



Global Delivery Service



**HER CHANG HSING PLASTIC INDUSTRY CO.,LTD**  
**和昶興塑膠工業股份有限公司**

TPR / TPE / EVA / SBS / SEBS / TPU



# TPR

## Daily Products & Grips of Hand Tools

日常用品 & 工具握把

TPR is widely used in daily products because it is easy to coloring with excellent bonding strength and soft touching feel. Recently, the bi-material design has become a main stream of grip industry. The over model injection designs with TPR which provides soft touching feel and impressive non-slip property. It is very suitable for different sort of grips, and makes various options and choices for grip makers. So it makes the end products more competitive as well. TPR著色性佳、接著性強，更有柔軟舒適的觸感，因此用於日常用品上深受廣大消費者喜愛。TPR的雙物料設計和應用於近年形成一大潮流。TPR包覆材料的觸感柔軟和極佳的防滑效果，運用在各類產品的握把部分，讓傳統式握把有不一樣的變化。

## Shoe Materials

鞋材用品

TPR is one of the major materials for the shoe industry. TPR to can provided good springiness, excellent shock absorbency, skidproof, cold-resistant, and abrasion resistance.

TPR具有良好的彈性、吸震性、防滑、耐寒性及耐磨損性，更是鞋材用品的主要原料之一。

## Ultra-Soft GEL

超軟質凝膠

TPR Ultra-Soft GEL provides high transparency, flexibility, excellent shock absorbency, and outstanding resilience. It also furnishes with soft touching feel. It can be injection molded directly onto fabrics and plastics, so it is ideal for different applications such as shock absorbency pads for footwear (inserts in the shoes center base), toe separators, sporting goods and protection appliances, medical recovery equipments, 3C products shock absorbency pads, toys.

TPR超軟質凝膠材料具有高透明度、高韌性、優越吸震性、彈力回覆性更具柔軟的觸感，並可直接注塑或在布料上注塑成型。適用於各種高級鞋材（鞋中底的吸震墊）、腳趾分隔膠、運動器材、運動防護器具、醫療復健用品、資訊產品防震墊、軟質玩具等。

# EVA

## EVA Compound Materials Properties

EVA複合材料屬性

PROPERTY	METHOD	UNIT	SPEC.
<b>Hardness</b> 硬度	ASTM-D-2240	shore C	30 ~ 70
<b>Density</b> 密度	ASTM-D-3575	g / cm <sup>3</sup>	0.20 ~ 0.22
<b>Tensile Strength</b> 抗拉強度	ASTM-D-412	kg / cm <sup>2</sup>	22 ~ 28
<b>Elongation</b> 伸長率	500 mm / min	%	230 ~ 250
<b>Tear Strength</b> 撕裂強度	ASTM-D-3574	kg / cm <sup>2</sup>	3 ~ 3.5
<b>Compression Set 50°C\6h</b> 壓縮設置 50°C\6小時	ASTM-D-395	%	45 ~ 50
<b>Dynamic compression set</b> 動態壓縮		%	11 ~ 13
<b>Resiliency</b> 彈性	ASTM-D-2632	%	35
<b>Shrinkage</b> 收縮	70C / 40 min	%	0.5 ~ 1
<b>Mould Release</b> 脫模劑			Good
<b>Expansion Ratio</b> 膨脹比			1.2 ~ 1.8

# TPE

## Application

### 適用範圍

- Consumer : appliances, food packaging and closures, hand and power tools, housewares, personal care, sporting goods ,infant care &toys
- Electronics : wire & cable, computer and business equipment, video game joystick grips
- Automotive : window seal, fenders, anti-dust covers, steering wheel covers, grips
- Medical : medical tubing, masks, pumping bulbs, handle grips, medical wheels, gaskets
- Others : in-soles, out-soles, heels, polymer modification
- 消費品市場：家用電器、食品包裝與密封、手工具、家用器皿、個人用品、運動器材、嬰兒用品和玩具
- 電子產品：電纜線外殼、辦公設備、遊樂器方向盤
- 汽機車：門窗邊條、擋泥板、防塵罩、方向盤、機車及腳踏車手把
- 醫療器材：醫用管材、防毒面罩、吸球、儀器手把、輪子、墊片
- 其他：各式鞋底、鞋跟、PP、PE、PS、EVA之改質劑

## TPE Properties

### TPE 屬性

PROPERTY	METHOD	UNIT	SPEC.
<b>Hardness</b> 硬度	ASTM D-2240	Shore A	10 ~ 95
<b>Specific Gravity</b> 比重	ASTM D-792	g / cm <sup>3</sup>	0.90 ~ 1.12
<b>Tensile Strength</b> 抗拉強度	ASTM D-412	kg / cm <sup>2</sup>	3 ~ 115
<b>Elongation</b> 伸長延展率	ASTM D-412	%	350 ~ 930
<b>Low Temperature</b> 脆化溫度	ASTM D-746	°C	-60 ~ -40

## TPE v.s. PVC

### Characteristic

### TPE 與 PVC

### 特性比較表

PROPERTY	TPE COMPOUNDS	PVC ( 軟質 )
<b>FEATURES</b> 特性	<ul style="list-style-type: none"> <li>· Without Plasticizers</li> <li>· Non-toxic and odorless during processing</li> <li>· No Toxic gas occurred during combustion</li> <li>· Harmless to environment &amp; human body</li> <li>· Eco-friendly</li> <li>· 不含增塑劑含磷苯二甲酸鹽</li> <li>· 加工過程無惡臭</li> <li>· 燃燒不產生有毒氣體</li> <li>· 對環境人體無害</li> <li>· 無毒、環保</li> </ul>	<ul style="list-style-type: none"> <li>· With Plasticizers</li> <li>· Stench occurred during processing</li> <li>· Toxic gas occurred during combustion</li> <li>· Cause pollution to environment</li> <li>· Import restrictions in EU</li> <li>· 增塑劑含磷苯二甲酸鹽</li> <li>· 加工過程有惡臭</li> <li>· 燃燒產生有毒氣體(戴奧辛)</li> <li>· 易污染環境</li> <li>· 在歐洲國家受到進口限制</li> </ul>
<b>HARDNESS</b> 硬度	0° ~ 90° Shore A 0° ~ 50° Shore D	10° ~ 70° Shore A
<b>PROCESSING TEMPERATURE</b> 加工溫度	100°C ~ 210°C	130°C ~ 180°C
<b>INFLUENCE TO FACILITIES</b> 對設備之影響	No 不影響	Corrosion to facilities 易腐蝕設備



# SBS / SEBS



**Engineering  
Plastic  
Elastomer  
has the  
following features**

工程塑膠彈性體  
具有之特性

- Non-toxic
- Not need vulcanization, easy to blend colors
- Has excellent resistance to low and high temperature (-30°C~120°C)
- Soft touch, excellent surface quality
- Has excellent resistance to twists and turns
- Broad hardness range: 0A ~ 60D
- Degraded material can be recycled completely
- Can be adjusted to make the best suitable formula according to customer's request
- Non-toxic and no unpleasant odors during production process
- No harm to environment and equipment
- 無毒
- 不用硫化，易於調色
- 具有優良的耐低溫、耐高溫（-30°C ~ 120°C）
- 觸感柔軟、表面質量優異
- 具有優良的耐曲折性
- 寬廣的硬度範圍：0A ~ 60D
- 水口料可百分百循環使用
- 可依客戶要求，調整最適合您使用的配方
- 生產過程中無毒性，更不會產生令人不愉快的氣味
- 對環境及設備無傷害

**Engineering  
Plastic  
Elastomer  
can bring you  
the following  
advantages**

工程塑膠彈性體  
可以為您帶來的  
優勢

- Developing new eco-friendly materials
- Lowering your processing costs
- Assisting in improvement of existing products
- Making your designer inspired
- Making your products diversified and humane
- Making your products more contemporary
- Can replace silicon (Si) rubber in some fields, and more user-friendly than silicon (Si) rubber
- Enhancing the market competitiveness of your products
- 發展新的環保材料
- 降低您的加工成本
- 協助改良現有產品
- 給您的設計師帶來設計靈感
- 使您的產品多樣化、人性化
- 使您的產品更具時代氣息
- 在某些領域更可替代矽膠，且比矽膠更具人性化
- 提升您產品的市場競爭力



**Grip****握把類**

Applicable to the elastic plastic packages of all types of elastic grips , such as golf grips, all kinds of racket grips, bicycle grips, motorcycle grips, luggage and suitcase grips, ski pole grips, elastic steering-wheel grips, tableware grips, cutting tool handles, hand tool grips, flashlight grips, toothbrush handles, anti-corrosion paint brush handles and so on.

適用於各類型的彈性握把，如高爾夫球握把、各類球拍握把、自行車握把、機車握把、箱包手提箱握把、滑雪桿握把、方向盤彈性握把、餐具握把、刀具手柄、手工具握把、手電筒握把、牙刷柄、防腐蝕油漆刷手柄彈性包膠等。

**Injection Molding****射黏類**

Applicable to the secondary injection molding of PP, ABS, PS, PC, PE, PVC, PA, POM, PMMA, etc., for example, two-color or multi-color toothbrush handles. Applicable to various types of rubber covering, with strong adhesive force. It will make your products beautiful and unique, comfortable to touch, and upgraded.

適用於PP, ABS, PS, PC, PE, PVC, PA, POM, PMMA等材質的二次射黏，如雙色或多色牙刷柄，各類型包膠，黏接力強勁、產品美觀、獨特、手感舒適，使您的產品提升更高的檔次。

**Luggage Accessories****箱包配件類**

Applicable to all kinds of soft and hard luggage accessories: handle, base, elastic rubber, injection molding fashion bags, luggage castors, tags.

適用於各類軟硬度的箱包配件：握把、底座、彈性膠皮、注塑時裝包、箱包腳輪、吊牌。

**Sports Equipment****運動器材類**

Applicable to the rubber of all kinds of soft and hard sports equipment, such as elastic grip, protector, goggles, flippers, chest expander rubber strip, hand grip and table tennis bat, etc.

適用於各種軟硬度的運動器材，如彈性握把、護具、蛙鏡、蛙鞋、擴胸器膠條、握力器、乒乓球拍的膠皮等。

**Toys****玩具類**

Applicable to all kinds of soft and hard toys, highly transparent toys, toy dolls, toy hats, baby molar devices, viscosity balls, and water wigglers and so on.

適用於各種軟硬度的玩具、高透明玩具、玩具公仔、玩具帽、嬰兒磨牙器、黏性球、水蛇等。

**Blow Molding****吹塑類**

Such as toys, lamps, and elastic tubes.

如玩具、燈飾、彈性條管。

**Adult Products****成人用品類**

Applicable to all kinds of soft and hard adult health-care appliances, such as adult simulation tools and health care equipment.

適用於各種軟硬度的成人保健用具，如成人仿真用具、保健用具。





TPR

EVA

TPE

SBS / SEBS

TPU

HER CHANG HSING PLASTIC INDUSTRY CO.,LTD

**0°C**  
**Non-Adhesive**  
0°C無黏性類

Such as 0°C toys, adult health-care equipment and simulation equipment.  
如0°C玩具成人保健用具及仿真用具。

**Massage**  
**Equipment**  
按摩器材類

Applicable to all kinds of soft and hard massage equipment, such as massage head, elastic massage ball, and muricate elastic massage mattress, etc.  
適用於各種軟硬度的按摩器材，如按摩頭、彈性按摩球、帶刺的彈性按摩墊等。

**Castors**  
腳輪類

Such as scooter wheels, industrial castors, computer desk leg wheels, furniture castors, and luggage castors.  
如滑板車車輪、工業腳輪、電腦桌腳輪、家具腳輪、箱包腳輪。

**Shoe**  
**Materials**  
鞋材類

Applicable to very soft insole, TR shoe materials and accessories.  
適用於非常柔軟的鞋墊、TR鞋材、鞋配件。

**Tableware**  
餐具類

Applicable to all kinds of tableware grips, beef fat scratchers and lunch boxes.  
適用於各種餐具的握把、牛油刮、便當盒。

**Extrusion**  
擠出類

Such as furniture decorative edge slat, snooker table elastic side strip, door and window seals, hose, beach chair elastic tape, elastic tape, automobile elastic tape.  
如家具裝飾邊條、桌球臺彈性邊條、門窗封條、膠管、沙灘椅彈性膠條、彈性跳繩、汽車彈性膠條。

**0°C Highly**  
**Adhesive**  
0°C高黏性類

Such as window stickers, sticky toys, and adhesive adult health-care products.  
如窗貼、黏性玩具、帶黏性的成人保健用品。

**Plastic**  
**Modification**  
塑料改性類

For toughening and increasing cold resistance, elasticity, bending resistance and rheology of plastics. With such features as environmental protection, easy processing, low cost and blended with a variety of plastics, our product can be used as the plasticizer and quality improver of PP, PS, PE, PPO, ABS and other plastics.  
用於塑料增韌及增加耐寒性、彈性、耐曲折性、流變性。以其環保、易加工、成本低廉、可與多種塑料接著，共混相容的特點，可作為PP, PS, PE, PPO, ABS等塑料的增韌劑和質量改進劑。



# TPU



## TPU Spec. (Injection grade)

射出級 TPU  
物性規格表

PROPERTY	METHOD	UNIT	I-70A	I-75A	I-80D	I-85D	I-90D
<b>Hardness</b> 硬度	ASTM D-2240	Shore A Shore D	70±2A	75±2A	80±2A	85±2A	90±2A
<b>Specific Gravity</b> 比重	ASTM D-792	g / cm <sup>3</sup>	1.18±0.02	1.18±0.02	1.18±0.02	1.20±0.02	1.22±0.02
<b>100% Modulus</b> 100% 抗拉模數	ASTM D-412	kg / cm <sup>2</sup>	30±10	40±10	40±10	70±10	80±20
<b>Tensile Strength</b> 抗拉強度	ASTM D-412	kg / cm <sup>2</sup>	350±100	350±100	400±100	400±100	500±100
<b>Elongation</b> 伸長率	ASTM D-412	%	800±100	700±100	550±100	550±100	500±100
<b>Tear Strength</b> 撕裂強度	ASTM D-624	kg / mm <sup>2</sup>	7±1	7±1	8±1	9±1	12±1
<b>Abrasion Loss</b> 摩擦損耗	DIN-53516	mm <sup>3</sup>	50以下	50以下	50以下	50以下	50以下

PROPERTY	METHOD	UNIT	I-95A	I-98A	I-60D	I-64D	I-71D
<b>Hardness</b> 硬度	ASTM D-2240	Shore A Shore D	95±2A	98±2A 55±2D	60±2D	64±2D	71±2D
<b>Specific Gravity</b> 比重	ASTM D-792	g / cm <sup>3</sup>	1.24±0.02	1.24±0.02	1.25±0.02	1.25±0.02	1.25±0.02
<b>100% Modulus</b> 100% 抗拉模數	ASTM D-412	kg / cm <sup>2</sup>	100±20	130±20	180±30	180±30	210±30
<b>Tensile Strength</b> 抗拉強度	ASTM D-412	kg / cm <sup>2</sup>	500±100	500±100	400±100	400±100	400±100
<b>Elongation</b> 伸長率	ASTM D-412	%	500±100	500±100	350±50	350±50	350±50
<b>Tear Strength</b> 撕裂強度	ASTM D-624	kg / mm <sup>2</sup>	15±1	18±1	22±1	22±1	24±1
<b>Abrasion Loss</b> 摩擦損耗	DIN-53516	mm <sup>3</sup>	50以下	50以下	50以下	50以下	50以下



## TPU Spec. (Extrusion grade)

押出級 TPU 物性規格表

PROPERTY	METHOD	UNIT	E-80A	E-85A	E-90A	E-95A	E-98A	E-55D	E-60D
<b>Hardness</b> 硬度	ASTM D-2240	Shore A Shore D	80±2A	85±2A	90±2A	95±2A	98±2A	55±2D	60±2D
<b>Specific Gravity</b> 比重	ASTM D-792	g / cm <sup>3</sup>	1.20±0.02	1.21±0.02	1.22±0.02	1.22±0.02	1.23±0.02	1.23±0.02	1.25±0.02
<b>100% Modulus</b> 100% 抗拉模數	ASTM D-412	kg / cm <sup>2</sup>	50±20	60±20	80±20	100±20	120±20	120±20	200±30
<b>Tensile Strength</b> 抗拉強度	ASTM D-412	kg / cm <sup>2</sup>	350±100	400±100	500±100	500±100	500±100	500±100	550±100
<b>Elongation</b> 伸長率	ASTM D-412	%	600±100	600±100	500±100	500±100	500±100	450±100	400±100
<b>Tear Strength</b> 撕裂強度	ASTM D-624	kg / mm <sup>2</sup>	8±1	8±1	13±1	15±1	16±1	17±1	25±1
<b>Abrasion Loss</b> 摩擦損耗	DIN-53516	mm <sup>3</sup>	50以下	50以下	50以下	50以下	50以下	50以下	50以下

## Quality is our exactly promise to the customer

HER CHANG HSING is a grounded, reliable, and trustworthy company. We have been established since 1991. After there years, we have built a reputation in our field, and had long term relationships with our suppliers and customers. There is no doubt that we will be committed ourselves to customers' satisfaction. In order to improve the quality of our products, we have put effort on upgrading every single production process. Now, we are not only maintaining the current business, but also investing new materials development. Moreover, our service category is extending to value-add and superior performance for our clients. HCH are looking forward to having bright prospects with our business partners in the coming future.

## 品質是我們對客戶的絕對承諾

自1991年公司創立以來，和昶興不斷精進，從不放鬆任一環節，來自業界一致的肯定與推崇，更是和昶興再次躍進的基石。未來，我們將在現有的基礎上，不斷在穩定中追求成長。除了提升現有的產品價值，我們更著重開發新材料，為客戶提升品質、性質、利潤。並與高科技產業，共同迎接未來新的挑戰。

**HER CHANG HSING PLASTIC INDUSTRY CO., LTD**  
**和昶興塑膠工業股份有限公司**



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