

台塑聚丙烯塑膠 FORMOSA POLYPROPYLENE

永嘉烯物性表 YUNGSOX PP resin properties data sheet

項目 Properties	單位 Unit	檢驗 方法 Test Method	薄膜級 Film Grade											
			均聚物 Homopolymer						無規共聚物 Random Copolymer					
			6020P	2020	2020S	2080	2100	2100M	5020	5050	5050R	5050M	5050S	5070
熔融指數 Melt Index	g/10min	ISO1133	2.3	3	3	10	7	7	3	6.5	6.5	6.5	6.5	7.5
熱變形溫度 Heat Deflection Temperature	°C	ASTM D648	115	113	113	115	115	115	75	75	75	80	75	90
軟化點溫度 Vicat Softening Temperature	°C	ISO306	155	150	150	155	155	155	110	110	110	110	110	125
降伏拉力強度 Tensile Strength at Yield	Kg/cm ²	ISO527	350	350	350	350	350	350	200	200	200	200	200	250
斷裂點伸長率 Tensile Elongation at Break	%	ISO527	600	600	600	500	500	500	500	500	500	500	500	500
洛氏硬度 Rockwell Hardness	R scale	ISO2039	105	105	105	107	107	107	80	80	80	85	80	95
剛性係數 Flexural Modulus	Kg/cm ²	ISO178	16,000	12,500	12,500	14,000	14,000	14,000	5,000	5,000	5,000	5,500	5,000	7,500
IZOD 衝擊強度 IZOD Impact Strength	Kgcm/cm notch	ISO180 (23°C)	4.5	4.5	4.5	3.5	4	4	12	10	10	10	10	7
		(-20°C)	---	---	---	---	---	---	---	---	---	---	---	---
濁度 Haze (30 μ)	%	FPC Method	<1.5	<0.12	<0.11	<2.2	<0.5	<0.5	<1.0	<1.0	<0.6	<1.5	<0.5	<1.0
密度 Density	g/cm ³	ISO1183	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
熔點 Melting Point	°C	DSC	165	162	160	165	165	165	133	132	130	131	130	144
FDA 21 CFR 177.1520			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
USP Class VI			---	---	---	---	---	---	---	---	---	Yes	Yes	---
JHOSPA-PL			---	Yes	Yes	---	Yes	Yes	---	Yes	Yes	---	---	Yes
用途 Application	隔離膜 微孔膜 Separator, Microporus membrane		BOPP 膜 高級食品、服 裝及飾品包裝 透明膠帶及裝 飾紙積層膜 BOPP film, High quality food, garment & garnish packaging, Tape,			IPP 吹 膜 一般食 品及成 衣包裝 IPP film, General food & garment packagin g	CPP 鑄 膜 食品包 裝積層 膜 CPP film, Food packing cast film	CPP 鑄 膜 電鍍積 層膜 CPP film, Aluminum metallized cast film	收縮 膜 Shrink film	熱封層膜 收縮膜 Heat sealing layer, Shrink film,		電鍍積層 膜 熱封層膜 Aluminum metallized cast film, Heat sealing layer	醫用包裝 膜 輸液軟袋 膜 Packaging of pharmaceutic als, Infusion bags (IV bags)	CPP 鑄膜 一般食品 及成衣包 裝積層膜 CPP film, General food & garment packaging casr film
特性 Characteristics	拉力強 度優、剛 性佳、耐 化學性 好 Excellent tensile strength, High flexural modulus, Excellent chemical resistance		高速生產性優 透明性優 光澤性佳 Excellent processing for high speed, Excellent transparent, Good luster			開口性 佳滑性 佳 透明性 佳 Good slippery & antiblock, Good transparent	透明性 優 積層加 工性優 Excellent transparent, Excellent laminates	電鍍性 佳 透明性 優 積層加 工性優 Good metallize properties Excellent transparent , Excellent laminates	低熱封溫度 柔軟性佳 Low heat seal temperature, Good softness	電鍍性佳 低熱封溫 度 柔軟性佳 Good metallizing properties, Low heat seal temperature, Good softness		低熱封溫 度 柔軟性佳 抗化學藥 品性佳 Low heat seal temperature, Good softness, Good resistance to chemical	透明性佳 積層加工 性優 Good transparent, Excellent laminates	

本表數據為代表值，僅供選擇品級用途之參考

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台塑聚丙烯塑膠 FORMOSA POLYPROPYLENE

永嘉烯物性表 YUNGSOX PP resin properties data sheet

項目 Properties	單位 Unit	檢驗 方法 Test Method	射出級 Injection Grade													
			均聚物 Homopolymer													
			1040	1080	1120	1100	1124	1124H	1250D	1350D	1350R	1600D	1700D	1600N		
熔融指數 Melt Index	g/10min	ISO1133	5	10	15	11	15	23	25	35	35	60	70	70		
熱變形溫度 Heat Deflection Temperature	°C	ASTM D648	115	115	120	115	135	125	120	120	110	118	118	125		
軟化點溫度 Vicat Softening Temperature	°C	ISO306	155	155	155	155	157	156	155	155	150	153	153	155		
降伏拉力強度 Tensile Strength at Yield	Kg/cm ²	ISO527	350	350	450	380	490	470	400	400	350	380	380	400		
斷裂點伸長率 Tensile Elongation at Break	%	ISO527	550	500	100	500	50	50	50	50	500	50	50	50		
洛氏硬度 Rockwell Hardness	R scale	ISO2039	105	107	111	107	115	112	111	111	105	110	110	111		
剛性係數 Flexural Modulus	Kg/cm ²	ISO178	14,000	14,000	16,000	14,500	22,000	17,000	16,000	16,000	14,000	15,500	15,500	17,000		
IZOD 衝擊強度 IZOD Impact Strength	Kg.cm/cm notch	ISO180 (23°C)	4	3.5	3.0	3.5	3.0	3.0	3.0	3.0	3.0	3.0	2.5	3.6		
		(-20°C)	---	---	---	---	---	---	---	---	---	---	---	---		
收縮率 Mold Shrinkage	%	FPC Method	1.3-1.7	1.3-1.7	1.3-1.7	1.3-1.7	1.3-1.7	1.3-1.7	1.3-1.7	1.3-1.7	1.3-1.7	1.3-1.7	1.3-1.7	1.3-1.7		
密度 Density	g/cm ³	ISO1183	0.90	0.90	0.90	0.90	0.91	0.91	0.90	0.90	0.90	0.90	0.90	0.9		
燃燒性 Flammability File No. E216959	Class	UL94	94HB	94HB	94HB	---	---	94HB RTI 125°C	---	---	---	---	---	---		
FDA 21 CFR 177.1520			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
USP Class VI			---	---	---	---	---	---	Yes	---	Yes	---	---	---		
JHOSPA-PL			Yes	Yes	Yes	---	---	Yes	Yes	Yes	---	Yes	Yes	Yes		
用途 Application	通用級 玩具 電器用品 家庭用品 General purpose, Toys, Electrical appliances, Housewares		光學級 電器用品 Optical purpose , Electrical appliances		電器用品 微波食品 家庭用品 Electrical appliances, Microwave food containers, Housewares		薄壁射出成型 品 收藏箱 家庭用品 Thin walled products, Storage boxes, Housewares		實驗室 耗材 醫療器材 Labware, Medical Device		高速射出薄壁成型品 收藏箱 家庭用品 High speed thin walled injection molding products, Storage boxes, Housewares					
特性 Characteristics	耐熱性佳 剛性佳 Good heat resistance, Good stiffness		高剛性 耐熱性 優 High stiffness, Excellent heat resistance		抗化學 藥品性 佳 低翹曲 低析出 Good resistance to chemical, Low warpage, Low migration		高剛性 高耐熱性 耐磨性優 光澤性佳 High stiffness, High heat resistance, Excellent resistance to abrasion, Good luster		高流動性 光澤性佳 低翹曲 High fluidity, Good luster, Low warpage		適用於γ ray 消毒 高流動性 光澤性佳 低翹曲 Anti γ-ray, High fluidity, Good luster, Low warpage		超高流動性 成型時間短 光澤性佳 低翹曲 Superhigh fluidity, Fast cycling, Good luster, Low warpage		透明性佳 成型時間 短 光澤性佳 低翹曲 Good transparency, Fast cycling, Good luster,Low warpage	

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射出級 Injection Grade											
耐衝擊共聚物 Impact Copolymer											
3015	3040C	3040	3080	3090	3064H	3084	3084H	3155	3204	3354	3504
2	3.5	5	8.5	8.5	6	8.5	8.5	20	29	35	55
110	110	105	105	110	130	130	130	105	105	105	125
145	145	140	140	145	155	155	155	140	140	140	155
280	280	280	280	280	300	290	290	250	260	250	270
450	400	500	500	500	200	200	200	400	100	100	100
95	95	98	100	100	105	105	105	95	95	95	100
11,200	11,000	10,500	10,000	11,500	14,000	14,000	14,000	10,500	10,000	10,000	12,000
50	40	12	10	40	15	10	10	12	10	8.5	8.5
13	10	5.5	4.5	8.0	4.5	4.5	4.5	6	6	4	4
1.3-1.7	1.3-1.7	1.3-1.7	1.3-1.7	1.3-1.7	1.3-1.7	1.3-1.7	1.3-1.7	1.3-1.7	1.3-1.7	1.3-1.7	1.3-1.7
0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
94HB	94HB	---	94HB	---	---	94HB	94HB RTI 125°C	---	---	---	---
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
---	---	---	---	---	---	---	---	---	---	---	---
---	---	Yes	---	---	---	---	---	---	---	---	---
油漆桶 運動器材 行李箱 載重容器 Pail, Sports appliance, Base of luggage, Heavy duty container	汽機車配件 電器零件 玩具 電池殼 辦公傢具 Automotive parts, Electric appliance parts, Toys, Battery case, Furniture			飲料瓶蓋 電器零件 Bottle cap Electric appliance parts,		汽機車配件 電器零件 電池殼 辦公傢具 Automotive parts, Electric appliance parts, Battery case, Furniture		汽機車配件 電器零件 辦公傢具 行李箱 Automotive parts, Electric appliance parts, Furniture, Luggage,		汽機車大型配件 電器零件 洗衣機內槽 工具箱 大型整理箱 薄壁產品 Larger automotive parts, Electric appliance parts, Washing machine parts, Tool boxes, Storage boxes, Thin wall products	
高衝擊強度 低溫脆性優 剛性佳 High impact strength, Excellent resistance to low temperature brittleness, Good stiffness	中衝擊強度 Medium impact strength		高衝擊 強度 Medium impact strength	高剛性 高耐熱性 高衝擊強 度 High stiffness, High heat resistance, High impact strength	高剛性 高耐熱性 中衝擊強 度 High stiffness, High heat resistance, Medium impact strength		高光澤 抗應力白化 性佳 High gloss, Good resistance to stress whitening,		高流動性 中衝擊強 度 High fluidity, Medium impact strength		超高流動性 高剛性 高耐熱性 High stiffness, High heat resistance,

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項目 Properties	單位 Unit	檢驗方法 Test Method	射出級 Injection Grade								
			高耐衝擊共聚物 High Impact Copolymer			無規共聚物 Random Copolymer					
			4084	4204	4304	5060	5060T	5090T	5200XT	5090R	5350T
熔融指數 Melt Index	g/10min	ISO1133	10	19	30	7	7.5	15	18	17	35
熱變形溫度 Heat Deflection Temperature	°C	ASTM D648	100	100	100	90	95	95	95	95	95
軟化點溫度 Vicat Softening Temperature	°C	ISO306	135	135	140	125	125	125	125	125	125
降伏點拉力強度 Tensile Strength at Yield	Kg/cm ²	ISO527	220	210	230	270	280	280	280	280	280
斷裂點伸長率 Tensile Elongation at Break	%	ISO527	550	550	450	500	300	300	300	300	200
洛氏硬度 Rockwell Hardness	R scale	ISO2039	95	92	95	95	98	98	98	98	98
剛性係數 Flexural Modulus	Kg/cm ²	ISO178	9,000	8,500	9,000	9,000	10,000	10,500	10,500	10,500	10,500
IZOD 衝擊強度 IZOD Impact Strength	Kg.cm/cm notch	ISO180 (23°C)	40	40	45	4.5	7	6	6	6	5
		(-20°C)	10	10	10	---	---	---	---	---	---
收縮率 Mold Shrinkage	%	FPC Method	1.3-1.7	1.3-1.7	1.3-1.7	1.3-1.7	1.3-1.7	1.3-1.7	1.3-1.7	1.3-1.7	1.3-1.7
密度 Density	g/cm ³	ISO1183	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
燃燒性 Flammability File No. E216959	Class	UL94	---	---	---	---	94HB	94HB	---	---	94HB
FDA 21 CFR 177.1520			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
USP Class VI			---	---	---	Yes	Yes	Yes	---	Yes	Yes
JHOSPA-PL			---	---	---	---	---	Yes	---	---	Yes
用途 Application			保險槓、汽車配件 載重容器、棧板 Bumpers, Automotive parts, Heavy duty container, Pallet			射拉吹 成型、 點滴瓶 ISBM, Pharmaceutical bottle	透明文件夾 透明 CPP 膜 透明容器 Transparent Portfolio, Transparent CPP film, Transparency container	高透明容器 透明家庭用品 一次性針筒 High transparent container, Transparent housewares, Disposable syringes	一次性針筒 適用於 γ ray 消毒 Disposable syringes, Anti γ ray	高透明容器 透明家庭用品 一次性針筒 High transparent container, Transparent housewares, Disposable syringes	
特性 Characteristics			高衝擊 強度、低 溫脆性 優 High impact strength, Excellent resistance to low temperature brittleness	高流動性、高衝擊 強度、低溫脆 性優 High fluidity, High impact strength, Excellent resistance to low temperature brittleness	抗化學 藥品性 佳 Good resistance to chemical	高透明性、 光澤性佳 High transparent, Good luster	高透明性、 藥品性佳 High transparent, Good resistance to chemical	高透明性、 抗化學 藥品性佳 High transparency, Good resistance to chemical	高透明性、 抗化學 藥品性佳 High transparency, Good resistance to chemical	高流動性、 高透明性、 抗化學 藥品性佳 High fluidity, High transparent, Good resistance to chemical	

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押出吹製級 Extrusion & Blow Molding Grade									
均聚物 Homopolymer							無規共聚物 Random Copolymer		
1005	1005N	1009	1020	1020L	1024	1024T	5003	5018	5018T
0.5	0.5	0.9	2.0	1.7	1.8	1.8	0.25	1.7	1.7
117	116	115	115	115	122	120	85	90	95
155	154	152	152	152	155	153	128	120	125
370	360	350	350	350	400	380	250	250	300
300	300	300	400	400	200	200	500	500	400
107	106	105	105	105	110	110	90	90	98
15,500	15,500	13,500	13,500	13,500	16,000	15,000	8,000	9,500	10,500
13	45	8	6	6	6	6	40	8	15
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1.3-1.7	1.3-1.7	1.3-1.7	1.3-1.7	1.3-1.7	1.3-1.7	1.3-1.7	1.3-1.7	1.3-1.7	1.3-1.7
0.90	0.90	0.90	0.90	0.90	0.91	0.91	0.90	0.90	0.90
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Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
---	---	---	---	---	Yes	---	---	Yes	---
Yes	Yes	---	---	---	---	---	---	---	Yes
真空成型板 PPH 管材 吹製成型 Thermoforming sheet, PPH pipe, Blow molding	真空成型板 吹製成型 Thermoforming sheet, Blow molding	真空成型板 吹製成型 打包帶 Thermoforming sheet, Blow molding Strapping	壓空成型板 文件夾 吹瓶、打包帶 Pressure forming sheet, Portfolio, Bottles, Strapping	透明壓空 成型板 文件夾 吹瓶 Transparent pressure forming sheet, Portfolio, Bottles	透明壓空 成型板 文件夾 Transparent pressure forming sheet, Portfolio,	透明壓空 成型板 文件夾 Transparent pressure forming sheet, Portfolio,	PPR 管材、 建築用冷熱水管、 飲用水管 真空成型板 吹製成型 PP-R pipe for drinking water, waste system, under-floor heating circuits Thermoforming sheet, Blow molding	吹瓶 點滴瓶 Blow molding, Pharmaceutic al bottle,	吹瓶 果汁瓶 透明文件夾 Blow molding, Juice bottle, Transparent portfolio
熔融強度優 真空成型性佳 Excellent melt strength, Deep drawing	熔融強度優 真空成型性佳 透明性佳 Excellent melt strength, Deep drawing, Good transparency	拉力強度優 Excellent tensile strength		透明性佳 高剛性 高耐熱性 Good transparency, High stiffness, High heat resistance		耐應力蠕變性佳 低溫脆性佳 高衝擊強度 抗白化性優 Excellent resistance to creep, Good resistance to low temperature brittleness, High impact strength, Excellent resistance to whiteness		抗化學藥 品性佳 Good resistance to chemical	高透明性 光澤性佳 High transparency, Good luster

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項目 Properties	單位 Unit	檢驗方法 Test Method	押出吹製級 Extrusion Grade			纖維級 Fiber Grade					
			耐衝擊共聚物 Impact Copolymer			均聚物 Homopolymer					
			3003	3005	3010	1040F	1202F	1352F	1900D	1990	1990R
熔融指數 Melt Index	g/10min	ISO1133	0.35	0.5	1.3	3	18	35	120	1,500	3,200
熱變形溫度 Heat Deflection Temperature	°C	ASTM D648	110	110	110	113	115	115	115	115	115
軟化點溫度 Vicat Softening Temperature	°C	ISO306	145	145	145	150	152	152	153	150	150
降伏點拉力強度 Tensile Strength at Yield	Kg/cm ²	ISO527	250	250	250	350	350	300	370	300	300
斷裂點伸長率 Tensile Elongation at Break	%	ISO527	500	500	500	600	300	100	50	<50	50
洛氏硬度 Rockwell Hardness	R scale	ISO2039	95	95	95	105	105	105	108	107	107
剛性係數 Flexural Modulus	Kg/cm ²	ISO178	12,000	11,500	12,000	12,500	13,500	13,000	15,000	13,500	13,500
IZOD 衝擊強度 IZOD Impact Strength	Kg.cm/cm notch	ISO180 (23°C)	80	60	55	4.5	3	3	2.5	2.0	2.0
		(-20°C)	16	16	13	---	---	---	---	---	---
收縮率 Mold Shrinkage	%	FPC Method	1.3-1.7	1.3-1.7	1.3-1.7	1.3-1.7	1.3-1.7	1.3-1.7	1.3-1.7	1.3-1.7	1.3-1.7
密度 Density	g/cm ³	ISO1183	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
燃燒性 Flammability File No. E216959	Class	UL94	---	---	---	---	---	---	---	---	---
FDA 21 CFR 177.1520			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
USP Class VI			---	---	---	---	---	---	---	---	---
用途 Application	PPB 管材 PPB Pipe,		真空成型板 吹製成型 Thermof orming sheet, Blow molding	瓦楞板 吹製成 型 Corrugated sheet, Blow molding	扁紗: 編織袋, 地毯底部 單絲: 刷子, 繩索 Yarn: Woven bags, Carpet backing Monofilament: Brush, Rope	土工織物 織帶 地毯紗 工業布 Geotextile, Textile, Carpet facing, Industrial textile	不織布 濾布 工業布 Non-woven fabric, Filter cloth, Industrial textile,	高速薄壁 射出成型 品 、濾材 High speed thin walled injection molding products, Filtration media	熔噴濾芯 不織布、 衛材 尿布、濾材 Meltblown filter, Non-woven fabric, Hygiene, Diaper, Filtration media	超細纖維、 不織布、 口罩、 高效濾材 Ultrafine fiber, Non-woven fabric, Mask, High efficiency particulate air	
特性 Characteristics	高衝擊強度 低溫脆性優 熔融強度優 High impact strength, Excellent resistance to low temperature brittleness, Excellent melt strength		高衝擊 強度 低溫脆 性優 剛性佳 High impact strength, Excellent resistance to low temperatur e brittleness, Good stiffness	拉力強度 優 Excellent tensile strength	抗氣體變 色性佳 延伸性佳 拉力強度 優 Anti gas-fading, Good stretchability , Good softness	抗氣體變 色性佳 延伸性佳 柔軟性佳 Anti gas-fading, Good stretchability , Good softness	超高流動 性 成型時間 短 光澤性佳 低翹曲 Superhigh fluidity, Fast cycling, Good luster, Low warpage	超高流動性 紡織性優 牽引性優 低丹尼數 柔軟性佳 顆粒狀 Superhigh fluidity, Excellent Spinnability, Excellent Drawability, Low denier, Pellet type	超高流動性 紡織性優 低丹尼數 不含過氧化 物 無氣味 粉狀 Super high fluidity, Excellent Spinnability, Low denier, Peroxide free, Odor free, Powder form		

本表數據為代表值，僅供選擇品級用途之參考

The details given in this data sheet are our standard value but not specification guaranteed.