



Certificate No:00107Q12774R0S/1100



Magengine

Your partner for high performance Polymer

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—Company profile

Magengine Co. , Ltd specializes in the R&D, manufacturing and sales of new polymer materials, engineering plastics and specialty plastics.

Our company mainly produces with the following 8 series of properties: stiffening and toughening, filling, alloying, electrical and thermal conductive, high-temperature resistant, Halogen-free retardant, degradable and functional master batch. In detail, Magengine produce engineering plastics, such as PC, ABS, PBT, PET, PA6, PA66, POM, PPO; specialty plastics, such as PPA, PPS, PEI, PES, PEEK, LCP; general plastics, such as PP, HIPS. Most of these materials have been widely used in automotive, electrical & electronics, home appliances, communications, and aviation industries.

Based on customer requirements and customer-oriented innovation, Magengine not only produces high quality and customized products, but also offers strong technical support and service. Our products have been exported to Southeast Asia, Middle East, America and Europe. We have established long-term technical cooperation with several well-known electronics and automobile companies. Aiming at creating win-win benefits, Magengine endeavors to improve its competitiveness which contributes to the profit-making capability for customers, and at the same time helps customers to success.

二. Product overview

Products Series	Products Name	Products Series	Products Name
Engineering Plastics	PA (Polyamide)	Thermoplastic elastomer	TPE-T50
	PC (Polycarbonate)		TPU-T51
	PBT (Thermoplastic Polyester)		TPEE-T52
	PET (Thermoplastic Polyester)		TPV-T53
	PPO (Polyphenylene Oxide)		TPE-T55-OM
	POM (Polyphenylene oxide)		
Special Engineering Plastics	PPA(Polyphthalamide)	New Products	High Melt Strength Polypropylene
	PPS (Polyphenylene Sulfide)		High Barrier Performance Nylon Series
	PEI (Polyetherimide)		Degradable Materials
	PES (Polyethersulfone)		Black Color Master Batch
	PEEK (Polyetheretherketone)		Wood-plastics
	LCP (Liquid Crystal Polyester)		
General Plastics Series	PP (Polypropylene)		
	HIPS (High Impact Polystyrene)		
	PMMA/ABS		
	ABS (Acrylonitrile-Butadiene-Styrene)		



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PA6 Catalogue

Mechanical properties	Units	Test Standard ISO	Conditions	MEB100	MEB601	MEB801	MEB705	MEB706	MEB709	MEB240	MEB9000	MEB9706	MENB100
1.Tensile Stress, at	Mpa	527	dry/moist	75/50	65/40	50/37	145/95	170/110	210/145	83/55	80/40	158/-	80/-
2.Elongation, at break		527	dry/moist	>30/>40	>35/>50	>35/>50	3/5	3/5	3/5	10/20	5/>40	3/-	25/-
3.Flexural Stress, at yield	Mpa	178	dry/moist	105/45	80/-	55/-	205/170	240/190	280/210	145/80	110/-	195/-	115/-
4.Flexural Modulus	Mpa	178	dry/moist	2550/850	2000/685	1800/685	6200/4500	7500/5000	10300/8500	4000/2300	2500/1000	8000/-	2950/-
5.Izod Impact Strength, notched	KJ/m2	180	dry/moist	4.5/16	13/NB	60/NB	12/18	13/20	20.5/30	6.0/14	3.5/10	8.0/-	3.5/-
6.Hardness, Rockwell		2039/2	dry/moist	R118/R97	R110/-	R100/-	R120/R114	R120/R114	R120/R115	R118/R105	R120/R112	R120/-	R120/-
7.Heat Deflection Temperature 0.45MPa	°C	75		160	160	130	216	225	230	195	170	215	200
1.81MPa	°C	75		60	65	55	195	210	215	120	55	190	90
8.Linear Thermal Expansion	10 ⁻⁵ cm/cm°C												
9.Fire Resistance UL94				HB			HB	HB	HB	HB	HB	V0	V0
10.Surface Resistivity	Ohm		dry/moist	10 ¹³ /10 ¹⁰	10 ¹³ /10 ¹⁰	10 ¹³ /10 ¹⁰	10 ¹² /10 ¹⁰	10 ¹² /10 ¹⁰	10 ¹³ /10 ¹⁰	10 ¹² /10 ¹⁰	10 ¹² /10 ¹⁰	10 ¹² /10 ¹⁰	10 ¹³ /-
11.Dielectric Strength	KV/mm		dry/moist	20/-	20/-	20/-	17/-	17/-	17/-	20/-	17/-	17/-	17/-
12.Water Absorb, %, 24hr		62		1.8	0.8		1.3	1.1	1.2	1.2	1.2	1.1	0.9
13.Equilibrium Water Content, %		62		9.5	8.5	8.5	7.2	6.2	5.5	6.5	8.5	5.6	4
14.Injection Molding Temperature	°C			230-265	225-265	225-265	230-270	230-280	235-290	230-280	220-250	220-265	230-265
15.Drying Temperature/Time	°C/hr			90/4-6	90/4-6	90/4-6	90/4-6	90/4-6	90/4-6	90/4-6	90/4-6	90/4-6	90/4-6
16.Linear Molding Shrinkage	mm/mm			0.01-0.014	0.009-0.01	0.006-0.0	0.004-0.009	0.0015-0.005	0.001-0.003	0.008-0.012	0.01-0.013	0.001	0.01-0.015



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17.Melt Flow Rate	g/10min	1133											0.4-1.4
18.Melting Point	°C			220	220	220	220	220	220	220	220	220	
19.Density	g/cm3	1183		1.13	1.1	1.03	1.28	1.36	1.48	1.35	1.18	1.52	1.2
Others				MEB100	MEB601	MEB801	MEB705	MEB706	MEB709	MEB240	MEB9000	MEB9706	MENB100
20.Fillers							GF25	GF30	GF45	M20		GF30	

Property: PA has the advantages of high mechanical strength, high softening point, good wear resistance, self-lubrication, cushioning, sound deadening, excellent oil and chemical corrosion resistance, and good electrical insulation. Because of these superior performances, PA composite has already replaced some metals being as structural materials.

Application: Electric & Electrical, Chemical Machinery, Automobile Industry.



PA66 Catalogue												
Mechanical properties	Units	Test Standard ISO	Condition s	MEA100	MEA102	MEA601	MEA801	MEA703	MEA705(H)	MEA706	MEA706(S H)	MEA708
1.Tensile Stress, at break	Mpa	527	dry/moist	80/60	80/60	70/50	53/40	115/90	151/100	185/125	165/115	200/150
2.Elongation, at break		527	dry/moist	25/>50	31/>50	40/>60	60/>80	3/6	3/5	3/5	3/5	2/5
3.Flexural Stress, at yield	Mpa	178	dry/moist	100/45	105/48	90/45	65/20	175/140	220/175	225/195	235/185	270/220
4.Flexural Modulus	Mpa	178	dry/moist	2700/1200	2700/1200	2250/1200	1500/850	5900/4300	7100/650	8200-5800	7400/5600	9000/6500

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5.Izod Impact Strength, notched	KJ/m2	180	dry/moist	3.4/10	4.4/10.3	6/18.5	60/NB	5.8/11	9.5/14	11/17.5	13/18.5	13/-
6.Hardness, Rockwell		2039/2	dry/moist	R120/R105	R120/104	R110/R100	R110/R100	R120/R114	R120/R115	R120/R115	R120/R115	R120/R117
7.Heat Deflection Temperature 0.45MPa	°C	75		210	215	200	190	255	258	258	258	265
1.81MPa	°C	75		65	67	70	65	235	245	250	250	255
8.Linear Thermal Expansion	10 ⁻⁵ cm/cm °C			10						1.5/8		
9.Fire Resistance UL94				HB	HB			HB		HB	HB	HB
10.Surface Resistivity	Ohm		dry/moist	10 ¹³ /10 ¹⁰	10 ¹³ /10 ¹⁰	10 ¹³ /10 ¹²	10 ¹³ /10 ¹²	10 ¹² /10 ¹⁰	10 ¹² /10 ¹⁰	10 ¹² /10 ¹⁰	10 ¹² /10 ¹⁰	10 ¹² /10 ¹⁰
11.Dielectric Strength	KV/mm		dry/moist	20/-	20/-	20/-	20/-	20/-	20/-	20/-	20/-	20/-
12.Water Absorb, %, 24hr		62		1.2	1.2	1.2	1.2	1	0.8	0.8	0.8	0.8
13.Equilibrium Water Content, %		62		8.5	8.5	7	6.7	6.8	6.0	5.5	5.5	4.5
14.Injection Molding Temperature	°C			260-290	260-290	255-290	255-290	260-295	260-295	260-300	260-300	260-310
15.Drying Temperature/Time	°C/hr			90/4-6	90/4-6	90/4-6	90/4-6	90/4-6	90/4-6	90/4-6	90/4-6	90/4-6
16.Linear Molding Shrinkage	mm/mm			0.013	0.013	0.013-0.016	0.016-0.018	0.004-0.08	0.004-0.008	0.002-0.006	0.003-0.006	0.002-0.005
17.Melt Flow Rate	g/10min	1133										
18.Melting Point	°C			255	254	260	260	260	260	260	260	260
19.Density	g/cm3	1183		1.13	1.13	1.09	1.08	1.21	1.30	1.36	1.36	1.45
Others				MEA100	MEA102	MEA601	MEA801	MEA703	MEA705(H)	MEA706	MEA706(SH)	MEA708
20.Fillers								GF15	GF25	GF30	GF30	GF40



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PA66 Catalogue							
Mechanical properties	Units	Test Standard ISO	Conditions	MEA230	MEA9000	MEA9705	MEA9705P
1.Tensile Stress, at	Mpa	527	dry/moist	75/-	75/50	140/20	120/105
2.Elongation, at break		527	dry/moist	15/-	10/>40	3/4	3/4
3.Flexural Stress, at yield	Mpa	178	dry/moist	105/-	115/95	195/165	180/160
4.Flexural Modulus	Mpa	178	dry/moist	3100/2000	2900/-	7500/5500	7000/5000
5.Izod Impact Strength, notched	KJ/m2	180	dry/moist	11.8/-	3.5/9.0	6.5/11.5	9.0/12
6.Hardness, Rockwell		2039/2	dry/moist	R118/-	R120/R115	R120/R115	R120/110
7.Heat Deflection Temperature 0.45MPa	°C	75		238	215	255	250
1.81MPa	°C	75		82	80	250	245
8.Linear Thermal Expansion	10 ⁻⁵ cm/cm °C						
9.Fire Resistance UL94				HB	V0	V0	V0
10.Surface Resistivity	Ohm		dry/moist	10 ¹³ /10 ¹⁰	10 ¹³ /10 ¹⁰	10 ¹² /10 ¹⁰	10 ¹³ /10 ¹⁰
11.Dielectric Strength	KV/mm		dry/moist	20/-	17/-	17/-	17/-
12.Water Absorb, %, 24hr		62		1.2	1.1	0.6	0.6
13.Equilibrium Water Content, %		62		7.0	7.5	6.0	5.0
14.Injection Molding Temperature	°C			260-285	255-280	260/280	260/280
15.Drying Temperature/Time	°C/hr			90/4-6	90/4-6	90/4-6	90/4-6
16.Linear Molding Shrinkage	mm/mm			0.012-0.015	0.012	0.003	0.003
17.Melt Flow Rate	g/10min	1133					





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18.Melting Point	°C			255	260	260	260
19.Density	g/cm3	1183		1.24	1.24	1.45	1.45
Others				MEA230	MEA9000	MEA9705	MEA9705P
20.Fillers				M15		GF25	GF25

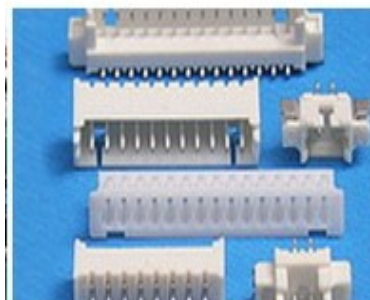
PBT Catalogue									
Mechanical properties	Units	Test Standard ISO	Conditions	MET601	MET703	MET706	MET9000	MET9703	MET9706
1.Tensile Stress, at	Mpa	527	dry/moist	38/-	98/-	125/-	56/-	100/-	125/-
2.Elongation, at break		527	dry/moist	30/-	3.5/-	2.5/-	5/-	3/-	2.5/-
3.Flexural Stress, at yield	Mpa	178	dry/moist	55/-	150/-	200/-	80/-	140/-	155/-
4.Flexural Modulus	Mpa	178	dry/moist	1500/-	4600/-	7500/-	2300/-	5000/-	7500/-
5.Izod Impact Strength, notched	KJ/m2	180	dry/moist	5.0/-	5.2/-	8.0/-	2.5/-	5.0/-	7.0/-
6.Hardness, Rockwell		2039/2	dry/moist	R110/-	R119/-	R120/-	R119/-	R120/-	R119/-
7.Heat Deflection Temperature 0.45MPa	°C	75		120	210	215	170	215	220
1.81MPa	°C	75		50	200	210	60	200	205
8.Linear Thermal Expansion	10 ⁻⁵ cm/cm °C								
9.Fire Resistance UL94				HB	HB	HB	V0	V0	V0
10.Surface Resistivity	Ohm		dry/moist	10x10 ¹³ /-	10 ¹³ /-	10 ¹³ /-	10 ¹³ /-	10 ¹³ /-	10 ¹³ /-
11.Dielectric Strength	KV/mm		dry/moist	15/-	15/-	20/-	15/-	20/-	20/-
12.Water Absorb, %, 24hr		62		0.09	0.08	0.07	0.08	0.07	0.07
13.Equilibrium Water Content, %		62		0.3	0.4	0.35	0.4	0.4	0.4

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14.Injection Molding Temperature	°C			225-265	225-265	225/270	225-260	225-260	225-265
15.Drying Temperature/Time	°C/hr			90/4-6	90/4-6	90/4-6	90/4-6	90/4-6	90/4-6
16.Linear Molding Shrinkage	mm/mm			0.013-0.020	0.008-0.010	0.003-0.005	0.011-0.018	0.005-0.014	0.003-0.01
17.Melt Flow Rate	g/10min	1133							
18.Melting Point	°C			220-225	220-225	220-225	220-225	220-225	220-225
19.Density	g/cm3	1183		1.25	1.42	1.53	1.25	1.59	1.72
Others				MET601	MET703	MET706	MET9000	MET9703	MET9706
20.Fillers				GF30	GF15	GF30		GF15	GF30

Properties: PBT is milky-white, semi-transparent to opaque,crystalline thermoplastic polyester. It is one of the advanced engineering plastics with high rigidity, high toughness, good fatigue resistance, weather resistance, low water absorption rate (all the properties maintain under moisture atmosphere including electrical properties), high dielectric ability, good electrical capacity, size stability, good formability, excellent anti-creep ability under high impact, and good chemical properties as well. It is easy to process into glass-fiber reinforced and flame-retardant products. PBT/PET can be ultrasonic welded and easily post-processed.

Application: Electric & Electrical, Chemical Machinery, Automobile Industry.





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PP Catalogue												
Mechanical properties	Units	Test Standard ISO	Conditions	MEP704	MEP706	MEP240 T	MEP260T	MEP620	MEP364	MEP9240	MEP9000	MEP601 EX
1.Tensile Stress, at break	Mpa	527	dry/moist	52/-	72/-	34/-	30/-	25/-	34/-	28/-	28/-	27/-
2.Elongation, at break		527	dry/moist	3/-	2/-	10/-	9/-	250/-	3/-	3/-	20/-	7500
3.Flexural Stress, at yield	Mpa	178	dry/moist	72/-	83/-	40/-	45/-	30/-	53/-	45/-	50/-	40
4.Flexural Modulus	Mpa	178	dry/moist	3020/-	4280/-	2400/-	2800/-	1050/-	4500/-	2700/-	2100/-	1300
5.Izod Impact Strength, notched	KJ/m2	180	dry/moist	6.0/-	7.0/-	3.5/-	4.0/-	45/-	4.8/-	3.0/-	4.5/-	50/-
6.Hardness, Rockwell		2039/2	dry/moist	R110/-	R103/-	R98/-	R100/-	R65/-	R110/-	R90/-	R90/-	R93/-
7.Heat Deflection Temperature 0.45MPa	°C	75		140	150	115	125	90	145	125	95	109
1.81MPa	°C	75		120	130	70	75		120	80		80
8.Linear Thermal Expansion	10 ⁻⁵ cm/cm°C											
9.Fire Resistance UL94									V0	V0	V0	
10.Surface Resistivity	0hm		dry/moist	10 ¹⁶ /-	10 ¹⁶ /-	10 ¹⁴				10 ¹⁶ /-	10 ¹⁵ /-	
11.Dielectric Strength	KV/mm		dry/moist	14.8/-	16.5/-	19/-	19/-	19/-	19/-	19/-	19/-	
12.Water Absorb, %, 24hr		62		0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03	
13.Equilibrium Water Content, %		62										
14.Injection Molding Temperature	°C			185-230	185-240	185-230	185-240	180-230	185-230	185-230	185-230	185-210
15.Drying Temperature/Time	°C/hr			80/4-6	80/4-6	80/4-6	80/4-6	80/4-6	80/4-6	80/4-6	80/4-6	80/4-6



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16.Linear Molding Shrinkage	mm/mm			0.006	0.006	0.014	0.012	0.014	0.006	0.01	0.02	0.02
17.Melt Flow Rate	g/10min	1133		5-7	2-5	8-20	3-7			2-5		0.5-1
18.Melting Point	℃			160	160	160	160	160	160	160	160	
19.Density	g/cm3	1183		1.04	1.12	1.04	1.14	0.95	1.17	1.32	1.95	0.9
Others				MEP704	MEP706	MEP240	MEP260T	MEP620	MEP364	MEP9240	MEP9000	
20.Fillers				GF20	GF30	M20	M30		GF20,M30	GF10,M15		

Properties: PP has the advantages of excellent comprehensive properties, good chemical stability, good shape processing performance and relatively low cost. PP can adapt to a wider range of application requirements through modifying, copolymerization, grafting, blending, reinforced filling, transparency, filling, weather resistance.

Application: Automobile Industry, Home Electrical Appliance, Electronic Instrument Industry, Textile Industry, etc.





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ABS Catalogue					
Mechanical properties	Units	Test Standard ISO	Conditions	MES706	MES9000
1.Tensile Stress, at break	Mpa	527	dry/moist	90/-	50/-
2.Elongation, at break		527	dry/moist	2/-	2/-
3.Flexural Stress, at yield	Mpa	178	dry/moist	115/-	80/-
4.Flexural Modulus	Mpa	178	dry/moist	6400/-	3000/-
5.Izod Impact Strength, notched	KJ/m2	180	dry/moist	6.8/-	6.0/-
6.Hardness, Rockwell		2039/2	dry/moist	R110/-	R110/-
7.Heat Deflection Temperature 0.45MPa	°C	75		110	87
1.81MPa	°C	75		101	75
8.Linear Thermal Expansion	10 ⁻⁵ cm/cm °C				
9.Fire Resistance UL94					V0
10.Surface Resistivity	0hm		dry/moist	10 ¹⁵ /-	10 ¹⁵ /-
11.Dielectric Strength	KV/mm		dry/moist	16/-	18/-
12.Water Absorb, %, 24hr		62		0.2-0.4	0.2-0.4
13.Equilibrium Water Content, %		62			
14.Injection Molding Temperature	°C			190-250	190-240
15.Drying Temperature/Time	°C/hr			80/4-6	80/4-6



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16.Linear Molding Shrinkage	mm/mm			0.001	0.005
17.Melt Flow Rate	g/10min	1133		3-5	15-19
18.Melting Point	℃				
19.Density	g/cm3	1183		1.28	1.16
Others				MES706	MES9000
20.Fillers				GF30	

Property : ABS has the advantages of good rigidity, high impact strength, heat resistance, low temperature resistance, chemical resistance, good mechanical strength and electrical capacity, good processability, dimensional stability, good surface gloss, easy painting, coloring, and second processing of spraying metal cover, electroplating, welding and bonding.

Application: Electrical & Electronics, Home Electrical Appliance, Computer and Instrument Equipments etc.





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≡ Quality management

1. Quality Assurance

Quality is vital to AIE all the time, we have attained the certifications of UL, SGS, ROHS and FDA, providing a solid guarantee for the stability of our product quality.



2. Testing Equipments



Moisture content tester



Numeric Torsional Testing



Flow Testing Press



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Horizontal Flame Chamber



HDT/Vicat softening Temperature tester



Hakke polylab System