

**Sunglory**



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SUNGLORY TIKTOK



SUNGLORY ZALO

SUNGLORY<sup>®</sup>  
**MANUFACTURER OF TPE&TPR,SOLUTIONS  
IN SOFT TOUCH MATERIALS**

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# 1 | COMPANY PROFILE

SUNGLORY® — MANUFACTURER OF TPE&TPR, SOLUTIONS IN SOFT TOUCH MATERIALS

SUNGLORY PLASTIC (VIET NAM) CO.,LTD. is a new enterprise specializing in the promotion and production of application tailored soft synthetic rubber compounds of the Thermoplastic Elastomers (TPE' s) group of polymers, the products cover thermoplastic elastomer TPE/TPR (TPS, TPV, TPO, TPU, TPEE), modified resin, functional masterbatch and other fields. Widely used in consumer goods, automotive parts, industrial supplies and medical accessories and other industries.

### ◆ Core values:

- **Innovation-driven:** We are committed to technological innovation and constantly promote the upgrading and application of TPE materials.
- **Quality first:** adhere to high standards of production process, to ensure that each batch of products are in line with international quality standards.
- **Customer orientation:** deeply understand customer needs, provide customized solutions, and establish long-term cooperative relations.

### ◆ Products and Services:

- Offers various types of TPE materials, including but not limited to universal, food contact grade, medical grade, and special performance.
- According to customers' specific application requirements, provide material formulation customization and technical support services.
- Equipped with a full range of twin-screw extruder production lines, the capacity of more than 10,000 tons/year.

### ◆ Target market:

Our market positioning covers multiple industries, including high-end markets with special requirements for material properties.

### ◆ Management team:

Composed of senior industry experts and management talents with international vision, with rich industry experience and forward-looking market insight.

### ◆ Company vision:

To be the world's leading supplier of TPE materials, to promote the development of the industry and achieve sustainable development through continuous technological innovation and excellent customer service.

**Sunglory**

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IN SOFT TOUCH MATERIALS





Exhibition Hall



Sample Room



Part of the Heyuan Production Area



Laboratory



## 2 | TPE INTRODUCTION

SUNGLORY® —MANUFACTURER OF TPE&TPR, SOLUTIONS IN SOFT TOUCH MATERIALS

“

Thermoplastic elastomers (TPE), sometimes referred to as thermoplastic rubbers, are a class of copolymers or a physical mix of polymers (usually a plastic and a rubber) that consist of materials with both thermoplastic and elastomeric properties.

TPE' s can replace PVC and traditional rubber and silicone rubber.

It provides broad space for tailored new product development and is a magic weapon in the hands of product designers.

”

### ◆ 2.1 What is TPE?

TPE (Thermoplastic Elastomer) is a kind of elastomeric raw material, which has the features of high resilience, high strength, available in a wide hardness range. Suitable for a wide range of applications. non-toxic and safe, and excellent colorability.

It exhibits soft touch, weather resistance, fatigue resistance and temperature resistance. It' s easy to process, no need to vulcanize, can be recycled to reduce costs and carbon emission

Specific products can be over-molded onto PP, PE, PC, PS, ABS, AS, SAN, PETG,PCTG,PMMA and other basis materials, but can also be molded separately.

### ◆ 2.2 Classification

- 1.Polymer types, prepared by reactor, such as TPA, TPU, and TPEE
- 2.Polymer blends, prepared in a compounding operation such as TPS and TPV.
  - a.Note that In China we call TPS-H TPE (based upon HSBC)
  - b.TPS-N (based upon SBC) we call TPR.

### ◆ 2.3 Processing

Like thermoplastics, TPE are processed by injection molding, extrusion and casting. Since TPE' s under certain conditions adhere to harder substrates, they can also be over moulded and co-extruded.

## ◆ 2.4 Advantages

TPE material generally show many advantages:

- ① Adjustable hardness; from gel like hardness (Shore OO grades) to medium hardness (Shore A range) to Hard - vulcanized rubber like grades (Shore D range)
- ② The benefit of using thermoplastic elastomers is the ability to stretch to moderate elongations and return to its near original shape creating a longer life and better physical range than other materials.
- ③ TPE material is easy to process and shape, can be manufactured into various shapes by injection molding, extrusion, blow molding or casting. It can also be combined with other materials by overmolding or co-extrusion. TPE' s can also be thermal welded.
- ④ TPE materials exhibit good cold resistance with brittle points below  $-50^{\circ}\text{C}$  and continuous use temperatures over  $70^{\circ}\text{C}$  .
- ⑤ TPE materials have, depending upon the polymer base, good chemical resistance to most daily chemicals at room temperature and limited immersion times.
- ⑥ Some TPE materials have excellent wear resistance. These products are widely used in automotive parts, industrial products, such as castors.
- ⑦ TPE materials are thermoplastic materials and can be 100% recycled, without significant property loss. Reducing cost and waste generation.
- ⑧ TPE' s are easy to color using a pigments or universal color masterbatches.
- ⑨ The haptic of TPE' s can be adjusted from silky smooth for watch straps to vibration dampening grippy for power-tool handles.
- ⑩ TPE materials usually do not contain toxic and harmful substances, comply with the relevant environmental protection and safety standards.

## ◆ 2.5 Application Areas

**Consumer Goods:** TPE materials wide range of properties and allows for new designs of toys, stationery products, household articles and beverage packaging.

**Automotive Parts:** Plastic materials have always played a major role in automotive weight reduction. TPE material now replace traditional rubber products and contribute to a softer user experience.

**Industrial supplies:** TPE materials durability allows for industrial product applications with a long lifespan. They can also bring shock absorption, soft touch, electrical insulation, sealing and flame retardancy performance.

**Medical accessories:** TPE material is biocompatible and can be sterilized and are therefore widely used in medical devices and drug packaging, such as medical hoses, seals, handles, tourniquets, dropper, bottle stoppers, etc.

In short, due to the TPE wide range of properties, these materials can be used in a wide range of applications in many different fields.

# 3 APPLICATION SCENARIOS

SUNGLORY®—MANUFACTURER OF TPE&TPR, SOLUTIONS IN SOFT TOUCH MATERIALS



①

Consumer goods



②

Automotive parts



③

Industrial supplies



④

Medical accessories

Regulatory approval that Sunglory can comply with in the various industry segment, such as FDA, EN71, REACH, etc.

### 3.1 Consumer goods

TPE has the features of safety, environmental protection, weather resistance and comfortable feeling, and is replacing PVC and traditional rubber and silicone rubber in the consumption field.



#### ◆ Toys

- 1, Children's toys: baby teether, soft doll, toy car, sticky ball, water balloon, malt gumming toys, spider, gecko and other doll toys, doll skin, swing, etc.
- 2, Adult products: artificial skin, etc.
- 3, Pet toys: pet flying saucer, pet toy ball, dog bones and so on.
- 4, Leisure and entertainment: artificial bait, chip coins, etc.



#### ◆ Stationery

Soft touch sleeve, pen holder, eraser, folder, stationery scissors, stapler non-slip pad and head case, pencil case, utility knife handle, writing pad, etc.



#### ◆ Furniture and general purpose

3D printing silk, chest expander, resistance band, O-type grip device, R-type grip device, jump rope handle housing, 8-figure puller, softball bat, golf club, table tennis bat, finger pressure board, running machine, foot massager, facial beauty device, stroller, bicycle, wheelbarrow, scooter handle housing, skateboard brake pads, wear-resistant silencer casters, sandals, rain shoes, raincoat, frog shoes, diving goggles, sea drifting equipment, pillow, female underwear, coating of oxford cloth, non-woven tent cloth, bag, lining, sanitary napkins and diaper, clothes rack housing, knee sheath, shoe material, yoga mat, floor mat, non-slip mat, heat insulation mat, table cloth, mosquito repellent bracelet, massager, electronic cigarette, cosmetic brush, perfume bottle cap gasket, toothbrush handle, comb grip, gloves, water cup jacket, sealed bag, washing basket, food container seal cover pad, folding cutting board, folding garbage can, folding foot bath tub, folding vegetable basket, washbasin, folding bathtub, scrub towel, shower curtain, face mask, deodorant drain, dish soap nozzle, hand sanitizer bracelet, toilet brush head, baby bottle handle housing, children's tableware handle, food box, food container cap gasket, kitchen utensils handles, non-slip insulated covers for food containers, egg bars, hair dryers, shaver handle housing, electric irons, electric toothbrushes, water pipe, suction cup, luggage caster, luggage over-molded handle, luggage zipper head, over-molded chopping block, TPE Fabric, 3D printed TPE ski goggles, etc.



#### ◆ Beverage packaging

- 1, TPE foam bottle sealing plug
- 2, Juice drink bottle cap gasket
- 3, Beer bottle cap gasket
- 4, Bottle caps



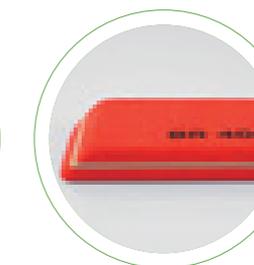
Baby teether



Toy car tires



Luggage casters and handles, zipper head



Eraser



Foam sole



Cosmetic brush head and handle



Yoga mat and expander



Wine sealing plug



Beer bottle cap



Juice drink cap



Food jar lid gasket



TPE Fabric



Application example: The beer bottle cap gasket is made of GP210-7522 material from Sunglory

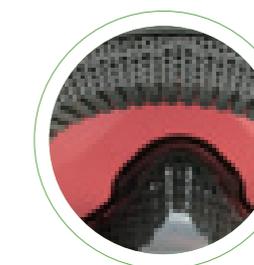
#### Product features:

The market development of TPE cap gasket materials in injection molding to replace silicone rubber plug products and molded cap to replace PVC bottle cap materials is expected in the future.

(1) Safety and environmental protection: do not contain plasticizers and vulcanization additives, will not be harmful to the body, comply with the requirements of food grade standards, can be recycled, will not cause secondary pollution of the environment;

(2) Strong designability: can be injection molding, molding processing, strong product designability, meet the diversified requirements of bottle cap design, TPE bottle cap materials can be customized for anti-theft cover and inkjet anti-counterfeiting products;

(3) Excellent performance: It can be firmly combined with various bottle cap materials, pressure and temperature resistance requirements can be customized according to product requirements, and product stability is excellent.



3D printed TPE ski goggles

### ◆ 3.2 Automotive parts

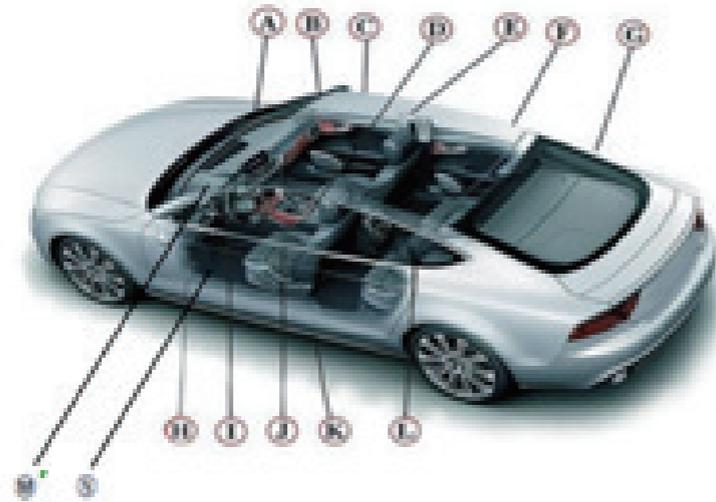
The TPE compounds developed by Sunglory for the automotive industry have a broad market. Our product is dedicated to meet the requirements of interior and exterior trim. If necessary, we can modify the material specifications to meet the unique requirements of our customers.

#### ◆ Automotive interior trim

1. Airbag cover
2. Gear sleeve and handle
3. Steering wheel jacket
4. Cable jacketing

#### ◆ Automotive exterior trim

Car dust cover, wiper blade, injection molding foot mat, blister foot mat, coating foot mat, front windshield seal frame, front windshield sealing strip, roof layering, sunroof seal, roof moulding, rear windshield trim, side strip, interior glass run channel, exterior glass run channel, carpet layering, triangle window lace, car coaster, car antenna, bumper, fender, wheel cover, luggage rack gasket, luggage seal, ventilation pipe, air conditioning hose, etc.



- |                                   |                               |                     |
|-----------------------------------|-------------------------------|---------------------|
| A. Front windshield seal frame    | F. Roof mouldling             | K. Carpet layering  |
| B. Front windshield sealing strip | G. Rear windshield trim       | L. Triangle window  |
| C. Roof strip                     | H. Side strip                 | M. Windscreen wiper |
| D. Gear guard                     | I. interior glass run channel | N. Foot mat         |
| E. Sunroof sealing strip          | J. exterior glass run channel |                     |



Car steering wheel jacket



vehicle's gear sleeve and handle



Airbag cover



Windscreen wiper



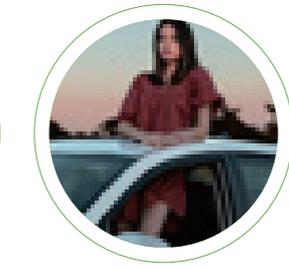
Car foot mat



Front windshield seal frame



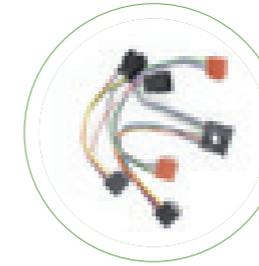
Sunroof sealing strip



Front windshield sealing strip



Front windshield lace



Cable jacketing



Roof mouldling



Intake-tube



Application example: Car foot mat are made of GP520-85BK-2 or GP520-90BK or GP520-80BK plus GP520-85BK from Sunglory.

#### Product features:

- (1)Weather resistance and UV resistance
- (2)Wear resistance
- (3)Efficient multi-component injection molding, excellent over-molding properties for PP, ASA, PC, PC/ABS and PMMA
- (4)Excellent surface quality
- (5)Low VOC
- (6)Environmental protection products, in line with REACH, ROHS, polycyclic aromatic hydrocarbons, nonylphenol and other environmental requirements. The products can be recycled
- (7)Comply with the requirements of UL94 V-0 flame retardant specifications

### ◆ 3.3 Industrial supplies

Sunglory is committed to developing special TPE products for industrial applications. Our compounds offer added value to our customers while complying with international standards such as flame retardant, UV resistance and food contact, etc.

### ◆ Electrical and Electronic

**The main product applications are:**

1. Cable jacketing and joint seal: mobile phone charging cable, USB data cable, headphone cable, network cable, power cord, charging pile line and other low-power cables, plugs, connectors, flame retardant cable and wire harness, etc.

2. Equipment shell, keys, contact sealing and anti-slip, anti-shock and noise reduction: dynamic high-grade audio equipment shell, MP4, memorizer, mobile phone shell, mobile phone bracket, camera, digital camera, digital camcorder, computer keys, DVD player, video game equipment, game console, headset, router, wireless data transmission terminal equipment, mouse wheel, mouse pad, electrical bracket/base, electronic wristbands, smart watches, electronic dictionary, Handheld learning machine, etc.

3. Switch: car start-stop switch, window lift switch, center control panel switch, window adjustment switch, rearview mirror adjustment switch, seat adjustment switch, remote control.

4. Uav: UAV handle, UAV flexible body and chassis, UAV ground support and landing support (anti-fall), UAV propeller (anti-vibration).

### ◆ Tools and Equipment

**The main product applications are:**

1, handle housing: electric saw, drill, garden scissors, screwdriver, stationery scissors, scraping trowel, vise, hand saw, wrench, hammer, cutter, etc.

2, measuring equipment button housing, shell, power plug jacketing, cable jacketing: universal electric meter, laser rangefinder, voltage tester, incubator, oven, shaking table, aging equipment, thermometer, thermocouple, thermal conductivity instrument, thermoelectric balance instrument, electronic scale, projector, coordinate measuring machine, spectrophotometer, infrared spectrometer, gas chromatograph, liquid chromatograph, mass spectrometer, ion chromatograph, gas detector, water quality analyzer, sound level meter, water level meter, spectrum analyzer, stopwatch, electronic timing and charging device, quantitative packaging machine, total station theodolite, 3D laser scanner, spectrometer, microscope, oscilloscope, mechanical testing machine, hardness tester, etc.

### ◆ Drinking water valve

The main product applications are: shower head, watering system.

### ◆ Kitchen appliances

The products are used in buttons, seals, shock-absorbing pads, shells, cables, plugs and containers: high-speed blender, refrigerator, gas stove, microwave oven, electric oven, induction cooker, kitchen hood, disinfection cabinet, dishwasher, egg steamer, electric rice cooker, juicer, water heater, electric kettle, electric pressure cooker, water purifier, electric steamer, etc.

### ◆ Building construction

**The main applications are:** door and window profiles, pipe protective covers, plastic runways, air conditioning water hoses, waterproof connection tapes, water hose joints, waterproof coils, water filtration systems (rainwater collection systems, underground space storage systems, separate drainage systems), ventilation systems, etc.

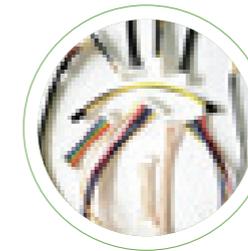
### ◆ Home appliances

The design diversity of TPE materials can be applied in most home appliances, mainly used in over-molding parts, seals, water hoses, shock-absorbing pad, anti-collision strips, etc., due to the complexity of processing and high labor costs, TPE is gradually replacing the original part of the rubber market.

**The main application products are:** sweeping robot, blender, coffee machine, light wave stove, water dispenser, air conditioner, electric fan, air purifier, humidifier, dehumidifier, heater, small freezer, air circulation fan, electric water heater, bath master, washing machine, dryer, electric hair dryer, radio, TV, set-top box, non-slip mat, etc.



Mobile phone case



USB cable jacket



Charging pile harness jacket



Mouse wheel, mouse pad



Uav fuselage, propeller, Ground support, landing support



Electronic wristband and key



Connector housings



Suction cup for phone holder



Electric drill handle



Shower head top spray, hose, connector and seal



Watering system hose, handle and seal



Buttons and shock-absorbing pad of high-speed blender



Refrigerator profiles and ice tray



Electric rice cooker handle, keys, cover, and inner ring



Floor brush, anti-collision strip, top cover, seal ring and button of sweeping robot



Doors and windows profiles



Plastic runways mat



Air conditioning drain hose installation



Washing machine barrel body, seal ring, cushioning pad, power cord, aqueduct, return pipe



Non-slip mat



Blender shock absorbing pad, button, seal ring, lid and handle



Floor brush, anti-collision strip and handle of vacuum cleaner



Application examples: coffee machine handle, damping base, button and coffee cup bar

### Product features:

- (1) Comfortable and non-slip
- (2) Noise reduction
- (3) Personalized appearance and versatility
- (4) Food grade contact requirements
- (5) Chemical resistance
- (6) UV resistance

### 3.4 Medical accessories

We offer medical TPE custom solutions to help you design advanced medical technologies. Our raw materials are of superior quality, hygienic, stable and biocompatible, helping us to work wonders for our customers with chemistry. These compounds provide high quality material solutions and comply with cytotoxicity ISO10993 PART5 & PART10 Cytotoxicity and anaphylaxis requirements.

#### These special TPE products have the following features:

- 1. no heavy metals and phthalates, no latex and PVC
- 2. translucent or transparent
- 3. can be disinfected and sterilized

#### Advantage

Our TPE materials are medical grade, compliant, clean and pure, and meet process safety standards.

- (1) The special bacteria-repellant structure formula passed ASTM WK66122 test, and the bacteria-repellant rate reached 99.999%
- (2) Durability and flexibility
- (3) Excellent resealing performance
- (4) Can be processed by injection molding and extrusion process
- (5) Through multi-component injection molding, over-molded onto polyolefin (PP, PE, COC, COP) and engineering plastics (such as ABS, PC, PET-G and polyamide)
- (6) Low friction, high elasticity
- (7) Excellent compression deformation characteristics
- (8) High transparency and pre-coloring options

### Medical Engineering

TPE is playing an increasingly important role in the field of smart healthcare and medical devices. The thermoplastic elastomer is ergonomic, cost-effective and has superior design function.

**The main products are:** medical surgical cloth, surgical gloves, disposable tourniquet, injection syringe, infusion tube, drip bucket, medical mask, film, hose, braces, waterproof medical instrument box, operating table pad, and so on.

### Medical diagnosis

**Application products:** blood analyzer, blood pressure meter, biochemical analyzer, medical imaging instrument (X-ray machine, CT scanner, nuclear magnetic resonance instrument, ultrasonic detector), electrocardiograph, biological microscope, medical hose, audiometer, stethoscope, etc.

### Drug packaging

The pharmaceutical packaging developed by TPE is robust and resistant to light, heat, moisture and biological contaminants, suitable for pharmaceutical storage, and is specifically designed for the industry.



Seal ring, separator and fastener of waterproof medical instrument box



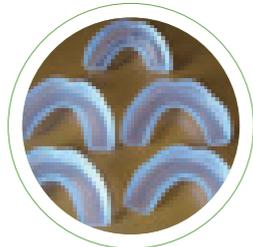
Infusion valve, infusion tube, drip bucket and needle cap of infusion set



Injection syringe needle cap, cylinder, seal ring and cylinder piston



Surgical gloves



Braces



Operating table pad



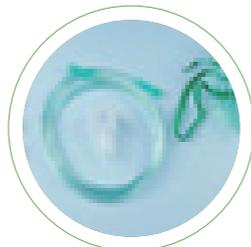
Disposable tourniquet elastic band, press button, anti-loosening cap, bracket and tension valve



Ultrasonic detector button, signal cable, probe, plug



Stethoscope signal cable and earplugs



Medical hose



Blood pressure monitor button and wristband



Medicine bottle sealed cap



Ear syringe



Aurilave



Mask



Plasma bag



Application scenarios

### Product features:

- (1) Excellent sealing, high elasticity, tear resistance.
- (2) Comply with cytotoxicity ISO10993 PART5 & PART10 Cytotoxicity and anaphylaxis requirements.
- (3) The special bacteria-repellant structure formula passed the ASTM WK66122 test, and the bacteria-repellant rate reached 99.999%.
- (4) 100°C high temperature boiling does not deform color does not migrate.

## 4 | PRODUCT CATALOG

SUNGLORY® —MANUFACTURER OF TPE&TPR, SOLUTIONS IN SOFT TOUCH MATERIALS

<b>Transparent Series</b>	<b>GP100</b>	<b>GP200</b>	<b>GP210</b>	
Base Resin	SBC	HSBC	HSBC	
Hardness Range	5A to 70D	700 to 50A	10A to 60D	
Original Color	Transparent	Transparent	Translucent	
Application	Toys	Adult products	General Purpose, Baby toys, Food seal	
<b>Overmolding Series</b>	<b>GP310</b>		<b>GP320</b>	
Base Resin	HSBC, TPU		HSBC	
Hardness Range	40A to 90A		40A to 90A	
Original Color	White		White	
Application	Commodity, Power tool handle, Automotive trim		Tool handles	
<b>Oiling Series</b>	<b>GP410</b>		<b>GP420</b>	
Base Resin	SBC		SBC	
Hardness Range	10A to 95A		10A to 95A	
Original Color	White		White	
Application	Toy dolls		Toys, Shoe material	
<b>Universal Series</b>	<b>GP510</b>	<b>GP520</b>	<b>GP540</b>	<b>GP550</b>
Base Resin	SBC	HSBC	HSBC	HSBC
Hardness Range	10A to 95A	10A to 95A	55A to 95A	45A to 95A
Original Color	White	White	White	White
Application	Toy tire leather, Handle, Sheet gasket	Toothbrush, Castor wheel, Ice trays, Toy tires, Mat, Electric button, Automotive trim	Cable jacketing	Extruded Profiles
<b>Functional Series</b>	<b>GP610</b>		<b>GP640</b>	
Base Resin	EPDM		HSBC	
Hardness Range	40A to 90A		60A to 95A	
Original Color	White		White	
Application	Heat-resistant sealing strip		Electronic appliances	
<b>改性树脂 / Modified Resin</b>	<b>GP920</b>			
Base Resin	PP			
Hardness Range	63D to 80D			
Original Color	White, Transparent			
Application	Home appliances, Packaging, Food containers			

## 4.1 GP100 Series

Composition	SBC, Mineral oil
Hardness	5A to 70D
Color	Transparent
Features	High tension, High torque, High elasticity, Easy coloring and paintable, Fully recyclable
Applications	Toy dolls, Pet toys, Transparent toys, Sports equipment
Processing	Injection molding, Blow molding
Overmold Substrate	PS, PC, ABS

Product Code	Hardness	Tensile Strength	Elongation at Break	Density	Melt Index
	ASTM D2240	ASTM D412	ASTMD412	ASTM D792	ASTM D1238
	Shore	Mpa	%	g/cm <sup>3</sup>	g/l0min
GP100-0501	5A	2	1200	0.9	100(200°C /0.325kg)
GP100-1001	10A	2.7	970	0.89	30(200°C /2.16kg)
GP100-2001	20A	3.0	900	0.89	20(200°C /2.16kg)
GP100-3001	30A	3.5	900	0.92	25(200°C /2.16kg)
GP100-4001	40A	4.0	800	0.92	60(200°C /2.16kg)
GP100-5001	50A	4.5	800	0.92	50(200°C /2.16kg)
GP100-6001	60A	5.0	700	0.92	55(200°C /2.16kg)
GP100-7001	70A	7.0	700	0.94	20(200°C /2.16kg)
GP100-8001	80A	10.0	700	0.94	7(200°C /2.16kg)
GP100-9001	90A	11.0	700	0.95	8(200°C /2.16kg)
GP100-5001D	50D	12.0	700	0.98	10(200°C /2.16kg)
GP100-6001D	60D	13.0	600	0.98	3(200°C /2.16kg)
GP100-7001D	70D	14.0	500	0.98	3(200°C /2.16kg)

## 4.2 GP200 Series

Composition	HSBC, Mineral oil
Hardness	700 to 50A
Color	Transparency
Features	Super soft, Dry and comfortable, High transparency, Fully recyclable
Applications	Furry ball, Water balloon, Doll, Digital pet skin, Artificial skin, Mask, Adult products
Processing	Injection molding, Casting
Overmold Substrate	PP, PC

Product Code	Hardness	Tensile Strength	Elongation at Break	Density	Melt Index
	ASTM D2240	ASTM D412	ASTMD412	ASTM D792	ASTM D1238
	Shore 00 / A	Mpa	%	g/cm <sup>3</sup>	g/l0min
GP200-0701Q	7 00	2.5	1200	0.84	27(150°C /1kg)
GP200-1501Q	15 00	2.7	1100	0.84	14(150°C /1kg)
GP200-2501Q	25 00	2.7	1100	0.84	3(150°C /1kg)
GP200-4001Q	40 00	3.0	1000	0.84	2(150°C /1kg)
GP200-0501	5A	3.0	900	0.85	6(150°C /1kg)
GP200-1001	10A	3.4	700	0.86	4(150°C /1kg)
GP200-2001	20A	3.5	650	0.87	3(150°C /1kg)
GP200-3001	30A	3.6	650	0.87	4(150°C /1kg)



Doll skin



Braces



Toy ball

## 4.3 GP210 Series

Composition	HSBC, Mineral oil, PP
Hardness	20A to 60D
Color	Translucent
Features	High wear resistance, Good temperature resistance, Good weather resistance, Good feel, Good colorability, Food contact level, Safe and environmentally friendly
Applications	Baby toys, Commodity, Food seal
Processing	Injection molding, Blow molding, Extrusion
Overmold Substrate	PP, PE, PP+GF

Product Code	Hardness	Tensile Strength	Elongation at Break	Density	Melt Index
	ASTM D2240	ASTM D412	ASTM D412	ASTM D792	ASTM D1238
	Shore	Mpa	%	g/cm <sup>3</sup>	g/10min
GP210-2004	20A	4.0	750	0.88	3(200°C /2.16kg)
GP210-3004	30A	4.5	750	0.88	4(200°C /2.16kg)
GP210-4004	40A	5.0	750	0.88	25(200°C /2.16kg)
GP210-5004	50A	5.0	750	0.88	35(200°C /2.16kg)
GP210-6004	60A	6.0	750	0.88	29(200°C /2.16kg)
GP210-7004	70A	7.5	700	0.88	24(200°C /2.16kg)
GP210-8004	80A	10.0	700	0.89	16(200°C /2.16kg)



Small seat



Toy tank



Water hose

## 4.4 GP310 Series

Composition	HSBC, TPU or TPU plus modified TPE
Hardness	40A to 90A
Color	White
Features	High peel strength, High tear strength, Good scratch resistance, Good colorability, Fully recyclable, Requires pre-drying.
Applications	Commodity, Power tool handle, Automotive trim
Processing	Injection molding, Extrusion
Overmold Substrate	ABS, PC, AS,PMMA,PETG

Product Code	Hardness	Tensile Strength	Elongation at Break	Density	Melt Index
	ASTM D2240	ASTM D412	ASTM D412	ASTM D792	ASTM D1238
	Shore	Mpa	%	g/cm <sup>3</sup>	g/10min
GP310-553A	55A	4.5	650	1.05	17(200°C /5kg)
GP310-6003	65A	5.5	500	1.05	12(200°C /2.16kg)
GP310-7003	70A	5.9	400	1.05	10(200°C /2.16kg)
GP310-8003	80A	6.5	400	1.06	8(200°C /2.16kg)
GP310-7501	75A	24	680	1.20	13(200°C /1kg)
GP310-8501	85A	36	660	1.21	10(200°C /2.16kg)



Electric drill handle



Mobile phone case



Tape case

## 4.5 GP320 Series

Composition	HSBC, Mineral oil
Hardness	40A to 90A
Color	White
Features	Matte, Anti-skid, Good colorability, Easy to process, Fully recyclable, Requires pre-drying.
Applications	Tool handles
Processing	Injection molding
Overmold Substrate	PA, PA+GF

Product Code	Hardness	Tensile Strength	Elongation at Break	Density	Melt Index
	ASTM D2240	ASTM D412	ASTM D412	ASTM D792	ASTM D1238
	Shore	Mpa	%	g/cm <sup>3</sup>	g/10min
GP320-4501	45A	2.5	450	1.08	15(200°C /2.16kg)
GP320-5501	55A	2.8	450	1.08	18(200°C /2.16kg)
GP320-6501	65A	2.8	600	1.08	25(200°C /2.16kg)
GP320-7001	70A	3	550	1.10	40(200°C /2.16kg)
GP320-7501	75A	3.5	400	1.10	25(200°C /2.16kg)



Mouse wheel



Hammer handle



Screwdriver handle

## 4.6 GP410 Series

Composition	SBC, Mineral oil
Hardness	10A to 95A
Color	White
Features	High tension, High torque, High elasticity, Easy coloring and paintable, Fully recyclable
Applications	Toy dolls
Processing	Injection molding
Overmold Substrate	PS

Product Code	Hardness	Tensile Strength	Elongation at Break	Density	Melt Index
	ASTM D2240	ASTM D412	ASTM D412	ASTM D792	ASTM D1238
	Shore	Mpa	%	g/cm <sup>3</sup>	g/10min
GP410-8202	82A	11.4	500	0.97	10(200°C /5kg)
GP410-8702	87A	11.6	500	0.97	12(200°C /5kg)
GP410-9202	92A	12.1	450	0.98	13(200°C /5kg)
GP410-9702	97A	12.5	300	0.98	9(200°C /5kg)
GP410-35	35A	3.5	700	0.94	25(200°C /2.16kg)
GP410-45	45A	4.0	650	0.95	20(200°C /2.16kg)
GP410-55	55A	4.5	600	0.95	18(200°C /2.16kg)
GP410-65	65A	5.0	550	0.95	15(200°C /2.16kg)



Doll figure



Doll fox



Doll rabbit

## 4.7 GP420 Series

Composition	SBC, Mineral oil, PS, Filler
Hardness	10A to 95A
Color	White
Features	Resistant to high tension, Resistant to high torque, High elasticity, Easy coloring and paintable, Fully recyclable
Applications	Toys, Shoe material
Processing	Injection-molding, Blow molding
Overmold Substrate	

Product Code	Hardness	Tensile Strength	Elongation at Break	Density	Melt Index
	ASTM D2240	ASTM D412	ASTM D412	ASTM D792	ASTM D1238
	Shore	Mpa	%	g/cm <sup>3</sup>	g/10min
GP420-4003	40A	3.5	450	1.08	20(200° C/2.16kg)
GP420-5003	50A	4.0	450	1.08	15(200° C/2.16kg)
GP420-6003	60A	4.3	400	1.08	10(200° C/2.16kg)
GP420-7003	70A	4.8	400	1.09	8(200° C/2.16kg)
GP420-8003	80A	5.5	350	1.09	5(200° C/2.16kg)
GP420-9003	90A	6.3	300	1.10	3(200° C/2.16kg)



Toy car



Toy excavator



Shoe sole

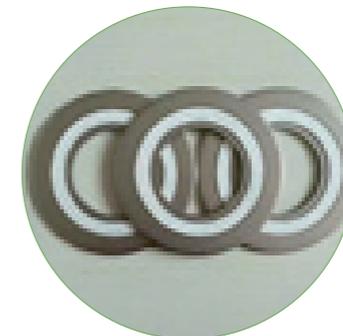
## 4.8 GP510 Series

Composition	HSBC, SBC, PP, PE, OIL
Hardness	10A to 95A
Color	White
Features	Resistant to high tension, High elasticity, Easy to process, Fully recyclable
Applications	Toy tire leather, Handle, Sheet gasket
Processing	Injection molding
Overmold Substrate	PP, PE

Product Code	Hardness	Tensile Strength	Elongation at Break	Density	Melt Index
	ASTM D2240	ASTM D412	ASTM D412	ASTM D792	ASTM D1238
	Shore	Mpa	%	g/cm <sup>3</sup>	g/10min
GP510-5003	50A	4.0	600	1.06	50(200° C/2.16kg)
GP510-6003	60A	4.5	550	1.06	45(200° C/2.16kg)
GP510-7003	70A	5.2	550	1.06	42(200° C/2.16kg)
GP510-8003	80A	6.3	500	1.06	38(200° C/2.16kg)
GP510-8503	85A	6.8	500	1.06	35(200° C/2.16kg)
GP510-5009	50A	2.5	450	1.15	60(200° C/2.16kg)
GP510-6009	60A	2.8	450	1.15	55(200° C/2.16kg)
GP510-7009	70A	3.2	400	1.15	50(200° C/2.16kg)



Toy tire



Sheet gasket



Handle

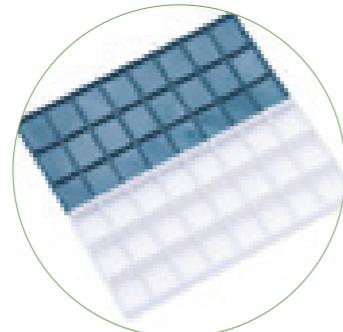
## 4.9 GP520 Series

Composition	HSBC, Mineral oil, PP, Filler and PE
Hardness	10A to 90A
Color	White
Features	Resistant to high tension, High elasticity, Easy to process, Fully recyclable
Applications	Toothbrush, Castor wheel, Ice trays, Toy tires, Car mat, Electric button
Processing	Injection molding
Overmold Substrate	PP, PE

Product Code	Hardness	Tensile Strength	Elongation at Break	Density	Melt Index
	ASTM D2240	ASTM D412	ASTM D412	ASTM D792	ASTM D1238
	Shore	Mpa	%	g/cm <sup>3</sup>	g/10min
GP520-5003	50A	4.8	800	1.05	16(200°C /2.16kg)
GP520-6003	60A	5.0	700	1.05	21(200°C /2.16kg)
GP520-7003	70A	5.7	700	1.05	25(200°C /2.16kg)
GP520-8003	80A	6.9	600	1.05	28(200°C /2.16kg)
GP520-8503	85A	7.5	600	1.05	20(200°C /2.16kg)
GP520-4005	40A	2.5	550	1.19	12(200°C /2.16kg)
GP520-5005	50A	3.0	550	1.19	20(200°C /2.16kg)
GP520-6005	60A	3.4	550	1.19	28(200°C /2.16kg)
GP520-7005	70A	4.2	550	1.19	30(200°C /2.16kg)
GP520-8005	80A	4.8	500	1.19	18(200°C /2.16kg)
GP520-9005	90A	6.0	480	1.20	6(200°C /2.16kg)



Toy tire



Oil painting box



Toothbrush

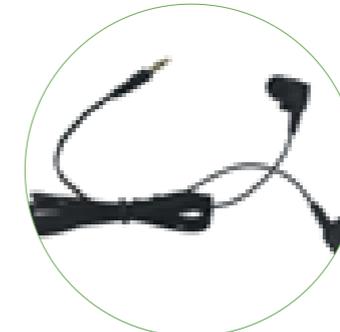
## 4.10 GP540 Series

Composition	HSBC, Mineral oil, or plus FR
Hardness	55A to 95A
Color	White, Off-White
Features	Soft feel and comfortable, High elasticity, UV resistant, Precipitation resistant, Halogen-free
Applications	Cable jacketing
Processing	Extrusion
Overmold Substrate	PP, PE

Product Code	Hardness	Tensile Strength	Elongation at Break	Density	Melt Index
	ASTM D2240	ASTM D412	ASTM D412	ASTM D792	ASTMD1238
	Shore	Mpa	%	g/cm <sup>3</sup>	g/10min
GP540-7505	75A	10	600	1.10	15(200°C /10kg)
GP540-8005	80A	12	550	1.10	20(200°C /10kg)
GP540-8506	85A	13	650	0.98	25(200°C /10kg)
GP540-9006	90A	14	600	0.98	30(200°C /10kg)
GP540-7503(N)F	75A	4.5	400	1.09	35(230°C /10kg)
GP540-8003(N)F	80A	4.8	325	1.09	30(230°C /10kg)
GP540-8503(N)F	85A	5.5	260	1.09	28(230°C /10kg)
GP540-9003(N)F	90A	6.0	250	1.09	25(230°C /10kg)



USB cable jacketing



Power cord jacketing



Power connection cable jacketing

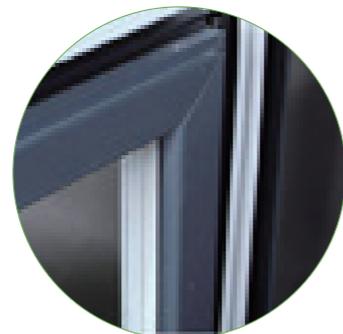
## 4.11 GP550 Series

Composition	HSBC, Mineral oil
Hardness	45A to 95A
Color	White
Features	Smooth finish, Excellent elasticity, UV resistant, Good weldability, Fully recyclable
Applications	Profiles
Processing	Extrusion
Overmold Substrate	PP, PE

Product Code	Hardness	Tensile Strength	Elongation at Break	Density	Melt Index
	ASTM D2240	ASTM D412	ASTM D412	ASTM D792	ASTM D1238
	Shore	Mpa	%	g/cm <sup>3</sup>	g/10min
GP550-5504	55A	4.5	600	1.10	10(200°C /5kg)
GP550-6004	60A	5.1	600	1.10	8(200°C /5kg)
GP550-6504	65A	5.8	600	1.10	6(200°C /5kg)
GP550-7004	70A	6.2	550	1.10	4(200°C /5kg)
GP550-7504	75A	7.0	550	1.10	3(200°C /5kg)



Profiles



Window Profiles



Profiles

## 4.12 GP610 Series

Composition	EPDM, Mineral oil, PP
Hardness	40A to 90A
Color	White
Features	Excellent aging resistance, High resilience, Excellent compression resistance, Halogen-free, Fully recyclable
Applications	Automotive seals, Door and window seals
Processing	Injection molding, Extrusion
Overmold Substrate	PP, PE

Product Code	Hardness	Tensile Strength	Compression Deformation (23° C/22h)	Compression Deformation (70° C/22h)	Elongation at Break	Density	Melt Index
	ASTM D2240	ASTM D412	ASTM D395	ASTM D395	ASTM D412	ASTM D792	ASTM D1238
	Shore	Mpa	%	%	%	g/cm <sup>3</sup>	g/10min
GP610-4502	45A	4.0	23	34	400	0.96	20(200°C /5kg)
GP610-5502	55A	4.8	24	35	430	0.96	22(200°C /5kg)
GP610-6502	65A	6.0	28	36	450	0.96	25(200°C /5kg)
GP610-7502	75A	6.8	31	39	500	0.96	28(200°C /5kg)
GP610-8502	85A	9.0	36	46	520	0.96	30(200°C /5kg)



Car door sealing strip



Car sunroof sealing strip



Windscreen wiper

## 4.13 GP640 Series

Composition	HSBC, Mineral oil, FR
Hardness	60A to 95A
Color	White
Features	Dry touch, Excellent elasticity, Good UV stability, Halogen-free, Fully recyclable, Meet UL94-V0 requirements
Applications	Electronic appliances
Processing	Injection molding
Overmold Substrate	PP, ABS, PC

Product Code	Hardness	Tensile Strength	Elongation at Break	Density	Melt Index
	ASTM D2240	ASTM D412	ASTM D412	ASTM D792	ASTM D1238
	Shore	Mpa	%	g/cm <sup>3</sup>	g/10min
GP640-6001	60A	4.5	450	1.10	5(200°C /5kg)
GP640-6501	65A	5.8	450	1.10	7(200°C /5kg)
GP640-7501	75A	6.7	400	1.10	8(200°C /5kg)
GP640-8501	85A	7.2	400	1.10	10(200°C /5kg)
GP640-9001	90A	8.2	350	1.10	12(200°C /5kg)
GP640-9501	95A	8.8	350	1.10	14(200°C /5kg)



Connector Jacking



Connector Jacking



Connector Jacking

## 4.14 GP920 Series

Composition	PP, POE or wood plastic powder or filler
Color	White, transparent
Features	High transparency, High temperature resistance, High gloss, High rigidity, High modulus, Warp-resistant, Low shrinkage
Applications	Home appliances, Packaging, Food containers
Processing	Injection molding

Product Code	Hardness	Density	Melt Index (230°C 2.16KG)	Heat deflection temperature (0.455MPa)	Izod impact strength (notched 23°C)	Flexural strength	Flexural modulus
	ASTM D2240	ASTM D792	ASTM D1238	ASTM D648	ASTM D256	ASTM D790	ASTM D790
	Shore D	g/cm <sup>3</sup>	g/10min	°C	KJ/m <sup>2</sup>	Mpa	Mpa
GP920-4600	66	0.90	15	66	18	18	683
GP920-4500	72	0.90	13	84	4	43	1300
GP920-2504	63	1.00	12	96	43	25	1300
GP920-2506	68	1.10	22	124	6	42	2600
GP920-0035	74	1.10	18	135	45	45	4500
GP920-70D01FR	68	1.40	10	102	47	27	1400
GP920-70DWPC	80	1.35	10	126	2	49	3100



Bowls and spoons



Bowl cover



Cup