



技術資料表  
Technical Data Sheet

## 1WACU18TYPE

抗靜電，抗 UV、耐磨、耐低溫級

Antistatic, anti-UV, wear-resistant, low-temperature resistant

樹脂 Resin	TPU 聚酯類 Thermoplastic Polyurethane polyester
規格 Grade	1WACU1885A-E3
來源 source	上禾伸企業

### 描述 Description

- 抗靜電級·適度的靜電導引、消除。

Antistatic grade, moderate static electricity guidance and elimination.

- 抗 UV 級·可使用於戶外或是陽光強烈照射的·使產品使用時間延長。

Anti-UV grade, can be used outdoors or under strong sunlight, extending the use time of the product.

- 抗張強度及斷裂延伸率大·優秀彎曲強度。

High tensile strength and elongation at break, excellent flexural strength.

- 可耐低溫-35~-50°C

Can withstand low temperature -35~-50°C

- 耐油、耐潤滑油及耐脂肪族碳氫有機溶劑。

Oil resistance, lubricating oil resistance and aliphatic hydrocarbon organic solvent resistance.

- 具抗氧、臭氧及耐老化之特性。

With anti-oxidation, ozone and anti-aging properties.

- 可和 PC、PC/ABS 雙次射出黏合。

It can be bonded with PC and PC/ABS by double injection.

- 是綠色環保塑料·對環境非常友善·可短期內·在自然環中分解·低汙染。

It is a green and environmentally friendly plastic, which is very friendly to the environment. It can be decomposed in the natural environment in a short period of time and has low pollution.

### 應用 application

墊片、軸襯、膠皮、薄膜、管件、電線電纜、運動鞋底、衣服與裝備零件、飾品件扣具零件、運動器材以及機械零件等。

Gaskets, bushings, rubber, films, pipe fittings, wires and cables, sports shoe soles, clothing and equipment parts, jewelry fastener parts, sports equipment and mechanical parts, etc.

### 成型模式

射出成型

### Forming mode

Injection Molding



### 特性 Properties

項目 Project	測試標準 Testing standards	單位 Unit	標準數值 Typical Value
硬度 Rockwell Hardness	ASTM D-2240	Shore A	85±3
比重 Specific Gravity	ASTM D792	g/cm <sup>3</sup>	1.195
流動指數 MFR,(MI) 190×2.16KG	ASTM D1238	g/10min	15
收縮率-平行    Mold Shrinkage MD	3 mm t	%	1.8
收縮率-垂直 ⊥ Mold Shrinkage TD			~2.2
耐燃性 Flammability	UL-94		HB
顏色 Color			natural color

### 機械特性 Mechanical properties

伸張降伏強度 Tensile Strength at Yield			130
伸張斷裂強度 Tensile Strength at Break	ASTM D638	kg/ cm <sup>2</sup>	72
拉伸模數 Tensile Modulus			4300
斷裂伸張率 Tensile Elongation at Break		%	> 200
彎曲強度 Flexural Strength	ASTM D790	kg/ cm <sup>2</sup>	50
彎曲模數 Flexural Modulus			890
衝擊強度(缺口式)IZOD Impact (notched)	ASTM D256	23°C kg-cm/cm	22
硬度 Rockwell/Shore Hardness	ASTM D785/D2240	D	85 ±2

### 電氣特性 Electrical properties

體積固有阻抗 Volume inherent impedance	ASTM D257	Ω-cm	10 <sup>8-11</sup>
表面阻抗 Surface resistivity		Ω	10 <sup>8-11</sup>

### 成型條件 Molding conditions

烘乾溫度 Drying temp. °C 90 烘乾時間 Drying time H 3~5

■TPU 塑料具有吸濕性，樹脂的預乾燥始終是加工前的必要步驟。依氣候，暴露在大氣中的顆粒會很快吸收水分。水分可能會導致聚合物的裂解，以及在模製和擠出部件中形成氣泡或條紋。為了確保高效和成功加工成優質部件，請參考建議烘乾溫度及時間。

TPU resin has hygroscopicity, and pre-drying of TPU resin is always a necessary step before processing. Relying on the climate, particles exposed to the atmosphere will quickly absorb moisture. Moisture may cause partial degradation of the polymer and formation of air bubbles or streaks in molded and extruded parts. In order to ensure efficient and successful processing into high quality parts, please refer to the recommended drying temperature and time.

進料區溫度 Feed zone temp. °C 165~185 壓縮區溫度 Compression zone temp. °C 170~195

計量區溫度 Metering zone temp. °C 170~195 噴嘴溫度 Nozzle temp. °C 170~195

■TPU 塑料成型溫度以低標為設定基準試做，逐步以 5°C 升高成型溫度，直到適合成型溫度即可，否則溫度過高，產品容易產生變色、過火熱裂解。

The molding temperature is tested by setting the low standard as a reference, and gradually increasing the molding temperature by 5°C until it is suitable for the molding temperature. Otherwise, the temperature is too high, and the product is prone to discoloration and overheating.

### 供應與儲存 Supply and Storage

■塑料以顆粒形式提供，包裝在 25kg 防潮袋中。

The plastic is supplied in pellet form, packaged in a 25kg moisture-proof bag.

■塑料應儲存在陰涼乾燥的環境中，直到使用前為止。

Plastic should be stored in a cool, dry environment until just before use.



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- 塑料儲存溫度不應超過 30°C。如果僅從袋中使用一部分 TPU 樹脂，則其餘 TPU 樹脂應該緊密封閉。

Plastic storage temperature should not exceed 30°C. If only a portion of the TPU resin is used from the bag, the rest of the TPU resin should seal tightly.

\*雖然上述信息是出於善意並被認為是準確的，但我們不保證依賴此類信息取得令人滿意的結果，並且不承擔因使用此類信息而引起的任何損失或損害的全部責任。\*以上數值係僅供選擇用途品級之參考。

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