



POLYFUL

ADVANCED MATERIAL

Hangzhou Polyful Advanced Material Co., Ltd.

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Company Profile

Hangzhou POLYFUL Advanced Material Co., Ltd. (“POLYFUL”) is a high-tech company specializing in the research, development, production, and sales of high-end polymer products.

Established by the founding team of a listed company, POLYFUL has launched in-depth cooperation with the national key laboratory of Zhejiang University.

Aimed at the polymer materials sector, it is focused on the development of high-performance products in 5G communications, new energy vehicles, food and healthcare, and environmental protection and biodegradation. POLYFUL is primarily engaged in high-end modified materials such as modified polyolefins and engineering plastics, as well as special polymers, including biodegradable resin and high-performance electronic chemical materials, with product quality reaching the leading level in China.

Positioning and Strengths

Positioning: A technology-driven new materials company focused on high-end polymers

Strengths: R&D by university teams, support of national base, cost effectiveness, environmentally friendly, customization

Honors and Qualifications

Since its inception in 2018, POLYFUL has won a range of honors, including China High-tech Enterprise, China’ s National Science and Technology Small and Medium Enterprise, High-tech Research and Development Center (Industrial) of Local Enterprise, and Local Eyas Enterprise.

It has also obtained the certifications of IATF16949 international automotive quality management system and ISO9001 quality management system.

Experiment&Production Equipment

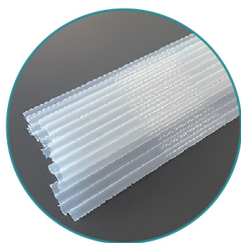


Application



Film-and-bag-specific modified resin

It can be processed into shopping bags, courier bags, garbage bags, disposable gloves, agricultural mulch film by blown film process.



Extrusion modified resin

It can be processed into fully biodegradable disposable straws by extrusion process.



Blister modified resin

It can be processed into fully biodegradable disposable dinner plates, fully biodegradable disposable water cups by casting and blister process.



Injection molding modified resin

It can be processed into fully biodegradable disposable knives, forks and spoons by injection molding process.

FULLY BIODEGRADABLE RESIN



Overview

Taking fully biodegradable materials including PLA and PBAT as the main raw materials, POLYFUL has developed a wide range of fully biodegradable modified resins aimed at various application scenarios. By different processing methods, they are divided into materials specific for films and bags, injection molding and shaped processing. POLYFUL's modified resins are all in line with fully biodegradable standards including GB/T, EN, and ASTM, with some of them meeting food contact requirements.

POLYFUL has registered with the FDA in the United States, focusing on the healthy, environmentally friendly and fully biodegradable materials for customers from home and abroad.

Features



Easy forming process



Easy coloring



Excellent mechanical properties



Natural antistatic



Safe, environmentally friendly and non-toxic



Food-grade contact



Fully biodegradable

Qualification



Category

Category	Grade	Product description	Applications	Corresponding processes
Fully degradable shopping bags Modified resins	DP-8123	Mineral powder filling	Shopping bags, waistcoat pockets, garbage bags, etc.	Blown film
	DP-8126			
	DP-8128			
	DP-8134	Starch filling		
	DP-8148			
	DP-8158			
Fully degradable courier bag modified resin	DP-8122 WTH	Triple extrusion	Courier bags, logistics packaging bags, etc.	
	DP-8124 WTH			
	DP-8122 NCH			
Fully degradable agricultural mulch film modified resin	DP-8110	Induction period < 60 days	Agricultural mulch film	
	DP-8111	60 days ≤ Induction period < 90 days		
	DP-8112	90 days < Induction period ≤ 120 days		
	DP-8113	Induction period > 120 days		
Fully degradable disposable gloves modified resin	DP-8222	High tensile strength	Disposable film gloves	Blown film and casting
Fully degradable straw modified resin	DP-5122	Pipe bending use only	Bent straws	Extrusion
	DP-5123	Straight pipe use only	Straight straws	
	DP-5140	Transparent	Transparent straight straws	
	DP-5525	High temperature resistant	High temperature resistant straight straws	
Fully degradable injection molding modified resin	DP-7123	High toughness injection molding	Disposable knife, fork and spoon	Injection molding
	DP-7124	Thin-walled injection molding	Thin-walled injection molded products	
	DP-7125	General injection molding	Disposable tableware	
	DP-7126	Out-of-mold crystal	Disposable knife, fork and spoon	
	DP-7525	Heat resistant	Disposable tableware	
Fully degradable casting sheet modification resin	DP-9325	General-purpose sheets	Blister products (eg. cup lids, meal boxes)	Casting and blistering
	DP-9326	Non-food contact sheets	The outer packaging of tools or toys	
	DP-9340	Transparent sheets	Transparent blister lids, blister cups, etc.	
	DP-9525	High temperature resistant sheets	Heat resistant nursery cups, etc.	

*All modified resins conform to national full degradation standards and related national standards

Application



Supermarket shopping field

Supermarket roll bags, shopping bags, waistcoat pockets, etc.



Kitchen living field

Food waste bags, food preservation bags, pet waste bags, etc.



Express e-commerce field

Courier bags, logistics packaging bags, bubble bags, fresh packs, milktea bags, etc.



Agricultural mulch film field

Agricultural mulch film, etc.



Disposable catering field

Disposable meal boxes, film gloves, tableware, straws, cups, lids, etc.

FULLY BIODEGRADABLE PRODUCTS



Overview

POLYFUL fully biodegradable products are made of POLYFUL fully biodegradable modified resin, with the advantages of excellent mechanical properties, non-toxic and harmless, environmental protection and odorless, and full degradation, the environmentally friendly products that meet the requirements of national standards. The complete process of independent research and development, independent production and independent processing is a reliable guarantee for POLYFUL production efficiency, and the testing and certification of authoritative institutions is a strong proof of its products quality.

POLYFUL has many categories of agricultural mulch film, supermarket daily-use bags and disposable kitchen appliances, which can meet the requirements of different application scenarios. Having registered with the FDA of United States, POLYFUL can provide custom-designed specialized degradation resin according to the different household needs, making contribution to the environmental protection life for customers.

Features



Plastic bags for daily use

Water and moisture resistant, puncture and tear resistant;
Good weight bearing and printability;
Good toughness and ductility;
Good heat sealability without edges bursting;



Agricultural mulch film

Low water-air permeability;
Having multiple induction periods;
Good warming and moisture retention;
Good toughness and support for mechanical laying;



Disposable kitchen appliances

Food-grade raw materials to ensure safe and environmentally friendly use;
Good toughness and strength, which is hard to bend;
Water and oil resistant, temperature resistant and odorless;
Thickened material with round corners and no burrs;

Qualification



Category

Application scenario	Product name	Executive standard
Supermarket shopping field	Fully biodegradable shopping bags	GB/T 38082-2019 (National Standard for degradable shopping bags) EN 13432 (European Standard for compostable degradable plastics) FDA Testing Standard (Food Contact Material Standard)
Express e-commerce field	Fully biodegradable courier bags	GB/T 38727-2020 (National Standard for degradable courier bags) EN 13432 (European Standard for compostable degradable plastics)
Daily living field	Fully biodegradable garbage bags	GB/T 28018-2011 (National Standard for degradable garbage bags) EN 13432 (European Standard for compostable degradable plastics)
Agricultural development field	Fully biodegradable agricultural mulch film	GB/T 35795-2017 (National Standard for degradable mulch) EN 13432 (European Standard for compostable degradable plastics)
Disposable kitchen field	Fully biodegradable disposable dinner plates	GB 18006.1-2009 (National Standard for plastic tableware) GB 18006.3-2020 (National Standard for degradable tableware)
	Fully biodegradable disposable water cups	EN 13432 (European Standard for compostable degradable plastics)
	Fully biodegradable disposable knives, forks and spoons	FDA Testing Standard (Food Contact Material Standard)
	Fully biodegradable disposable straws	GB 4806.1-2016 (National Standard for food safety) GB 4806.6-2016 (National Standard for food contact material) GB 4806.7-2016 (National Standard for food contact product) EN 13432 (European Standard for compostable degradable plastics) FDA Testing Standard (Food Contact Material Standard)
	Fully biodegradable disposable gloves	EN 13432 (European Standard for compostable degradable plastics) FDA Testing Standard (Food Contact Material Standard)

Application



Automobile materials

- Enable lightweight of automobile to achieve fuel saving and high speed, which can be used for interior and exterior decorative parts or functional structural parts.
- Applied for different parts such as interior or exterior parts of the engine compartment by adjusting weather resistance and flame retardance.



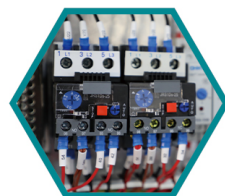
Electrical & Electronics materials

- Used as housing materials, cladding materials, mechanical materials and insulating materials for electrical and electronics equipment and components through modification to improve behavior of electricity.
- Enhance performance of flame retardance and high temperature resistance, which can be used in the parts working in harsh environment.



Home appliance materials

- Tailor for customers with solutions for recycling engineering plastics
- Focus on the research and development of special materials which use plastic to replace steel and copper, making efforts in improving the function, appearance and lightweight property comprehensively.




MODIFIED ENGINEERING PLASTICS




Overview

POLYFUL's modified engineering plastics are modified materials built upon general-purpose plastics and engineering plastics by adding proper performance additives, thus improving their mechanical properties and flame retardant grade and other related performance indexes. The modified plastics has strength similar to steel, as well as the advantages of low density, high toughness, corrosion resistance, high impact resistance, wear and shock resistance, flame retardant, and ageing resistance, which can be widely used in many fields such as automobile manufacturing, household appliances, rail transportation, construction consumables, etc.


Features




Low density




High toughness



Wear and shock resistance



Flame retardant



Corrosion and ageing resistance

Category

Product category	Product grade	Modified direction	Main application
Modified PA6	EN-1 series	Halogen-free, red phosphorus-free flame retardant, high heat resistance	Auto parts, mechanical parts, housing of battery pack, outdoor products, engineering parts and other products
Modified PA66	EN-2 series	High wear resistance, self-lubrication, high rigidity	Automobile industry, instrument housing, nylon ties and other products requiring high impact resistance and strength
Modified PP	PO-3 series	High strength, high heat resistance, high gloss	Housing or semi-structural parts of electric rice cooker, hair dryer, boiling water boiler and other home appliances
Modified PBT	CA-5 series	Flame retardant, high rigidity, high heat resistance	Household appliances, electrical wire connectors, structural parts for autos, electricity meter terminals and other products
Modified ABS	CA-7 series	High heat resistance, low emissivity	Rear view mirrors, air purifier housings, purifier ventilation panels and other products
Modified PC	CA-8 series	Halogen-free flame retardant, high gloss, high transmission	Automobile parts, lighting components, backplanes of LED display board, monitor housings, curtain walls and other products
Modified PC/ABS	CA-9 series	Flame retardant, stiffening	Bumpers, grilles, center consoles, bus panels, low-voltage electrical switches, accessories of new energy charging system, battery housings, power supply drive housings and other products

Qualification

Products of modified engineering plastics series conform to the IATF 16949 automotive parts and production quality certification, the US UL certification, and the ISO 9001 specifications, and have obtained the corresponding certifications and test reports.



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View additional material information including performance and processing data

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The information presented on the UL Prospector datasheet was acquired by UL Prospector from the producer of the material. UL Prospector makes substantial efforts to assure the accuracy of this data. However, UL Prospector assumes no responsibility for the data values and strongly encourages that upon final material selection, data points are validated with the material supplier.

Component - Plastics

Guide Information

Hangzhou POLYFUL Advanced Material Co Ltd

Production Plant, Building 1, No.1418-19 Moganshan Road, Hangzhou Zhejiang 310000 CN

CA-8120

RTI Str

60

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Component - Plastics

Guide Information

Hangzhou POLYFUL Advanced Material Co Ltd

Production Plant, Building 1, No.1418-19 Moganshan Road, Hangzhou Zhejiang 310000 CN

CA-8142

RTI Str

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Component - Plastics

Guide Information

Hangzhou POLYFUL Advanced Material Co Ltd

Production Plant, Building 1, No.1418-19 Moganshan Road, Hangzhou Zhejiang 310000 CN

CA-5246

Polybutylene Terephthalate (PBT), glass fiber reinforced, furnished as pellets

Color	Min. Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str
NC, BK	1.0	V-0	-	-	75	75	75
	3.2	V-0	-	-	75	75	75

Comparative Tracking Index (CTI): -
Dielectric Strength (kV/mm): -
High-Voltage Arc Tracking Rate (HVTR): -
Dimensional Change (%): -

Inclined Plane Tracking (IPT) kV: -
Volume Resistivity (10⁸ ohm-cm): -
Surface Resistivity (10⁸ ohms/square): -
High Volt, Low Current Arc Resis (D495): -

ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.

Report Date: 2021-07-30
Last Revised: 2021-07-29

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Value

(NC, BK)

(NC, BK)

for determining

terminated by UL

Value

1 (NC)

0 (BK)

(NC, BK)

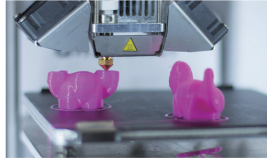
for determining

terminated by UL

IEC and ISO Test Methods

Test Name	Test Method	Units	Thk (mm)	Value
Flammability	IEC 60695-11-10	Class (color)	1.0	V-0 (NC, BK)
			3.2	V-0 (NC, BK)
Glow-Wire Flammability (GWFI)	IEC 60695-2-12	°C	-	-
Glow-Wire Ignition (GWIT)	IEC 60695-2-13	°C	-	-
IEC Comparative Tracking Index	IEC 60112	Volts (Max)	-	-
IEC Ball Pressure	IEC 60695-10-2	°C	-	-
ISO Heat Deflection (1.80 MPa)	ISO 75-2	°C	-	-
ISO Tensile Strength	ISO 527-2	MPa	-	-
ISO Flexural Strength	ISO 178	MPa	-	-
ISO Tensile Impact	ISO 8256	kJ/m ²	-	-
ISO Izod Impact	ISO 180	kJ/m ²	-	-
ISO Charpy Impact	ISO 179-1	kJ/m ²	-	-

Application



Model toys



Household daily necessities



Health care products



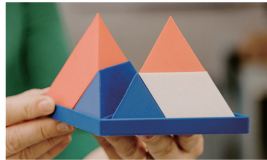
Auto parts



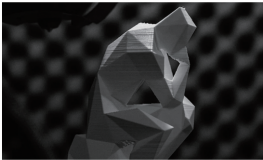
Consumer electronics



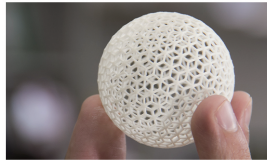
Packaging containers



Educational equipment



Statue sculptures



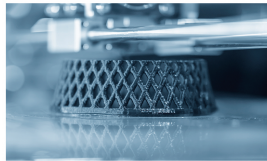
Artwork



Architectural models



Medical rehabilitation equipment



Industrial design samples

Advantages

Satisfying small batch or distributed production requirements

Lower mold cost

Increased productivity

Reduced waste in industrial manufacturing

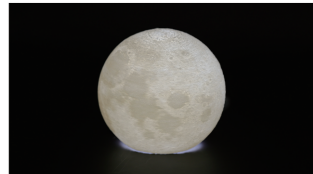
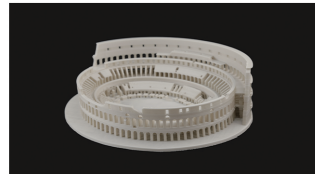
High performance

High cost-effectiveness

High recycling rate

High material utilization

Performance



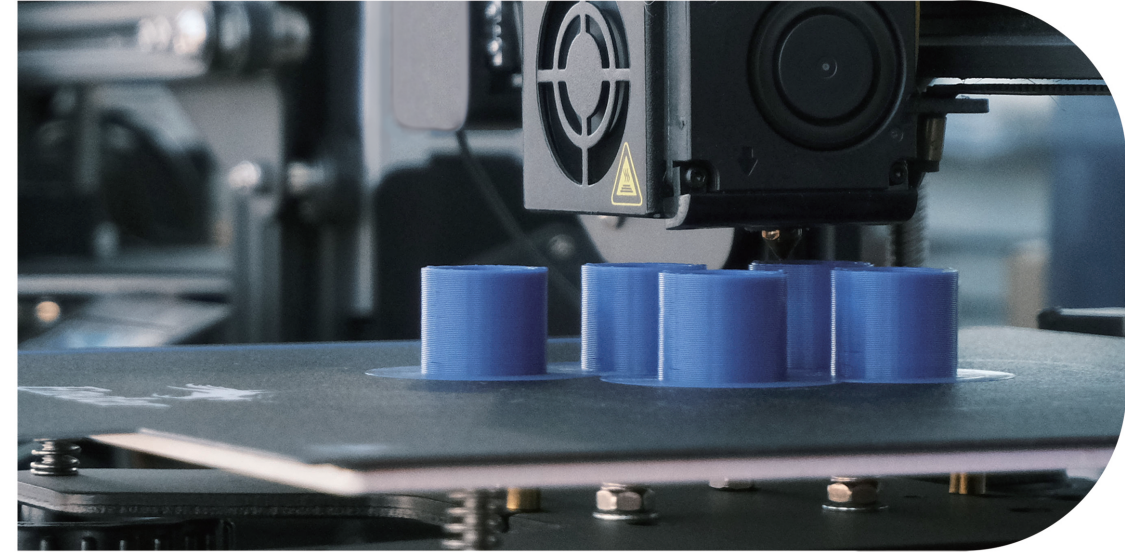
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3D PRINTING MATERIAL



Overview


3D printing is a rapid prototyping technology, especially suitable for manufacturing complex-shaped, customized, and lightweight parts. 3D printing materials play essential roles in the final quality of 3D printed parts. POLYFUL high-performance 3D printing materials include POLYFUL 3D-PLA, POLYFUL 3D-PP, and POLYFUL 3D-ABS. The products have excellent performance and are easy to process, form, and mold. They are suitable for current mainstream FDM 3D printer equipment and can be widely used in automotive, electrical, medical, industrial products, and daily household use. In addition to PP, PLA, and ABS, POLYFUL 3D printing product line also includes high-performance 3D printing materials, such as elastomers, ASA, and PA.


POLYFUL 3D-PP


Category


POLYFUL3D-PP series products include polypropylene (PP) 3D printing special filaments and polypropylene (PP) 3D printing special resin, which have the advantages of high malleability, dimensional stability, stable filament diameter, low warpage, and so forth. They are suitable for FDM 3D printers.


Features


 High toughness

 Excellent chemical resistance

 Excellent isotropy

 Good sealing

 Low water absorption

 Same characteristics as the injection-molded PP final part and can be welded to the injection-molded PP part

Parameters

Polypropylene (PP) 3D printing special resin

Grade	Particle Size (mm)	Density (g/cm³)	Melt Flow Rate (g/10min)	Tensile Strength (MPa)	Elongation at Break(%)	Flexural Strength (MPa)	Flexural Modulus (MPa)	Impact Strength (KJ/m²)
3D-PP-58	3*3	1.13	18(230℃, 2.16KG)	27	6%	40	2400	4
3D-PP-75	3*3	1.13	16(230℃, 2.16KG)	29	8%	45	2400	4

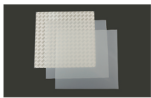
Filaments extrusion processing conditions: Drying temperature: 80°C; Drying time: 2-4 hours; Processing temperature: 170-180°C

PRINT THE INSTRUCTIONS

- Leveling: The bottom plate must be leveled.
- Heated bed: No heating at room temperature, more energy saving.
- Printing temperature: 230-260°C.
- Fill rate: It is recommended to set 3%-10% for printing large-size models.
- Layer height: It is recommended that the layer thickness should not be too smaller than the nozzle diameter, and parameters such as 0.2, 0.25, and 0.3 can be tried.
- Fan: It is recommended to turn off the cooling fan.
- Printing environment: room temperature environment; try to avoid setting the printing area under the air outlet of the air conditioner or the air outlet of a fan.

Panels

POLYFUL high-performance polypropylene (PP) 3D printing material, with a special panel, can provide you with the best printing effect.




POLYFUL 3D-PLA


Category


POLYFUL 3D-PLA series products include polylactic acid (PLA) 3D printing special filaments and polylactic acid (PLA) 3D printing special resin, which have the advantages of easy molding, low shrinkage, high strength, environmental protection, non-toxicity, low warpage, and a wide range of applications. They are suitable for FDM 3D printers.

Features


 Low shrinkage, no warping


 Excellent tensile strength and toughness

 High precision, no bubbles, no odor

 Smooth and delicate printing effects

 Good fluidity, easy to form

 A wide range of applications and strong compatibility

 Non-toxic and degradable

Parameters

Polylactic acid (PLA) 3D printing special resin

Grade	Particle Size (mm)	Density (g/cm³)	Melt Flow Rate (g/10min)	Tensile Strength (MPa)	Elongation at Break(%)	Flexural Strength (MPa)	Impact Strength (KJ/m²)
3D-PLA-12	3*3	1.24	8.1	57.1	7.8	87.7	3.6
3D-PLA-31	3*3	1.27	16.7	34.3	85.4	47.4	4.1

Filaments extrusion processing conditions: Drying temperature: 80°C; Drying time: 2-4 hours; Processing temperature: 185-215°C

PRINT THE INSTRUCTIONS

- Leveling: The bottom plate must be leveled.
- Heated bed: 50-60°C.
- Printing temperature: 190-230°C.
- Fill rate: It is recommended to set 3%-10% for printing large-size models.
- Layer height: It is recommended that the layer thickness should not be too smaller than the nozzle diameter, and parameters such as 0.2, 0.25, and 0.3 can be tried.
- Fan: It is recommended to turn off the cooling fan.
- Printing environment: room temperature environment; try to avoid setting the printing area under the air outlet of the air conditioner or the air outlet of a fan.

POLYFUL 3D-ABS

Category

POLYFUL 3D-ABS series products include ABS 3D printing filaments and ABS 3D printing resin, which have the advantages of good physical properties, good molding effects, wide application range, and durable printed products. They are suitable for FDM 3D printers.

Features

 High toughness, high impact resistance

 Good fluidity, easy to form

 High precision, no bubbles, no odor

 Non-toxic and degradable

 Excellent tensile strength and toughness

 Smooth and delicate printing effects

Parameters

ABS 3D printing special resin

Grade	Particle Size (mm)	Density (g/cm³)	Melt Flow Rate (g/10min)	Tensile Strength (MPa)	Elongation at Break(%)	Flexural Strength (MPa)	Flexural Modulus (MPa)	Impact Strength (KJ/m²)
3D-ABS	3*3	1.04	18	48	25	68	1200	20

Filaments extrusion processing conditions: Drying temperature: 80°C; Drying time: 2-4 hours; Processing temperature: 185-215°C

PRINT THE INSTRUCTIONS

- Leveling: The bottom plate must be leveled.
- Heated bed: 95-110°C.
- Printing temperature: 220-250°C.
- Fill rate: It is recommended to set 5%-10% for printing large-size models.
- Layer height: It is recommended that the layer thickness should not be too smaller than the nozzle diameter, and parameters such as 0.2, 0.25, and 0.3 can be tried.
- Fan: It is recommended to turn off the cooling fan.
- Enclosed space: baffles can be added around the printer to maintain a constant temperature in the printing environment.
- For a better printing effect, please try to keep the temperature of the printing area as constant as possible.

Application



Polyurethane substrate SI-TPV

Smooth and skin-friendly with good antibacterial properties.
Non-sticky, non-ash-sticky, and sweat resistant. Excellent bonding with PC, ABS, PC/ABS, etc.
UV resistance, good heat resistance, good abrasion and scratch resistance, and good ageing resistant properties

- Applicable for electronic product wrapping, smart wearable devices, secondary injection molding, sealing joint strip



Polyolefin substrate SI-TPV

Good tensile properties
Resistant to high and low temperatures and UV
Good wrap-around properties with PP

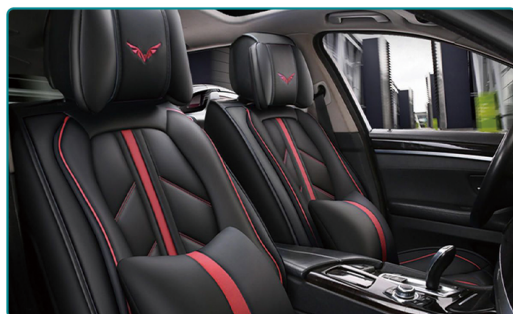
- Applicable for daily necessities, sports equipment, cosmetic packaging



Nylon substrate SI-TPV

High hardness up to 40-60D
Good tensile properties
Resistant to high temperature, chemical and oil

- Applicable to automobile brake pipe, brake pipe, buffer material



Artificial organosilicone leather

Reusable materials that are environmentally friendly
Excellent weather resistance
Easy coloring and excellent color fastness
Smooth hand feeling with good stain resistance by simple and efficient production process

- Applicable for outdoor furniture, soft package decoration, automotive trim

THERMOPLASTICS SILICONE ELASTOMERS



Overview

Thermoplastic silicone elastomer (SI-TPV) is a stable TPV polymer alloy formed by uniformly dispersing the vulcanized silicone rubber particles in a thermoplastic material through dynamic vulcanization crosslinking technology. Our company has its own intellectual property, which can bring stable and reliable new elastomer materials to customers.

The product can be molded by injection and extrusion to be used in electronic wear, laptop computers, mobile phones, headphones, plastic wrapping, baby products, and sealing field. Due to its light specific gravity and recyclability, it also has been widely applied in the automobile industry.

Category

Product grade	Performance characteristics
TP-3165, TP-3175	Flame-retardant elastomer, in accordance with GB 8410-2006 flame retardant testing standard, which is applicable for flame retardant environmental products
TP-3360, TP-3375	Used for extrusion, casting and other processing methods, applicable for making electric wires and cables, USB cables, artificial leather and other products
TP-3460, TP-3475	The antibacterial rate of Escherichia coli and Staphylococcus aureus reaches more than 99.9%, which is suitable for antibacterial products
TP-3560, TP-3575	Good resistance to short time stains, especially the short time stains such as chili oil, ketch-up, coffee, etc.
TP-3650, TP-3660, TP-3675	Used for PC, ABS, PVC and other polar materials with good covering performance, applicable for injection molding preparation of smart wearing, bracelets, secondary injection molding covering housing

Product advantages

The material has both the mechanical properties of rubber and the processing properties of thermoplastic plastics, with excellent properties such as high modulus, strength, and elasticity, as well as skin-friendly, non-ash-sticky, and recyclable.



Process with environmental protection

Odorless with no by-products and volatiles
No precipitates without fillers and plasticizers,recyclable materials



Diverse processing

Easy to wear bright colors, with high color fastness
Applicable for screen printing, transfer printing, painting and other secondary processing



Stable performance

Good weather and UV resistance
Good oil and chemical resistance
Good anti-yellowing property with no solvent oil



Smooth hand feeling

Silky feeling
Non-sticky, non-ash-sticky and sweat resistant



Good abrasion resistance

Silicone rubber can reduce the coefficient of friction of the product
TPU can enhance the abrasion resistance of the product



Good wrap-around properties

Used for secondary injection molding with PC, ABS and other plastics

Qualification

ROHS and REACH certified
GB/T 24128-2018/ISO 16869:2008 Evaluation of anti-mold effect
GB/T 31402-2015/ISO 22196:2007(IDT) Antisepsis performance test
GB 4806.7-2016 National Food Safety Standard
GB 4810-2006 Combustion characteristics of automobile interior materials up to class B



Application



Automobile industry

Sound-absorbing cotton, oil-absorbing felt, thermal insulation pad



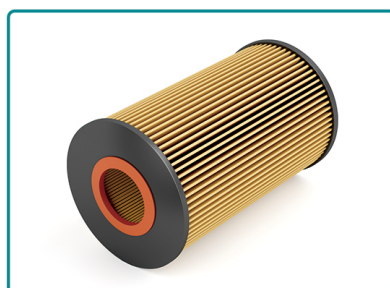
Medical protection

Medical masks, medical protective clothing



Daily necessities

Diapers, sanitary napkins



Other sectors

Air filtration, liquid filtration

HIGH MELT FLOW RATE INDEX POLYPROPYLENE



Overview

With polypropylene as the basic raw material, the high melt flow rate index polypropylene adopts a controllable rheological approach to improve the fluidity and molecular weight distribution of the resins. It is the primary raw material for making polypropylene melt-blown non-woven products.

The product is independently developed and produced by our company. Its stable melt quality flow rate and superior spinnability can greatly improve the processing efficiency. The products are suitable for market areas such as automobile, medical, and hygiene that require non-woven fabrics with melt blown molding process.

Features



Low odor



High transparency with no impurities



Melt index with stable performance



Narrow molecular weight distribution



Good processing properties

Qualification



GB/T 30923-2014 Plastic Polypropylene (PP) Melt-blown Special Materials

GB/T 2914-2008 Vinyl Chloride Homopolymer and Copolymer Resin Volatile (Including Water) Determination

Parameters

Performance	Testing standards	Test conditions	Unit	M-450	M-1300	M-1500	M-1800
Melt flow rate	ISO 1133	230℃, 2.16kg	g/10min	450	1300	1500	1800
Melting point	GB/T 19466	10℃/min	℃	164	163	163	163
Molecular weight distribution index	GPC	150℃	/	2.5	2.4	2.4	2.3
Ash content	ISO 3451	850℃, 2h	%	0.01	0.01	0.01	0.01
Volatiles	ISO 1269	105℃	%	0.06	0.06	0.06	0.05



Quality Technical Index

Appearance: white powder

Melting point: 160°C

Volatiles: $\leq 0.5\%$ (WT)

Adding method

There are two ways of application in plastics processing:

1. Adding stiffening nucleating agents to the resin for direct mixing, injection or extrusion molding;
2. Mixing the product with resin and other additives to make masterbatches, and then blended with ordinary polypropylene.

POLYPROPYLENE STIFFENING NUCLEATING AGENT



Overview

This product is an economic and efficient stiffening nucleating agent of large molecules, which can significantly increase the crystallization velocity of polypropylene, reduce its crystallization size, shorten its molding cycle, and effectively improve the rigidity, impact resistance and surface flatness of polypropylene products. Compared with the small molecule nucleating agents sold on the market, this product is non-toxic, odorless, dust-free, with good stability. It has no small molecule precipitates, fully compatible with polypropylene, and easy to disperse, and there is no precipitates migration from products.

Features



Process with environmental protection

The state of matter is 300 mesh powder
Little dust will appear when added



Significant stiffening

Increase the rigidity of polypropylene significantly
Also improve impact resistance and heat deflection temperature



Good compatibility

This product which is based on a polypropylene carrier is fully compatible with it
With no agglomerate in the mixing process
Uniformly dispersed with no small molecule precipitation



Non-toxic and harmless

No waste water and exhaust gas emission during production
Products passed the inspection of hygiene standard of food packaging



Easy processing

Low melting point
Fast molding



Simple process

The product can be directly blended with polypropylene pellets
There is no need to pre-mix with white oil
And it does not need to de-volatilize small molecules

POLYPROPYLENE STIFFENING UNCLEATING AGENT

Parameters

Grade	Appearance	Particle size	Recommended additive amount %	Functions	For resins
CS-6993	White powder	300 mesh	0.1-0.3%	Increase bending Increase crystallization temperature	Homopolymerized pp

Performance comparison:

Item	Unit	Test method	Base material comparison	CS-6993
Bending strength	MPa	GB/T 9341-2008	39	51.9
Bending modulus	MPa		1464	2020
Extension intensity	MPa	GB/T 1040.2-2006	34.4	40.5
Tensile elongation	%		19	15.9
Notch impact strength of cantilever beam	kJ/m²	GB/T 1843-2008	3.2	3.2