A	A	A	A
Inorganic salt solutions 無機鹽溶液	—	—	A	A	A	A
Hot water 熱水	—	—	B	B	B	B
OUTSIDE APPLICATIONS-UV RESISTANCE 在外抵抗紫外線程度	—	—	B/black：A	A	B	B/black：A

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NYLON 66	ACETAL	ULTRA WEAR®	TEFLON	POLYCABONATE	PVDF	KETRON®	TORLON	CELAZOLE	VESPEL
PA66	POM C	UHMW-PE	PTFE	PC	PVDF	PEEK	PAI	PBI	PI
Natural (cream) /Black	Natural /Black	White /other colors	Natural (white)	Natural (clear translucent)	Natural (white)	Natural (beige) /Black	Dark vellow - brown	Black	Brown
1.14	1.42	0.94	2.15-2.20	1.20	1.79	1.32	1.41	1.30	1.43
90	70	22	—	65	50	110	—	—	—
—	—	—	>60	—	—	—	140	159	86
40	30	>300	>150	>50	>20	20	15	3/	8
3300	3000	750	400-700	2300	2100	4200	4400	5900	—
20			1.5	17	10	32	38	37	—
			- /0.4	12/7	- / -	30/25	36/31	- / -	- /18
			- /0.3	3/-	- / -	20/8	30/20	- /33	- /9
39	46	13	8	40	31	76	80	—	45
5.50	8.80	—	16;160	9;90	10;80	6.50	11;110	2.7;27	6.45
4	8	no break							
no break	no break	no break	—	no break	no break	no break	—	—	—
—	—	D65	D 50-60	—	—	—	—	—	—
M89	M86	—	—	M75	M75	M105	E80 (M 119)	E105 (M 125)	M97
0.25-0.50	0.25-0.45	0.20-0.30	0.05-0.15	—	0.30-0.70	0.30-0.50	0.25-0.45	0.20-0.30	0.20-0.50
255	165	135	327	—	175	340	—	—	—
—	—	—	—	150	—	—	295	400	—
0.28	0.31	0.42	0.23	0.21	0.19	0.25	0.26	0.40	0.35
80	110	200	130-170	65	130	50	30	25	55
95	125	200	130-170	65	145	50	35	25	55
			130-170	—	—	110	40	25	55
100	110	45	50	135	105	160	280	430	360
- 30	- 50	< - 200	< - 200	- 60	- 50	- 60	< - 200	—	< - 200
180	140	110	300	135	160	310	260	540	480
95/80	115/100	- /90	260	115	150	250	250	345	245
26	15	17	95	26	44	35	45	—	53
V-2	HB	HB	V-0	V-2	V-0	V.0	V-0	V.0	V-0
27	20	90(0.2mm)	>20	28	18	24	24	22	22
10^{16}	10^{14}	10^{16}	10^{18}	10^{17}	10^{15}	10^{16}	10^{15}	10^{15}	10^{16}
10^{16}	10^{15}	10^{13}	10^{17}	10^{18}	10^{16}	10^{16}	10^{18}	10^{13}	10^{15}
3.8	3.6	2.3	2.1	3	7.4	3.2	4.2	3.3	3.63
3.3	3.6	2.3	2.1	3	6	3.2	3.9	3.4	3.55
0.013	0.003	<0.0002	<0.0003	0.001	0.025	0.001	0.026	—	0.0018
0.02	0.008	<0.0002	<0.0003	0.008	0.165	0.002	0.031	0.034	0.0034
CTI 600	CTI 600	CTI 600	CTI 600	CTI350	CTI600	CTI150	—	—	—
2.40	0.20	<0.01	<0.01	0.15	0.05	0.20	2.50	—	1.20
8.00	0.85	<0.01	<0.02	0.35	0.05	0.45	—	4.50	
B	B	A	A	A	A	A	A	B	B-C
C	C	A	A	B	A	A-B	A	C	B-C
A	A	A	A	B-C	A	A	B	B	C
B-C	A	A	A	C	B	A	C	C	C
A	A	B	A	C	A	A	A	A	A
A	A	B	A	A	A	A	A	A	A
A	A	A	A	C	A-B	A	A	A	A
A	A	A-B	A	C	A-B	A	A	A	A
B	B	B	A	C	A	A	A	A	A
A	A	A	A	B	A	A	A	A	A-B
A	A	A	A	A	A	A	A	B	B-C
B	A	B	A	A	A	A	A	—	B
B/black：A	C/black：B	B/black：A	A	B	A	A	A	B	B