



CiaoPlas

CIAO GREEN



工程塑膠

Engineering Plastic

生質材料

Biodegradable Polymer

專業配色服務

Professional Color Matching Service



Line



Website



Facebook

台中廠(總部) TEL: +886-4-23582333

40850 台灣台中市南屯區工業區27路1號

東莞廠 TEL: +86-769-87787166

523627 中國廣東省東莞市裕豐村銀豐工業區

泰國廠 TEL: +66-38-337724

262/10 Moo. 3 T.Boowin, A.Sriracha, Chonburi, Thailand 20230

Taichung Plant, Taiwan(HQ) TEL: +886-4-23582333

No.1, 27th Rd., Taichung Industrial Park, Taichung 40850, Taiwan

Dongguan Plant, China TEL: +86-769-87787166

Yin-Feng Industrial Estate, Yin-Feng District, Zhangmutou, Dongguan, Guangdong 523627, China 523627

Chonburi Plant, Thailand TEL: +66-38-337724

262/10 Moo. 3 T.Boowin, A.Sriracha, Chonburi, Thailand 20230

官方網址 / Website : www.cfmt.com.tw

Service mail: service@cfmt.com.tw



Create better solution for you

產品 Products

尼龍6 (PA6)

高流動快速成型尼龍
Easy Flowing Fast Cycle Time Grade

玻纖強化級
Glass Fiber Reinforced Grade

玻礦纖強化級
Glass Fiber and Minerals Reinforced Grade

超韌耐寒級
High Impact Strength at Low Temperature Grade

耐衝剛性強化級
Glass Fiber Reinforced and Elastomer Toughened Grade

阻燃級
Flame Retardant Grade

阻燃剛性強化級
Flame Retardant and Glass Fiber Reinforced Grade

導熱級
Thermally Conductive Grade

導電級 / 抗靜電
Electrically Conductive / Anti-static Grade

電鍍級
Electroplated Grade

磁性級
Magnetic Grade

尼龍66 (PA66)

射出級
Injection Grade

玻纖強化級
Glass Fiber Reinforced Grade

超韌耐寒級
High Impact Strength at Low Temperature Grade

耐衝剛性強化級
Glass Fiber Reinforced and Elastomer Toughened Grade

耐磨級
Wear Resistance Grade

阻燃剛性強化級
Flame Retardant Glass Fiber Reinforced Grade

無鹵阻燃級
Halogen Free Flame Retardant Grade

耐水解級
Hydrolysis Resistance Grade

磁性級
Magnetic Grade

尼龍6/66 (PA6/66)

玻纖強化級
Glass Fiber Reinforced Grade

超韌耐寒級
High Impact Strength at Low Temperature Grade

耐衝剛性強化級
Glass Fiber Reinforced and Elastomer Toughened Grade

阻燃級
Flame Retardant Grade

阻燃剛性強化級
Flame Retardant and Glass Fiber Reinforced Grade

耐水解級
Hydrolysis Resistance Grade

聚丙烯 (PP)

表面改良級
Minerals filled Grade

保桿級用料
Bumper Grade

抗菌級
Anti-bacterial Grade

植纖級
Plant Fibers Grade

阻燃級
Flame Retardant Grade

無鹵阻燃級
Halogen Free Flame Retardant Grade

無鹵阻燃剛性強化級
Halogen Free Flame Retardant and Glass Fiber Reinforced Grade

抗靜電級
Anti-static Grade

導電級
Electrically Conductive Grade

玻纖強化級
Glass Fiber Reinforced Grade

玻礦纖強化級
Glass Fiber and Minerals Reinforced Grade

生質材料 (BIODEGRADABLE POLYMER)

射出級
Injection Grade

吹膜級
Blown Film Grade

擠出級
Extrusion Grade

品質 · 技術 Quality · Technology



BPI



seedling mark



JBPA



GreenPLA



Din Certco



GRS

CiaoPlas

工程塑膠
Engineering Plastic

CIAO GREEN

生質材料
Biodegradable Polymer



專業配色服務
Professional Color Matching Service

尼龍 6 樹脂

POLYAMIDE 6 RESIN

物性表

Technical Data Sheet

特性 Characteristics	型號/品名 Product Name	比重 Specific Gravity	收縮率 Molding Shrinkage	抗張強度 Tensile Strength at Break	抗折強度 Flexural Strength	抗折模數 Flexural Modulus	衝擊強度 Izod Impact Strength Notched	變熱形溫度 H.D.T	UL 94 Class (T=1.6mm,1/16")	產品優勢 Product Advantages	應用範圍 Product Applications
		ASTM D792 (±0.02)	ASTM D955 (%)	ASTM D638 (kg/cm ²)	ASTM D790 (kg/cm ²)	ASTM D790 (kg/cm ²)	ASTM D256 (kg-cm/cm)	ASTM D648 (°C/264 psi)			
高流動快速成型尼龍 Easy Flowing Fast Cycle Time Grade	MC212FCT35 高流動快速成型 R.V. 2.4 本色	1.12	1	780	1100	27000	3	60	V2	結合優異的高流動性及快速結晶，適用於薄件射出。 It exhibits high flow injection and fast cycle properties which is suitable for Thin-Wall injection molding	廣泛應用於電子電機、汽機車、電動工具、配線器材等產業。 Electric appliance, automotive parts, electric tools, cable ties.
	MC212FCT50 高流動快速成型 R.V. 2.7 本色	1.13	0.7	780	1100	27000	3	60	—		
	MC212H35 高流動快速成型尼龍 R.V. 2.4 本色	1.12	1	780	1100	27000	3	60	V2		
	MC212H50 高流動快速成型尼龍 R.V. 2.7 本色	1.13	0.7	780	1100	27000	3	60	—		
玻纖強化級 Glass Fiber Reinforced Grade	MC212G15 NAT 15%玻纖 本色	1.23	0.35	1150	1850	50000	7	200	HB	結合優異的高剛性、尺寸安定性、低翹曲性與表面平滑特性。 It exhibits high rigidity, dimensional stability, low warpage and glossy surface properties.	機車引擎護套、打氣筒、園藝工具、電熱器外殼、風扇外殼、車輪。 Motorcycle engine protection cover, air pump components, garden tools, heater housing, electric fan housing, wheel.
	MC212G20 NAT 20%玻纖 本色	1.270	0.35	1300	2100	59000	9	205	HB		
	MC212G33 NAT 33%玻纖 本色	1.38	0.25	1650	2600	85000	16	210	HB		
	MC212G45 NAT 45%玻纖 本色	1.50	0.1	1900	3150	120000	20	210	HB		
	MC212G50 NAT 50%玻纖 本色	1.57	0.1	2000	3200	135000	22	215	HB		
玻礦纖強化級 Glass Fiber and Minerals Reinforced Grade	MC212GM20 NAT 20%玻礦纖 本色	1.35	0.4	800	1200	50000	5	195	HB	結合優異的高剛性、尺寸安定性、低翹曲性與表面平滑特性。 It exhibits high rigidity, dimensional stability, low warpage and glossy surface properties.	機車引擎護套、打氣筒、園藝工具、電熱器外殼、風扇外殼。 Motorcycle engine protection cover, air pump components, garden tools, heater housing, electric fan housing.
	MC212GM30 NAT 30%玻礦纖 本色	1.38	0.35	1000	1550	57000	7	195	HB		
	MC212GM40 NAT 40%玻礦纖 本色	1.44	0.35	1200	1900	70000	9	205	HB		
超韌耐寒級 High Impact Strength at Low Temperature Grade	MC212LST NAT 低溫耐衝擊 本色	1.06	1.45	470	650	17500	85(25°C) 55(-20°C)	55	HB	結合優異的超高韌性及低溫耐衝擊特性。 It exhibits super tough and high impact strength at low temperatures.	帳篷支架、旅行箱配件、運動器材、嬰兒車及自行車零件、電動機械零件。 Tent holder, suitcase accessories, sports equipment, mechanical parts stroller and bicycle accessories.
耐衝擊性強化級 Glass Fiber Reinforced and Elastomer Toughened Grade	MC212STG10 NAT 10%玻纖&耐衝擊 本色	1.18	0.3-0.7	850	1400	42000	15	185	HB	結合優異的超高剛性及高韌特性。 It exhibits high rigidity and high toughness properties. 低吸濕級。吸濕率 ≤ 1.5%。 結合優異的超高剛性及高韌特性。 Low moisture absorption moisture absorption ≤ 1.5% It exhibits high rigidity and high toughness properties.	運動器材、電動工具外殼、溜冰鞋底座、輪椅輪框、電池盒座。 Sports equipments, electric equipments casing, roller skate base, wheelchair round frame, battery parts.
	MC212STG20 NAT 20%玻纖&耐衝擊 本色	1.25	0.3	1100	1700	50000	18(25°C) 10(-20°C)	200	HB		
	MC212STG35 NAT 35%玻纖&耐衝擊 本色	1.33	0.33	1400	2100	75000	20	205	HB		
	MC212STG40 BK 40%玻纖&耐衝擊 黑色	1.32	0.2-0.4	1200	2000	81000	19	200	HB		
	MC212STG30 BK 30%玻纖&耐衝擊 黑色	1.40	0.4	1650	2500	95000	25	210	HB		

尼龍 6 樹脂

POLYAMIDE 6 RESIN

物性表

Technical Data Sheet

特性 Characteristics	型號/品名 Product Name	比重 Specific Gravity	收縮率 Molding Shrinkage	抗張強度 Tensile Strength at Break	抗折強度 Flexural Strength	抗折模數 Flexural Modulus	衝擊強度 Izod Impact Strength Notched	變形溫度 H.D.T	UL 94 Class (T=1.6mm,1/16")	產品優勢 Product Advantages	應用範圍 Product Applications
		ASTM D792 (±0.02)	ASTM D955 (%)	ASTM D638 (kg/cm ²)	ASTM D790 (kg/cm ²)	ASTM D790 (kg/cm ²)	ASTM D256 (kg-cm/cm)	ASTM D648 °C(264 psi)			
阻燃級 Flame Retardant Modified Grade	MC212FH05 NAT 無鹵阻燃性 UL94 本色	1.17	1.0	700	1150	30000	5	75	1/8"~1/32" V0	優異的阻燃特性 具有UL94黃卡。 It exhibits outstanding flame-retardant UL94(Refer to yellow card)	連接器、電器開關殼座、散熱風扇、電動工具、工具機馬達殼 Connector, electric appliance switch, radiation ventilator, electric equipments, machine motor housing.
	MC212FH30 NAT 無鹵阻燃性 UL94 本色	1.36	0.6-0.8	1250	2200	87000	7~9	240	1/8"~1/32" V0		
	MC212FH35 NAT 無鹵阻燃性 UL94 本色	1.40	0.5-0.7	1350	2300	91000	9	245	1/8"~1/32" V0		
阻燃剛性強化級 Flame Retardant Glass Fiber Reinforced Grade	MC212LB30 NAT 有鹵阻燃剛性 本色	1.54	0.5-0.7	1400	2100	98000	10	200	1/8"~1/16" V0	高強度、高剛性、高耐熱、良好的尺寸穩定性以及成型工藝性。 High strength, rigidity, heat resistance, excellent dimensional stability and molding technology.	LED燈泡鱗片、3C產品外殼。 LED light bulb plate fin, computer related product casing.
	MC212LB40 NAT 有鹵阻燃剛性 本色	1.60	0.3-0.5	1500	2300	100000	10~12	210	1/8"~1/16" V0		
導熱級 Thermally Conductive Grade	MC212FI10 NAT 高導熱性尼龍 本色	1.3~1.8	0.2-0.4	500	1,100	55,000	3~5	220	HB V0	導熱率0.5~5。提供絕佳的散熱效果，特別適用於戶外與室內的LED照明燈泡基底殼，且有絕緣導電不同規格特性。 Thermal conductivity 0.5-5。It offers excellent heat dissipation by radiation and is applicable for indoor and outdoor LED lighting.	
導電級/抗靜電級 Electrically conductive / Anti-static Grade	MC212NC05 NAT 導電/抗靜電性尼龍 本色	1.08	1.8	400	650	16,000	4	200	HB	導電級。表面電阻10 ³ ~10 ⁵ 。 抗靜電級。抗靜電表面電阻10 ⁷ ~10 ¹¹ 。 提供抗靜電與靜電消散(ESD)防護要求，以及電磁與射頻干擾(EMI/RFI)屏蔽。 Electrically conductive surface resistance 10 ³ -10 ⁵ . Anti-static character 10 ⁷ -10 ¹¹ . It offers reliability and value on applications that require dissipation of static charges, protection from electrostatic discharge (ESD), and EMI/RFI shielding.	封裝包材、IC及LCD托盤、電子通訊產品外殼、電器產品EMI遮罩外殼。 Packaging, IC&LCD tray, electronic communication products casing, electric equipments casing with EMI shielding.
電鍍級 Electroplated Grade	MC212MS30 NAT 電鍍性尼龍 本色	1.42	0.9	600	1,000	31,000	3	85	HB	奈米級電鍍尼龍。本色。具高剛性、耐高溫、電鍍後表面平整光滑特性。HDT較同系列高10°C~15°C。 Nano electroplated nylon grade. It exhibits high rigidity, heat resistant, smooth electroplated surface properties which has HDT higher than normal nylon around 10~15°C.	汽車後照鏡、電鍍產品。 Reflector, Electroplated parts.
磁性級 Magnetic Grade	MC212FE20 NAT 磁性尼龍 本色	1.3	0.5	650	950	22,000	6	—	HB	絕緣且具有可吸鐵金屬、不生鏽特性。 It exhibits insulation, magnetic properties and rust resistance.	運動器材、玩具、檢測元件、建材。 Sporting equipment, Toys, Electric detector parts, Construction parts.

● 可配合客戶特殊需求提供產品開發服務，品名後若有標示「-XX」之型號即為客制化產品

● We offer customized services for product development, As in the rear of product name marks with "-xx", it stands for customized product.

● 本色樹脂可依客戶顏色需求染色

● Color-matching service for customer's need

● 測試條件：23±2°C，50±5% RH，24小時

● Testing condition: 23±2°C, 50±5% RH, 24hrs

● 比重條件：數據正負誤差±0.02

● The value of specific gravity is subject to the deviation of ±0.02

尼龍 66 樹脂

POLYAMIDE 66 RESIN

物性表

Technical Data Sheet

特性 Characteristics	型號/品名 Product Name	比重 Specific Gravity	收縮率 Molding Shrinkage	抗張強度 Tensile Strength at Break	抗折強度 Flexural Strength	抗折模數 Flexural Modulus	衝擊強度 Izod Impact Strength Notched	變熱形溫度 H.D.T	UL 94 Class (T=1.6mm,1/16")	產品優勢 Product Advantages	應用範圍 Product Applications
		ASTM D792 (±0.02)	ASTM D955 (%)	ASTM D638 (kg/cm ²)	ASTM D790 (kg/cm ²)	ASTM D790 (kg/cm ²)	ASTM D256 (kg-cm/cm)	ASTM D648 °C(264 psi)			
射出級 Injection Grade	MD212 NAT 射出級 本色	1.14	1.7	835	815	29500	6.1	70	V2	結合優異的高流動性及快速結晶，適用於薄件射出。 It exhibits high flow injection and fast cycle properties which is suitable for Thin-Wall injection molding.	廣泛應用於電子電機、汽機車、電動工具、配線器材等產業。 Electric appliance, automotive parts, electric tools, cable ties.
玻纖強化級 Glass Fiber Reinforced Grade	MD212G15 NAT 15%玻纖 本色	1.25	0.3	1150	1800	54000	7	240	HB	結合優異的硬度、強度和耐熱特性。 It exhibits outstanding stiffness, strength and heat resistant properties.	運動器材、插頭、風扇葉片、塑膠螺釘、齒輪、自行車煞車碟片、螺帽。 Sporting equipment, Power plug, Fan louver, Plastic screw, Gear parts, Bicycle braking parts, Bolt and nut.
	MD212G33 NAT 33%玻纖 本色	1.38	0.3	1850	2850	94000	12	250	HB		
	MD212G45 NAT 45%玻纖 本色	1.51	0.25	2200	3300	130000	15	255	HB		
	MD212G50 NAT 50%玻纖 本色	1.57	0.25	2300	3600	145000	16	255	HB		
超韌耐寒級 High Impact Strength at Low Temperature Grade	MD212LST NAT 低溫耐衝擊 本色	1.08	1.4	500	750	18000	90(25°C) 10(-20°C)	60	HB	結合優異的超高韌性及低溫耐衝特性。 It exhibits super toughness and high impact strength at low temperatures.	雪鞋鞋底、網球拍條釘。 Snowshoes base.
耐衝剛性強化級 Glass Fiber Reinforced and Elastomer Toughened Grade	MD212STG15 NAT 15%玻纖&耐衝擊 本色	1.19	0.5-1.1	1100	1300	40000	18	210	HB	結合優異的超高剛性及高韌特性。 It exhibits outstanding stiffness, strength and toughness properties.	電動工具外殼、溜冰鞋底、輪椅用料。 Electric tool casing, Roller skates base, Wheelchair wheel frame.
	MD212STG33 NAT 33%玻纖&耐衝擊 本色	1.38	0.3-0.8	1300	1800	65000	24	220	HB		
耐磨級 Wear Resistance Grade	MD212LA10 耐磨性 本色	1.14	2.0	750	1200	32000	4	70	HB	結合優異的耐磨及持久特性。 It exhibits outstanding wear resistance and durability properties.	滑輪、軸承套 Pulley, Bearing sleeve.

● 可配合客戶特殊需求提供產品開發服務，品名後若有標示「-XX」之型號即為客制化產品

● We offer customized services for product development, As in the rear of product name marks with "-xx", it stands for customized product.

● 本色樹脂可依客戶顏色需求染色

● Color-matching service for customer's need

● 測試條件：23±2°C，50±5% RH，24小時

● Testing condition: 23±2°C, 50±5% RH, 24hrs

● 比重條件:數據正負誤差值±0.02

● The value of specific gravity is subject to the deviation of ±0.02

尼龍 66 樹脂

POLYAMIDE 66 RESIN

物性表

Technical Data Sheet

特性 Characteristics	型號/品名 Product Name	比重 Specific Gravity	收縮率 Molding Shrinkage	抗張強度 Tensile Strength at Break	抗折強度 Flexural Strength	抗折模數 Flexural Modulus	衝擊強度 Izod Impact Strength Notched	變熱形溫度 H.D.T	UL 94 Class (T=1.6mm,1/16")	產品優勢 Product Advantages	應用範圍 Product Applications
		ASTM D792 (±0.02)	ASTM D955 (%)	ASTM D638 (kg/cm ²)	ASTM D790 (kg/cm ²)	ASTM D790 (kg/cm ²)	ASTM D256 (kg-cm/cm)	ASTM D648 °C(264 psi)			
阻燃剛性強化級 Flame Retardant and Glass Fiber Reinforced Grade	MD212LB30 NAT 有鹵阻燃剛性 UL94 本色	1.45	0.5	1370	2200	91000	8	235	1/16" V0	高強度、高剛性、高耐熱、良好的尺寸穩定性以及成型工藝性。 具有UL94黃卡。	連接器、電器開關殼座、散熱風扇、電動工具、工具機馬達殼
	MD212LB35 NAT 有鹵阻燃剛性 UL94 本色	1.50	0.3	1400	2300	85000	10	240	1/16" V0	High strength, rigidity, heat resistance, excellent dimensional stability and molding technology. UL94(Refer to yellow card)	Connector, Electric appliance switch, Radiator, Electric tools, Machine motor housing.
無鹵阻燃級 Halogen Free Flame Retardant Grade	MD212FH05 NAT 無鹵阻燃性 UL94 本色	1.17	1.1	750	1200	31000	5	105	1/8"~1/32" V0	優異的阻燃特性。 具有UL94黃卡。 It exhibits outstanding flame retardancy properties. UL94(Refer to yellow card)	連接器、電器開關殼座、散熱風扇、電動工具、工具機馬達殼。
	MD212FH30 NAT 無鹵阻燃性 UL94 本色	1.40	0.6	1300	2500	70000	7.5	240	1/8"~1/32" V0		
	MD212FH35 NAT 無鹵阻燃剛性 UL94 本色	1.38	0.3	1200	2000	83000	10	240	1/8"~1/32" V0		
耐水解級 Hydrolysis resistance Grade	MD212GH33 耐水解性 本色	1.41	0.27	1800	2900	104000	14	250	HB	具高剛性、耐高溫、耐水解特性材料，且符合規範 TL52062。 It exhibits high rigidity, heat resistant properties which is conform to TL520620.	水室產品、中冷器、汽車配件。 Radiator tank, Cooling fan.
磁性級 Magnetic Grade	MD212SS16 NAT 磁性尼龍 本色	1.21	0.2	700	1200	27500	2.5	—	HB	絕緣且具有可吸鐵金屬、不生鏽特性。 符合規範 FDA 21 CFR 177.1500	運動器材、玩具、檢測元件、建材。
	MD212SS33 NAT 磁性尼龍 本色	1.31	0.2	650	1000	25000	2	—	HB	It exhibits insulation, magnetic properties and rust resistance. which is conform to FDA 21 CFR 177.1500	Sporting equipment, Toys, Electric detector parts, Construction parts.

尼龍與環保複材專家

Nylon and Environmental Composites Expert

工程塑膠 · 生質材料 · 專業配色服務

尼龍 6/66 樹脂

POLYAMIDE 6/66 RESIN

物性表

Technical Data Sheet

特性 Characteristics	型號/品名 Product Name	比重 Specific Gravity	收縮率 Molding Shrinkage	抗張強度 Tensile Strength at Break	抗折強度 Flexural Strength	抗折模數 Flexural Modulus	衝擊強度 Izod Impact Strength Notched	變熱形溫度 H.D.T	UL 94 Class (T=1.6mm,1/16")	產品優勢 Product Advantages	應用範圍 Product Applications
		ASTM D792 (±0.02)	ASTM D955 (%)	ASTM D638 (kg/cm ²)	ASTM D790 (kg/cm ²)	ASTM D790 (kg/cm ²)	ASTM D256 (kg-cm/cm)	ASTM D648 °C(264 psi)			
玻纖強化級 Glass Fiber Reinforced Grade	MB212G15 NAT 15%玻纖 本色	1.22	0.2-0.35	1000	1,600	48,000	7	220	HB	結合優異的高剛性、尺寸安定性、低翹曲性與表面平滑特性。 It exhibits high flow injection and fast cycle properties which is suitable for Thin-Wall injection molding	吹風機外殼、打字機筒管、照相機腳座、釣具捲線軸。 Hair dryer casing, typewriter bobbin, camera tripod, fishing tackle winder.
	MB212G33 NAT 33%玻纖 本色	1.40	0.15	1750	2,700	88,000	14	225	HB		
	MB212G45 NAT 45%玻纖 本色	1.51	0.15	1900	2,900	110,000	20	230	HB		
超韌耐寒級 High Impact Strength at Low Temperature Grade	MB212LST NAT 低溫耐衝擊 本色	1.10	1.6	500	850	19,500	70(25°C) 10(-20°C)	60	HB	結合優異的超高韌性及低溫耐衝特性。 It exhibits super tough and high impact strength at low temperatures.	溜冰鞋支架、嬰兒車配件、運動器材。 Roller skates holder, stroller accessories, sports equipments.
耐衝剛性強化級 Glass Fiber Reinforced and Elastomer Toughened Grade	MB212STG15 NAT 15%玻纖&耐衝擊 本色	1.10	0.5-0.7	950	1,400	40,000	14	>210	HB	結合優異的強度和耐熱特性。 It exhibits outstanding stiffness and heat resistant properties.	馬達外殼、鞋跟、辦公桌椅濾油器、工業用扣帶。 Motor casing, shoe heel, office furniture, oil filter, industrial used buckle.
	MB212STG25 NAT 25%玻纖&耐衝擊 本色	1.32	0.4-0.6	1250	1,800	55,000	18	>215	HB		
	MB212STG40 NAT 40%玻纖&耐衝擊 本色	1.42-1.46	0.1-0.2	1400	2,300	70,000	15	215-240	HB		
阻燃級 Flame Retardant Grade	MB212FH05 NAT 無鹵阻燃性 UL94 本色	1.18	1.5-1.6	600	1,050	27,000	6	125	V0	優異的阻燃特性。 It exhibits outstanding flame-retardant properties.	連接器、電器開關殼座、散熱風扇、電動工具、工具機馬達殼。 Connector, electric appliance switch, radiation ventilator, electric equipments, machine motor housing.
阻燃剛性強化級 Flame Retardant and Glass Fiber Reinforced Grade	MB212LB30 NAT 有鹵阻燃剛性 UL94 本色	1.580	0.25	1400	2,200	91,000	11	240	V0	高強度、高剛性、高耐熱、良好的尺寸穩定性以及成型工藝性。 High strength, rigidity, heat resistance, excellent dimensional stability and molding technology.	連接器、電器開關殼座、散熱風扇、電動工具、工具機馬達殼。 Connector, electric appliance switch, radiation ventilator, electric equipments, machine motor housing.
耐水解級 Hydrolysis resistance Grade	MB212GH33 NAT 耐水解性 本色	1.36-1.39	0.2-0.3	1600	2,500	80,000	34	205	HB	具高剛性、耐高溫、耐水解特性材料，且符合規範TL52062。 It exhibits high rigidity, heat resistant, properties which is conform to TI520620.	水室產品、中冷器、汽車配件。 Radiator tank, cooling fan

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PP 複合塑膠

物性表

POLYPROPYLENE RESIN

Technical Data Sheet

特性 Characteristics	型號/品名 Product Name	比重 Specific Gravity	收縮率 Molding Shrinkage	抗張強度 Tensile Strength at Break	抗折強度 Flexural Strength	抗折模數 Flexural Modulus	衝擊強度 Izod Impact Strength Notched	變熱形溫度 H.D.T	UL 94 Class (T=1.6mm,1/16")	產品優勢 Product Advantages	應用範圍 Product Applications
		ASTM D792 (±0.02)	ASTM D955 (%)	ASTM D638 (kg/cm ²)	ASTM D790 (kg/cm ²)	ASTM D790 (kg/cm ²)	ASTM D256 (kg-cm/cm)	ASTM D648 (°C/264 psi)			
表面改良級 Minerals Filled Grade	PP212MS15 NAT 15% 礦纖 表面改良 本色	1.05	1.55	325	425	14775	3.5	114	HB	結合優異的高剛性、高韌性、表面平滑性。	儀表板座、門板、內部飾板、燈罩、家電產品零件。
	PP212MS25 NAT 25% 礦纖 表面改良 本色	1.14	0.9-1.2	330	485	16120	4	116	HB	It exhibits high rigidity, high toughness, glossy surface properties.	Motor meter base, door plank, lampshade, home appliance.
保桿級用料 Bumper Grade	PP212MS20 BK 20%礦纖 黑色	1.03	0.4	230	365	18895	5.5	60	HB	結合優異的高剛性、尺寸安定性、高韌性、表面平滑性。 It exhibits high rigidity, dimensional stability, high toughness, glossy surface properties.	儀表板座、門板、內部飾板、燈罩、家電產品零件、飯鍋外殼、咖啡爐、刮鬍刀外殼。 Motor meter base, door plank, lampshade, rice cooker housing, coffee pot, razor casing.
抗菌級 Anti-bacterial Grade	PP212AG05 NAT 抗菌級 本色	0.97	1.4	350	450	11000	4	115	HB	結合牡蠣殼粉/銀離子抗菌特性、減少樹脂上細菌孳生(大腸桿菌、金黃色葡萄球菌)。通過JISZ 280I測試。 It applies to the products that require hygienic and control of bacteria growth. Combining with Silver ion which has very good antibacterial property and is able to control E.coli, Staphylococcus aureus. JISZ 280I test approved.	握把、廁所配件、居家用品。 Grip, bathroom accessories home appliance.
植纖級 Plant fibers Grade	PP212PF20 植纖級 本色	0.97	1.4	320	570	17000	5	100	HB	結合植纖外觀及低比重特性，讓產品具有環保概念。 The modified PP resin with plant fibers has the characteristic of plant fibers appearance and lower gravity which is suitable for eco-friendly products.	廚房用具、裝飾產品。 Kitchenware decorative products.
阻燃級 Flame Retardant Grade	PP212LB05 NAT 阻燃級本色	0.98	1.0	300	550	14000	3	100	1/16" V2	結合優異的耐燃性、尺寸安定性與耐候性。 具有UL94黃卡。 It exhibits flame retardancy, dimensional stability and weatherability resistance properties. UL94(Refer to yellow card)	電熱器、電暖器、電器絕緣板。 Electric heater, electric radiator, electric equipment for insulation plank.
無鹵阻燃級 Halogen Free Flame Retardant Grade	PP212FH05 NAT 無鹵阻燃級 UL94 本色	1.1	1.5	200	360	12000	5	100	1/16" V0		
無鹵阻燃剛性強化級 Flame Retardant and Glass Fiber Reinforced Grade	PP212FH35 NAT 無鹵阻燃剛性強化級 UL94 本色	1.40	0.89	400	660	52000	6.5	155	1/16" V0		
抗靜電級 Anti-static Grade	PP212AS05 NAT 抗靜電級 本色	0.90	1.5	280	450	12500	4	115	HB	材料表面電阻達到10 ⁷ ~10 ¹¹ (Ω/□) 抗靜電特性。 It applies to the products that require anti-static characteristic with surface resistance 10 ⁷ ~10 ¹¹ (Ω/□)	包裝材、無塵室耗材、電子產業。 Packaging material, cleanroom supplies electronic industry.
導電級 Electrically conductive Grade	PP212LC20 BK 導電級 本色	1.10	1.2	300	500	12500	4	100	HB	材料表面電阻達到10 ³ ~10 ⁵ (Ω/□) 導電特性。 It applies to the products that require anti-static characteristic with surface resistance 10 ³ ~10 ⁵ (Ω/□)	家電外殼、風扇配件、無塵室耗材。 Electric appliance housing fan accessories cleanroom supplies.

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PP 複合塑膠

物性表

POLYPROPYLENE RESIN

Technical Data Sheet

特性 Characteristics	型號/品名 Product Name	比重 Specific Gravity	收縮率 Molding Shrinkage	抗張強度 Tensile Strength at Break	抗折強度 Flexural Strength	抗折模數 Flexural Modulus	衝擊強度 Izod Impact Strength Notched	變熱形溫度 H.D.T	UL 94 Class (T=1.6mm,1/16")	產品優勢 Product Advantages	應用範圍 Product Applications
		ASTM D792 (±0.02)	ASTM D955 (%)	ASTM D638 (kg/cm ²)	ASTM D790 (kg/cm ²)	ASTM D790 (kg/cm ²)	ASTM D256 (kg-cm/cm)	ASTM D648 °C(264 psi)			
玻纖強化級 Glass Fiber Reinforced Grade	PP212G20 NAT 20%玻纖 本色	1.07	0.3	700	1150	41000	11	155	HB	結合優異的高剛性、尺寸安定性。 It exhibits high rigidity and dimensional stability properties.	化工廠泵浦外殼、紡織紗管、汽車風扇、自行車配件、打氣筒零件。 Pump housing, spin tube, motor fan, bicycle accessories, air pump components.
	PP212G30 NAT 30%玻纖 本色	1.12	0.2	750	1150	58000	7	160	HB		
	PP212G40 NAT 40%玻纖 本色	1.22	0.2	880	1480	70300	15	155	HB		
玻礦纖強化級 Glass Fiber and Minerals Reinforced Grade	PP212GM20 NAT 20%玻礦纖 本色	1.03	1.0	370	550	20000	3	130	HB	結合優異的高剛性、尺寸安定性、表面平滑性。 It exhibits high rigidity and dimensional stability properties.	儀錶板座、門板、燈罩、飯鍋外殼、咖啡爐、刮鬍刀外殼。 Motor meter base, door plank, lampshade, rice cooker housing, coffee pot, razor casing.
	PP212GM30 NAT 30%玻礦纖 本色	1.11	0.9	400	600	25000	4	130	HB		
	PP212GM40 NAT 40%玻礦纖 本色	1.20	0.8	420	650	30000	4	135	HB		

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物性表

BIODEGRADABLE POLYMER

Technical Data Sheet

特性 Characteristics	型號/品名 Product Name	比重 Specific Gravity	收縮率 Molding Shrinkage	抗張強度 Tensile Strength at Break	抗折強度 Flexural Strength	抗折模數 Flexural Modulus	衝擊強度 Izod Impact Strength Notched	變熱形溫度 H.D.T	產品優勢 Product Advantages	應用範圍 Product Applications
		ASTM D792 (±0.02)	ASTM D955 (%)	ASTM D638 (kg/cm ²)	ASTM D790 (kg/cm ²)	ASTM D790 (kg/cm ²)	ASTM D256 (kg-cm/cm)	ASTM D648 °C(264 psi)		
射出級 Injection Grade	PLA290HT07 NAT 超高耐熱(120°C) Heat resistance(120°C)	1.26	1.2	500	900	40000	3	120	<p>為生物可降解材料，具耐熱、耐刮、流動性佳及結晶速度快...等特性。</p> <p>Biodegradable materials exhibit heat resistance, mar resistance, high flow rate and fast cycle time characteristic.</p>	<p>一般射出級產品、辦公室用品、餐具、高亮面耐熱馬克杯。</p> <p>General injection grade for OA supplies, tableware, heat resistant and glossy mugs.</p>
	PLS410MS03 WHT 耐熱增韌級(90°C) Heat resistance(90°C) Toughness and impact strength properties biomass material	1.29	1.7	400	550	11800	5.2	90		
	PLS420MS18-3 NAT 耐熱增韌級經濟型(90°C) (Economical) Heat resistance(90°C) Toughness and impact strength properties biomass material	1.39	1.2	350	650	30000	4.5	95		
	PLS440PF03-1 NAT 增韌級甘蔗植纖 Toughness and impact strength properties Sugarcane biomass material	1.23	1	350	550	11000	3	65		

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BIODEGRADABLE POLYMER

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特性 Characteristics	型號/品名 Product Name	比重 Specific Gravity	MD抗張強度 Tensile Strength at Break	MD延伸率 MD Elongation	TD抗張強度 TD Tensile Strength at Break	TD延伸率 TD Elongation	熔 融 MI	產品優勢 Product Advantages	應用範圍 Product Applications
		ASTM D792 (±0.02)	ASTM D638 (kg/cm ²)	ASTM D790 (kg/cm ²)	ASTM D790 (kg/cm ²)	ASTM D256 (kg-cm/cm)	ASTM D648 °C(264 psi)		
吹膜級 Blown Film Grade	PBM210MS15 NAT 一般型 General grade	1.3	350	>100	400	>150	<5	<p>為生物可降解吹膜材料，可運用於膜袋類一次性消耗產品，具有良好的延展性及韌性。</p> <p>It exhibits excellent melt strength and elongation film compounds products which are suitable for disposable plastic bags.</p>	<p>塑膠包材、農地膜。</p> <p>Plastic bags, Agricultural film.</p>
	PBM310MS20 BK 經濟型 Economic grade	1.39	500	>100	400	>200	<5		

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		ASTM D792 (±0.02)	ASTM D638 (kg/cm ²)	ASTM D790 (kg/cm ²)	ASTM D790 (kg/cm ²)	ASTM D256 (kg-cm/cm)	ASTM D648 (°C/264 psi)		
擠出級 Extrusion Grade	PLA290-1 NAT 3D列印生質材料 3D printing biodegradable polymer	1.24	500	1000	30000	3	55	適用於3D線材產品，印製時無臭味且不易捲翹。 3D printing filament grade with no foul smell while printing and smooth surface.	3D列印線材。 3D printing filament.
	PLS410MS18-1 NAT 耐熱板材、餐盒 Heat resistant sheet Heat resistant tableware	1.39	400	650	16500	6	85	為生物可降解材料，耐熱性佳，防潮、耐熱、無毒、無臭、無味之包裝材料。 Biodegradable extrusion film with superior features of heat resistance, heat resistance, moisture-proof, non-toxic, and odorless.	食品、纖維、一般文具、雜貨等個體包。 Food, fibert, stationery, and general merchandise
	PLS130-1 NAT 吸管生質材料(可彎折) Heat resistance biodegradable polymer for bendable straw	1.25	400	500	11000	7	70	為生物可降解材料吸管，友善自然環境，安全且無毒。 It's biodegradable material of straw, enviornmental-friendly, safe as well as non-toxic.	生質吸管 Biomass material straw
	PLS420MS18 NAT 耐熱吸管生質材料 Heat resistance biodegradable polymer for bendable straw (Economical)	1.39	400	650	16500	6	85		

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