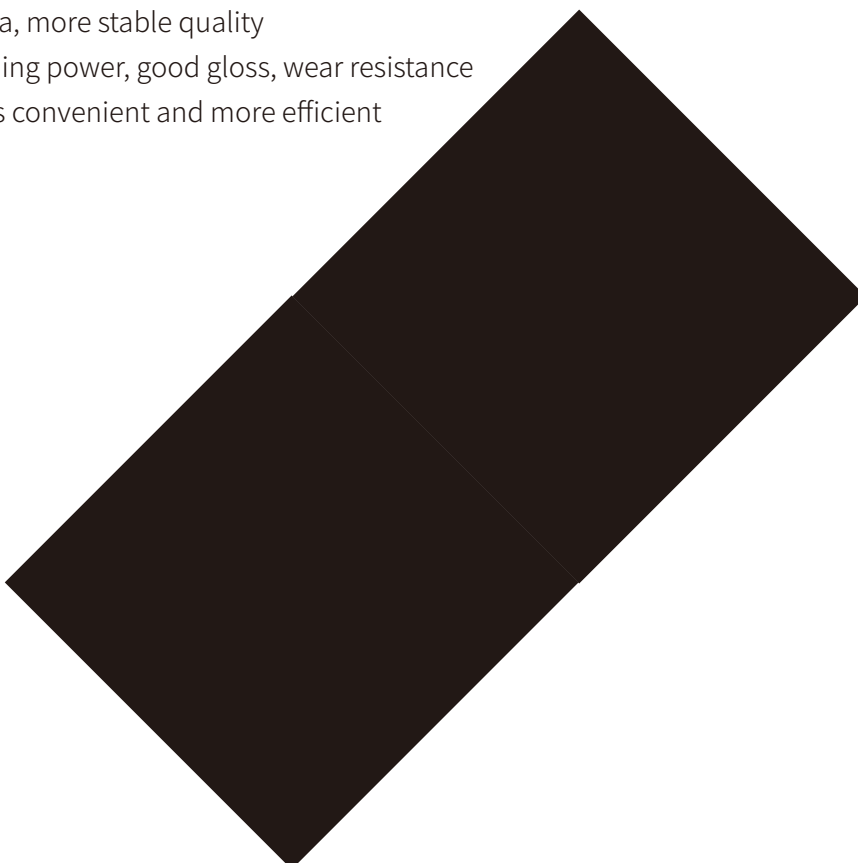




# ECOATONE MULTIFUNCTIONAL COATING

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- New technology, new formula, more stable quality
  - Outstanding color, strong hiding power, good gloss, wear resistance
  - The construction operation is convenient and more efficient
- 



WASHINTA

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# ECOATONE

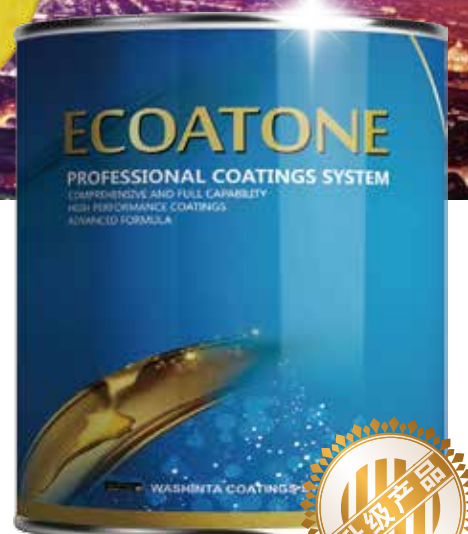
## MULTIFUNCTIONAL COATING

- New technology, new formula, more stable quality
- Outstanding color, strong hiding power, good gloss, wear resistance
- The construction operation is convenient and more efficient



### Applicable substrates:

Stainless steel, galvanized sheet, aluminum alloy, molybdenum, copper, iron, various electroplated surfaces, acrylic, fiberglass, ABS, PVC, etc.



## Contents

Company Introduction .....	2
ULTIFUNCTIONA COATINGS Introduction .....	3
TDS .....	5
BP-2K Solid colors .....	6
BP- Series Hardener .....	6
BP-Thinner .....	7
BP-3111 DTM Primer .....	8
BP-838 Epoxy Primer .....	9
BP- 501 Glossing Agent .....	10
BP- 502 Retarder .....	10
BP- 503 Paint Stripper .....	11
BP- 504 Degreaser .....	11
BP- 506 Anti Silicone .....	12
BP- 507 Matting Agent .....	12
BP- 508 Accelerator .....	13
Paint spraying common problems and solutions guide .....	14
1K/2K Toners Characteristics Table .....	20

Note: The mixing ratio is ratio by volume except as other wise specified.



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## Company Introduction

Washinta Chemical Coating Co., Ltd, was founded in 1990 and located in Zhaoqing City, Guangdong province, only one hour drive from Guangzhou.

Specializing in developing, producing and marketing car paints with more than 20 year's experiences in this field.

Our factory covers 30,000 square meters with total investment of USD6,000,000.

Through our constant development in these years, Washinta Chemical has become one of the largest and influential automotive coatings manufacturers in China. What's more, we have been establishing stable partnerships with three famous European car paint companies.

Relying on our advanced equipments and a team of professional engineers, Washinta has always keeping the advanced technology in car paint field with a full set of software and hardware facilities.

To ensure the stable and good product quality under highly efficiency, Washinta insists on selecting superior raw materials from most famous chemical companies in the world, such as BASF, Bayer, Clariant, Eastman, Merck and etc. as well as doing quality inspections in our factory. Moreover, Washinta is certificated ISO 9001, ISO 14001 and TS 16949.

Benefit from the stable product quality, reasonable price, precise color mixing system with excellent service, Washinta Chemical wins the trust of customers around the world.

Washinta not only has built very good sales nets in Mainland China, but also distributed our products in export markets. Such as the U.K, U.S.A, Australia, the Middle East, Africa, Ghana, Russia, Egypt, Mongolia, the Asia and so on.

With the good cooperation and sincere support from all the customers, Washinta constantly spurs themselves to improve and endeavor to make our brand globally reputable.



ISO14001 :2015 International Management System Certification

ISO/TS16949 International Automobile Industry Quality System Certification

## Introduction of ECOATONE multi-purpose coating

ECOATONE multi-purpose coating is a special coating product for advertising signs and advertising logos that WASHINTA Chemical Coatings Co., Ltd. has invested in, using advanced technology and unique formulas. It is a revolutionary progress in the advertising sign and advertising logo industry!

ECOATONE multi-purpose coating is based on advanced technology and unique formulas, based on automotive paint, highlighting the grinding-free process and super strong adhesion. It is composed of modified acrylic resin, fluorescent powder, leveling agent, defoaming agent, etc. It has the characteristics of fullness, excellent brightness, strong covering power, good weather resistance, etc.

## Instructions

If the base material is pure aluminum sheet and pure galvanized sheet, there is no pollution on the surface and it meets the construction conditions. It can be free of grinding, degreasing, rust removal and epoxy primer (fluorocarbon primer, phosphating primer), and the product quality can reach the standard effect. Because there are impure and poor base material quality on the market, such as: not pure aluminum sheet, mixed with aluminum alloy material, impure galvanized plate, etc., it is recommended to grind the base material surface, then remove rust and oil (please use dry grinding 800 sandpaper or water grinding 600 sandpaper), and spray epoxy primer (fluorocarbon primer, phosphating primer). This can avoid the poor adhesion caused by the base material in the later stage. The product performance must be tested before construction.

Thinner: Acrylic thinners can be used with our products.

Mixing ratio: Solid color paint, curing agent and thinner are mixed according to the standard of 3:1:0.5; Matte series paint, curing agent and thinner are mixed according to the standard of 4:1:0.5 (this multi-purpose paint must be used with ECOATONE brand special hardener to achieve the best effect).



# ECOATONE

## Multifunctional coating features:

- **No primer or sanding required**

ECOATONE multifunctional coatings do not require grinding or primer treatment on stainless steel, aluminum alloy, aluminum plate, galvanized plate, copper, cold-rolled plate, acrylic plate, ABS, and other substrates. They use special imported raw materials and combine advanced international production technology. They have good adhesion and can ensure hiding power and adhesion without the need for primer (if there are oil stains on the surface of the substrate, degreasing is required).

- **Strong adhesion**

The surface of the material that is dry, clean or degreased can be directly sprayed without special treatment, which saves time and labor, greatly saves construction time and cost, and improves efficiency. The adhesion is comparable to that of the primer, and it is guaranteed not to fall off for 3 years. It has high positive impact resistance, except for force majeure.

- **High brightness**

The multifunctional coating adopts imported raw materials and combines advanced international production technology. It has the characteristics of good leveling, high hardness and high brightness.

- **Large spraying area**

ECOATONE finished paint has good covering power, and the spraying area is 2-3 times that of ordinary paint, saving costs and construction time.

- **Good weather resistance**

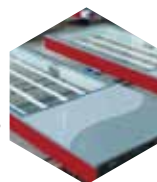
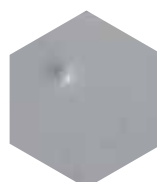
According to the construction spraying process and supporting use of ECOATONE multifunctional coating products, there will be no fading phenomenon outdoors for 3 years, and the color saturation remains bright.

- **Wide range of applications**

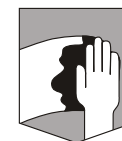
This product is used in various materials in the advertising industry, such as stainless steel, aluminum alloy, aluminum plate, copper, cold-rolled plate, acrylic plate, ABS and other substrates. It has the effect of adapting to various materials and matching the masterbatch according to the needs.

- **Less odor**

The coating material uses imported raw materials, which is green and environmentally friendly, with mild odor, reducing the harm to the body of construction workers.



## ECOATONE LTIFUNCTIONAL COATING LFGEND



Cleaning



Dry sanding by hand



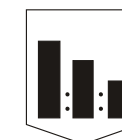
Dry sanding by machine



Wet sanding by hand



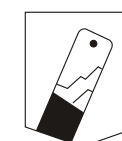
Ready for use



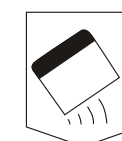
Mixing Ratio-3 components



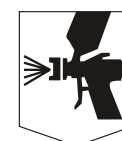
Pot Life



Use measuring rulers



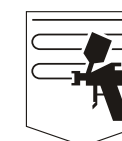
Use spreader



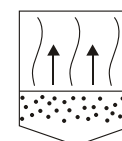
Gravity feed spray gun



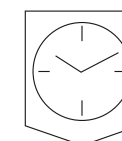
Suction feed spray gun



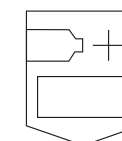
No. of coats



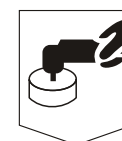
Flash-off time



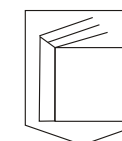
Drying time



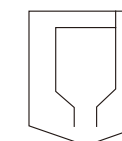
Add hardener



Polishing



Refer to product instruction










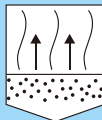

Construction viscosity

BP-2K multifunctional coating solid color paint

**Product characteristics:** good fullness, high gloss, good leveling, good weather resistance, strong color retention, excellent adhesion.  
**Applicable substrates:** stainless steel, galvanized sheet, aluminum alloy, aluminum, copper, iron, various electroplated surfaces, acrylic, fiberglass,ABS, PVC, etc.



Construction requirements:

	<b>Surface cleaning:</b> Use a degreasing cleaner to remove wax, oil, silicone and other impurities.										
 	<b>Mixing ratio</b> <table><tr><td>solid color paint</td><td>+</td><td>Hardener</td><td>+</td><td>Thinner</td></tr><tr><td>2</td><td></td><td>1</td><td></td><td>0.2~0.6</td></tr></table>	solid color paint	+	Hardener	+	Thinner	2		1		0.2~0.6
solid color paint	+	Hardener	+	Thinner							
2		1		0.2~0.6							
	<b>25°CViscosity:</b> ISO 4 cup: 14~18 seconds										
 	<table><tr><td rowspan="2"><b>Airbrush Settings</b></td><td>Gravity type (upper pot): 1.2~1.5mm 2~4kg/cm<sup>2</sup></td></tr><tr><td>Siphon type (lower pot): 1.5~1.7mm 2~4kg/cm<sup>2</sup></td></tr></table>	<b>Airbrush Settings</b>	Gravity type (upper pot): 1.2~1.5mm 2~4kg/cm <sup>2</sup>	Siphon type (lower pot): 1.5~1.7mm 2~4kg/cm <sup>2</sup>							
<b>Airbrush Settings</b>	Gravity type (upper pot): 1.2~1.5mm 2~4kg/cm <sup>2</sup>										
	Siphon type (lower pot): 1.5~1.7mm 2~4kg/cm <sup>2</sup>										
 	<b>Number of spraying passes/film thickness:</b> 2~3 layers, 30-50μm <b>Flash-drying time:</b> At 25°C, flash-drying between layers takes 10~15 minutes, and it must be left to stand after spraying. <b>Drying time:</b> Drying time: 60~70°C, 40 minutes; Self-drying time: 1~3 days										
	<b>Tooling time:</b> 25°C 6 hours, mainly for white, yellow, lemon yellow, bright yellow, silver, and flash gold, other colors can be extended by several hours										

Technical indicators:

<b>Gloss, adhesion</b>	gloss>90°; adhesion: level 0
<b>Hardness</b>	≥HB
<b>Flexibility</b>	≤1mm
<b>Forward impact test</b>	50cm/kg
<b>Artificial accelerated aging test</b>	1000 hours, color difference ΔE≤3, gloss loss rate ≤20%
<b>Gasoline resistance (24 hours)</b>	no blistering, no rust, slight discoloration allowed
<b>Acid and alkali resistance</b>	(5%, 168 hours): no blistering, no rust, slight discoloration allowed
<b>Neutral salt spray resistance</b>	(240 hours): no blistering, no rust, no shedding
<b>Moisture resistance</b>	(240 hours): no blistering, no rust, no shedding
<b>Water resistance</b>	(240 hours): no blistering, no rust, no shedding

- Before spraying old workpieces, the primer film must be polished and cleaned.
- Use corresponding curing agent and diluent according to different temperatures during construction.
- Storage conditions and period: Store in a cool and dry place/20°C, with original cap for two years.
- Packaging specifications: 4L canned.

BP-series Hardener

**Product description:** ECOATONE multifunctional coating special curing agent. Yellowing resistant. There are multiple models such as standard, quick-drying, slow-drying, etc. to match different varieties, different construction areas and construction temperatures. Supporting **products:** ECOATONE multifunctional special coating.



Product features:

<b>BP-6400 Hardener (Fast)</b>	Fast-drying medium-concentration curing agent, fast drying time, suitable for mixing and spraying at low temperature <18°C.
<b>BP-6401 Hardener (Normal)</b>	Hardener(Normal)Standard medium-concentration curing agent, suitable for mixing and spraying at room temperature of 18~30°C.
<b>BP-6402 Hardener (Slow)</b>	Slow-drying medium-concentration curing agent, suitable for mixing and spraying at high temperature >30°C.

- Choose different hardener according to temperature, humidity and drying conditions. Generally, quick-drying hardener are used below 18°C, standard curing agents are used between 18 and 30°C, and slow-drying hardener are used above 30°C.
- Hardener are sensitive to moisture and are prone to swelling and solidification after absorbing water. Therefore, after the hardener is opened and used, if it has not been used up, the can lid should be tightly sealed and stored in a cool and dry place, otherwise it will easily become thick and hard. Generally, hardener should be avoided from being stored in direct sunlight.
- Storage conditions and period: Store in a cool and dry place at 20°C, and the original cap can be stored for 1 year.
- Packaging specifications: 2L or 4L filling.

BP Series Thinners

**Product Description:** High-quality thinners designed for ECOATONE multifunctional paint products. Quick-drying, standard, slow-drying and other models are available to match different products, different construction areas and construction temperatures.  
**Product Use:** Reduce the spray viscosity of the paint, increase the smoothness of the paint film, and have strong solubility.



Product features:

<b>BP-5 Thinner(Fast)</b>	The fastest evaporation speed, fast-drying thinner for 1K basecoat and 2K products, suitable for construction under temperature conditions <18°C.
<b>BP-1 Thinner(Normal)</b>	Medium evaporation speed, standard thinner for 1K basecoat and 2K products, suitable for construction under temperature conditions of 18~25°C.
<b>BP-2 Thinner(Slow)</b>	Slightly slower evaporation speed, slow-drying thinner for 1K basecoat and 2K products, suitable for construction under temperature conditions of 25~30°C.

- If the temperature is too high or the weather is humid, add 10~30% BP-502 anti-white water in an appropriate amount
- Storage conditions and period: Store in a cool and dry place at 20°C, and can be stored for 2 years with the original cover.
- Packaging specifications: 4L canned.




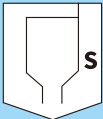



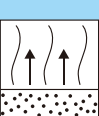




BP-3111 DTM Primer

**Product features:** Its anti-corrosive pigment content, chemical resistance and high adhesion ensure good isolating properties and the possibility to be applied directly on a wide variety of metallic surfaces, such as aluminum and steel. At the same time ensures its excellent levelling properties and is easy to sand. All these characteristics make DTM a perfect base for achieving excellent results.

**Applicable substrates:** Hardened and polished old paint film, iron, Aluminum.

Construction requirements:

	<b>Surface cleaning:</b> Use degreasing cleaner to remove wax, oil, silicon and other impurities.											
 	<table><tr><td rowspan="2">Mixing ratio</td><td>BP-3111 DTM Primer</td><td>+</td><td>BP3100 Hardener</td><td>+</td><td>BP-5 Thinner</td></tr><tr><td>4</td><td></td><td>1</td><td></td><td>1~2</td></tr></table>	Mixing ratio	BP-3111 DTM Primer	+	BP3100 Hardener	+	BP-5 Thinner	4		1		1~2
Mixing ratio	BP-3111 DTM Primer		+	BP3100 Hardener	+	BP-5 Thinner						
	4		1		1~2							
	<b>25°C Viscosity:</b> ISO 4 cup: 16~20 seconds											
 	<table><tr><td rowspan="2">Spray gun setting</td><td>Gravity type (upper pot); 1.4-18mm 2-4kg/cm<sup>2</sup></td></tr><tr><td>Siphon type (lower pot): 1.7~2.0mm 2~4kg/cm<sup>2</sup></td></tr></table>	Spray gun setting	Gravity type (upper pot); 1.4-18mm 2-4kg/cm <sup>2</sup>	Siphon type (lower pot): 1.7~2.0mm 2~4kg/cm <sup>2</sup>								
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	Siphon type (lower pot): 1.7~2.0mm 2~4kg/cm <sup>2</sup>											
 	<b>Spraying number/film thickness:</b> 2-3 layers, 30-50µm <b>Flash-drying time:</b> At 25°C, flash-dry between layers for 10-15 minutes, and stand still after spraying <b>Drying time:</b> <b>Drying time:</b> 60-70°C, 30 minutes; <b>Self-drying time:</b> 20°C, 2~3 hours											
 	<b>Grinding operation:</b> 240#~400# sandpaper dry grinding or 600#~800# sandpaper nemesis grinding.											

Technical indicators:

Gloss, adhesion	gloss 30±5°; Adhesion: Level 0
Hardness	≥HB
Flexibility	≤1mm
Forward impact test	50cm/kg
Gasoline resistance (24 hours)	No blistering, no rust, slight discoloration allowed
Acid and light resistance	(5%, 48 hours): no blistering, no rust, slight discoloration allowed
Neutral salt spray resistance	(240 hours): no blistering, no rust, no shedding
Moisture resistance	(240 hours): no blistering, no rust, no shedding
Water resistance	(240 hours): no blistering, no rust, no shedding




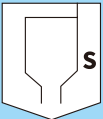



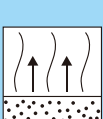


1. For oxidized iron plates or cast iron, sandblasting treatment is Sa2.5 level, surface roughness 30~75µm, or pickling treatment is used to remove all iron oxide scale, and rust is removed with a wire brush.
2. When the temperature is below 10°C, it is recommended to bake in a 60°C-70°C oven for 30 minutes to facilitate the curing of the paint film.
3. The curing agent and diluent must be used correctly, otherwise the paint film may not dry completely.
4. Storage conditions and period: Store in a cool and dry place at 20°C, with the original cap, it can be stored for 2 years.
5. Packaging specifications: 4kg/Tin.

BP-838 Pure Epoxy Primer

**Product features:** It has excellent anti-corrosion protection and excellent adhesion on metal surfaces such as steel, aluminum, and galvanized sheets.



Construction requirements:

	<b>Surface cleaning:</b> Use degreasing cleaner to remove wax, oil, silicon and other impurities.										
 	<b>Mixing ratio</b> <table><tr><td>BP-838 Pure Epoxy primer</td><td>+</td><td>BP-839 Pure Epoxy hardener</td><td>+</td><td>BP-602 Epoxy Thinner</td></tr><tr><td>4</td><td></td><td>1</td><td></td><td>1~2</td></tr></table>	BP-838 Pure Epoxy primer	+	BP-839 Pure Epoxy hardener	+	BP-602 Epoxy Thinner	4		1		1~2
BP-838 Pure Epoxy primer	+	BP-839 Pure Epoxy hardener	+	BP-602 Epoxy Thinner							
4		1		1~2							
	<b>25°C Viscosity:</b> ISO 4 cup: 16~20 seconds										
 	<table><tr><td rowspan="2">Spray gun setting</td><td>Gravity type (upper pot); 1.4-18mm 2-4kg/cm<sup>2</sup></td></tr><tr><td>Siphon type (lower pot): 1.7~2.0mm 2~4kg/cm<sup>2</sup></td></tr></table>	Spray gun setting	Gravity type (upper pot); 1.4-18mm 2-4kg/cm <sup>2</sup>	Siphon type (lower pot): 1.7~2.0mm 2~4kg/cm <sup>2</sup>							
Spray gun setting	Gravity type (upper pot); 1.4-18mm 2-4kg/cm <sup>2</sup>										
	Siphon type (lower pot): 1.7~2.0mm 2~4kg/cm <sup>2</sup>										
 	<b>Spraying number/film thickness:</b> 2-3 layers, 30-50µm <b>Flash-drying time:</b> At 25°C, flash-dry between layers for 10-15 minutes, and stand still after spraying <b>Drying time:</b> <b>Drying time:</b> 60-70°C, 40 minutes; Natural-drying time: 20°C, ≥10 hours										
 	<b>Grinding operation:</b> 240#~400# sandpaper dry grinding or 600#~800# sandpaper nemesis grinding.										

Technical indicators:

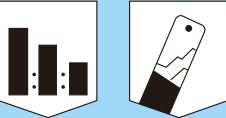
Gloss, adhesion	gloss 30±5°; Adhesion: Level 0
Hardness	≥HB
Flexibility	≤1mm
Forward impact test	50cm/kg
Gasoline resistance (24 hours)	No blistering, no rust, slight discoloration allowed
Acid and light resistance	(5%, 48 hours): no blistering, no rust, slight discoloration allowed
Neutral salt spray resistance	(240 hours): no blistering, no rust, no shedding
Moisture resistance	(240 hours): no blistering, no rust, no shedding
Water resistance	(240 hours): no blistering, no rust, no shedding

1. For oxidized iron plates or cast iron, sandblasting treatment is Sa2.5 level, surface roughness 30~75µm, or pickling treatment is used to remove all iron oxide scale, and rust is removed with a wire brush.
2. When the temperature is below 10°C, it is recommended to bake in a 60°C-70°C oven for 30 minutes to facilitate the curing of the paint film.
3. The curing agent and diluent must be used correctly, otherwise the paint film may not dry completely.
4. Storage conditions and period: Store in a cool and dry place at 20°C, with the original cap, it can be stored for 2 years.
5. Packaging specifications: 4kg/Tin.

BP-501 Glossing Agent

**Product Description:** Glossing Agent designed for ECOATONE multifunctional special coatings, which can improve the gloss of the paint film.



	<b>Matching product:</b> ECOAONE multifunctional special plain paint.
	<b>Mixing ratio (volume ratio):</b> BP-ECOATONE multifunctional coatings can add 0-20% BP Glossing Agent.
<b>Matching method:</b> (BP-ECOATONE multifunctional coatings + BP-brightener) total amount: BP-series curing agent = 2:1	


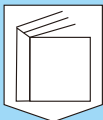
1. If the hiding power of the paint itself is poor, it is not advisable to add brightener.
2. Do not use in 1K basecoat and clearcoat.
3. Storage conditions and period: Place in a cool and dry place at 20°C, and store for 2 years with the original cap.
4. Packaging specifications: 4L cans.

BP-502 Retarder

**Product features:** Additives that extend the evaporation time, suitable for use in high temperature, humid weather or large-area spraying. Makes the paint easier to spray, has better leveling effect, and avoids whitening of the paint film.

**Supporting products:** Same as ECOATONE multifunctional special paints and clearcoat.



	<b>Mixing ratio:</b> When the temperature is higher than 30°C, 10-30% of anti-white water can be mixed into BP slow-drying thinner for use.
	For the spraying operation procedures, please refer to the instructions for use of the mixed paint.


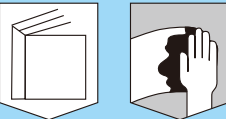
1. Storage conditions and period: Store in a cool and dry place at 20°C, and the original cap can be stored for 1 year.
2. Packaging specifications: 1L canned.

BP-503 Paint Stripper

**Product features:** low odor, no corrosion to substrate, non-flammable, can quickly and effectively remove all kinds of new and old paint.

**Applicable materials:** paint film on the surface of metal workpieces. It is not recommended to use it on the surface of plastic and fiberglass materials.



	<b>Mixing ratio:</b> It can be used without mixing.
	<b>Usage:</b> Shake the paint stripping water before use, and evenly apply it on the paint film surface of the workpiece that needs to be stripped. After about 15 minutes, the paint film will soften and wrinkle, and then wipe it with a cloth or scrape it off, and then rinse it with clean water. For thick and thinner to remove paint films, it can be repeatedly applied until it falls off.


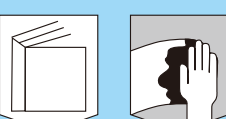
1. The surface of the workpiece after stripping with BP-503 needs to be polished, and then BP-504 oil removal is used to remove grease, wax, silicone, sand and other pollutants. If this step is not performed, it will affect the adhesion of the re-sprayed paint.
2. The clean water that has just been used should enter the wastewater treatment process according to local regulations to avoid polluting the environment.
3. Storage conditions and period: Store in a cool and dry place at 20°C, with original lid, can be stored for 2 years.
4. Packaging specifications: 1L or 4L cans.

BP-504 Degreaser

**Product features:** It can gently remove oil stains on the surface of the workpiece to be sprayed to avoid unnecessary paint film defects.

**Applicable substrates:** any topcoat, primer, putty, bare metal surface. It is not recommended to use on plastic and fiberglass surfaces.



	<b>Mixing ratio:</b> It can be used without mixing.
	<b>Usage:</b> Use a clean cloth soaked with BP-504 degreaser to wipe the surface of the workpiece to be treated, and immediately wipe the surface dry with another clean cloth. Please always use two rags, because only one cloth cannot really remove the dirt. Please note that the surface should be wiped dry with a dry cloth before the BP-504 degreaser evaporates. If it is not wiped dry before it evaporates, the dirt will be attached to the surface of the workpiece intermittently.

1. The purpose of cleaning the surface of the workpiece with BP-504 degreaser is to remove pollutants such as grease, wax, silicone, sand, etc. If this step is not performed, these pollutants will be brought into the sandpaper marks due to grinding, thereby affecting the adhesion of the entire repair system.
2. The two rags need to be replaced frequently to keep them clean.
3. The used rags must be placed in a designated sealed container after the solvent evaporates to avoid spontaneous combustion.
3. Storage conditions and period: Store in a cool and dry place at 20°C, with the original cover for 1 year.
4. Packaging specifications: 1L or 4L.



BP-506 Anti Silicone

**Product features:** topcoat additive, used to eliminate paint film defects such as rolling holes (fish eyes) or shrinkage holes caused by oil or silicon pollution.  
**Supporting products:** used for ECOATONE multi-functional special solid paint. Do not add to midcoat, primer, or base paint.



	<b>Addition ratio:</b> about 5-15g of anti-rolling water can be added to each liter of paint that has been prepared with curing agent and diluent
	<b>Spraying method:</b> wet spray 1-2 layers of paint with anti-rolling water on the paint film with rolling holes.

- 1. The amount of addition should not be too much, otherwise the paint film is prone to dark bubbles or pinholes.
- 2. If the rolling situation is serious, the paint film must be polished and leveled after it is completely dry, and then re-sprayed after adding anti-rolling water.
- 3. Storage conditions and period: Store in a cool and dry place at 20°C, and can be stored for 2 years with the original cover.
- 4. Packaging specifications: 1L canned.

BP-507 Matting Agent

**Product features:** Can reduce the surface brightness of the paint film, has good matte effect, the paint film is flat and smooth, and has strong versatility. It can be mixed in different proportions to obtain paint films with different gloss.  
**Matching products:** Suitable for ECOATONE multifunctional paint 2K solid color paint, Washinta brand clearcoat and 1K base paint.



Mixing ratio:

1K base paint		BP-507 matte agent = (85-70): (15-30)		
2K Paint	Matte effect	2K solid color paint	BP-507 Matting Agent	BP-series Hardener
	Full Matte	30 parts	70 parts	15 parts
	Semi-matte (eggshell light)	50 parts	50 parts	25 parts
	Semi-gloss	70 parts	30 parts	35 parts

Spraying method:

please refer to the instructions for use of the mixed paint

- 1. Matting agent is easy to crystallize if it is exposed to air for too long, so when using it, remove the crystals and impurities on the edge of the can, and filter it out with a filter to avoid particles in the paint film. Pay special attention when using it with clearcoat.
- 2. Storage conditions and period: Store in a cool and dry place at 20°C, with original lid, can be stored for 1 year.
- 3. Packaging specifications: 4L,

BP-508 Accelerator

**Product features:** A drying accelerator designed for 2K solid color paint and clearcoat. which can speed up the dust-free and drying time of the paint, and is suitable for local repair or use at low temperatures.



	<b>Ratio:</b> 1. When the temperature is 10-15°C, 4g of BP-508 Accelerator can be added to each liter of prepared paint; 2. When the temperature is 0-10°C, 8~12g of BP-50B Accelerator can be added to each liter of prepared paint; 3. When the temperature is below zero, 12~15g of BP-508 Accelerator can be added to each liter of prepared paint.
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- 1. After adding Accelerator, the usable time of the paint will be greatly shortened, so it should be used up as soon as possible.
- 2. The maximum amount added per liter of prepared paint shall not exceed 15 grams, otherwise the paint film will become brittle and lose gloss.
- 3. Accelerator cannot be used as a hardener, but can only be used as an auxiliary agent with a hardener.
- 4. Storage conditions and shade limit: Store in a cool and dry place at 20°C, with original lid, can be stored for 1 year.
- 5. Packaging specifications: 1L.

## Common problems in paint spraying and their solutions

During the paint spraying process, we often encounter many problems. There are many types of coating diseases, the most common ones are: orange peel, sagging, blooming, bottom see-through, pinholes, shrinkage, fish eyes, prickly heat, peeling, gloss loss, discoloration, cracking, etc. The disease is caused by many factors. Below we analyze some of the most common faults, which will help users take corresponding measures when encountering similar problems.

### Shrinkage. Fisheyes



The existence of fisheyes on the surface of the workpiece due to the lack of cleaning, or the influence of foreign matter (such as oil, water, silicone, etc.) mixed in the paint, the paint cannot be evenly attached, shrinking and exposing the painted surface, or the presence of small sand holes due to poor primer treatment, which makes the topcoat uneven, is called shrinkage type coating fault.

#### Causes:

① Pollution (most common), there are several possible situations:

- A.** The surface of the coated object is polluted by water, wax, polishing agent, dust, silicone, oil or lubricating oil, etc. Many types of car wax and car gloss agents contain silicone resin, which is the most common cause of fisheyes on new spray coatings. Silicone resin has a very strong adhesion to the paint film. If it is wiped with only a degreaser, it is usually not completely removed. Therefore, anti-rolling water should be added to the top layer of the repair to improve it.
- B.** In the process of cleaning the old paint film, if soap, detergent, etc. are used, if they are not handled properly, the residual stains will cause shrinkage type defects in the paint film.
- C.** Car polishing at a considerable distance from the primer layer that has been properly prepared for spraying can cause fisheyes.
- D.** The tools, air pipes, compressor oil-water separators and other equipment used for paint mixing or spraying are not clean, causing paint contamination.
- E.** If the gun washing water used contains or is mixed with dirt, dirt will be brought into the spray gun during each gun washing process, causing problems in spraying.
- F.** The air in the painting environment is not clean, with dust, paint mist, silicon boron, grinding dust, wax mist dust, etc., or air from neighboring factories pollutes the polished and cleaned painted surface or wet paint surface.
- G.** Work clothes, gloves, etc. are not clean.

- ② The spraying pressure is too high, and the distance between the spray gun and the painted surface is too close, which will also cause fisheyes (black paint).
- ③ The surface tension of the paint used is high, the leveling property is poor, the paint itself has poor anti-shrinkage property or is mixed with pollutants.

#### Prevention methods:

- ① Thoroughly clean the base surface with wax removal and silicon cleaner before trimming.
- ② It is forbidden to use silicon-containing floor polish in the spraying workshop.
- ③ Regularly maintain the oil-water separator on the intake pipe.

#### Compensation method:

If the shrinkage is not serious, you can spray two more coats of paint with anti-rolling water after the paint surface has passed the normal volatilization time; if the situation is serious, the affected area should be cleared and then re-sprayed.



### Flow, drip, and sag

During the spraying and drying process, the surface of the vertical or oblique material forms a phenomenon of flow from top to bottom or thickening of the lower edge.

#### Causes:

- ① Improper spraying operation, the spray gun is too close to the object to be coated, the gun is too slow, and the spraying is too thick at one time.
- ② The spraying environment is too low or the surrounding ventilation is not smooth, resulting in too high solvent vapor content in the air, which slows down the drying time of the coating film and makes the paint surface too wet and sag.
- ③ During wet-on-wet spraying, the spraying interval between passes is too short.
- ④ Improper selection of spray guns, too large nozzle diameter, coupled with low air pressure; too narrow spray width and too much oil output will cause sag.
- ⑤ Using a thinner that dries too slowly or using too much thinner, the paint viscosity is too low.
- ⑥ Uneven spraying, the thick surface dries slowly, and if the lower part is thin, it is very easy to form sag.
- ⑦ Paint sprayed on a contaminated or oily surface, or on a smooth old paint film, is also prone to sag. Therefore, before spraying, ensure that the surface to be coated is thoroughly cleaned, and the smooth paint surface should be polished in advance.

#### Remedial method:

After the paint layer is completely dry, sand and polish the sagging area with very fine sandpaper or smooth it with fine sandpaper before re-spraying.

### Orange peel, grapefruit peel



Wrinkles similar to orange peel and grapefruit peel appear on the surface of the coating during spraying. This is mainly because the atomized fine paint particles cannot flow between each other when they reach the paint surface, resulting in poor bonding.

#### Causes:

- ① Due to improper dilution ratio, the paint viscosity is too high and the leveling is poor.
- ② Use of poor or weakly soluble diluents, or diluents that dry too quickly.
- ③ The ambient temperature is too high, and the paint has lost a lot of solvent when it reaches the paint surface, resulting in poor leveling.
- ④ Spray gun adjustment or technical errors (most common):
  - A.** Spraying distance is too far or too close, and the coating is sprayed too thick or too thin, which will cause poor leveling of the paint surface;
  - B.** Spraying air pressure is too high or too low. If the pressure is too low, the paint atomization is not fine enough, so that the paint becomes granular when it reaches the surface of the car body, forming grapefruit peel; if the air pressure is too high, the paint will be wrinkled.
- ⑤ If the paint is uneven, the topcoat will have poor leveling like orange peel.
- ⑥ The drying time is short, the leveling time of the paint layer is insufficient, and it enters the baking room too early.

#### Prevention method;

- ① Select the diluent according to the following factors: ambient temperature, workpiece size, and air circulation speed.
- ② Use a scale to mix in the correct proportion to ensure normal construction viscosity.
- ③ Use the correct spraying method and adjust the spray gun parameters.
- ④ Each paint layer ensures sufficient drying time.
- ⑤ Prepare and polish the base material correctly.
- ⑥ The temperature of the coated object should be cooled to below 50°C, and the temperature in the spraying room is preferably around 20°C.

#### Remedy:

After the paint surface is completely dry, use very fine sandpaper or wax to grind off the orange peel depending on the severity of the orange peel wrinkles; if the situation is serious, use fine sandpaper to smooth it and then spray again.

### Whitening



During the painting process and after spraying, the surface of the coating is milky white. The paint surface is not only white, but also white and dull like clouds. This phenomenon often occurs in high temperature and humid environment. In severe cases, it completely loses its gloss and micropores appear on the coating.

#### Cause:

The solvent in the paint film evaporates rapidly, which reduces the temperature of the paint surface, causing the moisture in the atmosphere to condense on the paint surface and sink into the paint, causing the moisture to precipitate and turn white.

- ① The air humidity in the spraying environment is too high,
- ② The air humidity in the spraying environment is too low, especially when the temperature of the object to be coated is lower than room temperature; or the ambient temperature is too high, and warmer air often contains more moisture.
- ③ The quality of the thinner used is poor, or the thinner that dries too quickly is used, and the evaporation is too fast, which will excessively reduce the surface temperature of the paint film.
- ④ Improper spray adjustment or improper drying: The air pressure is too high, or the wet paint film is sprayed with a spray gun, which will increase the evaporation rate of its release agent, causing water to condense on the surface of the paint film.
- ⑤ Poor air circulation in the spraying site.

#### Remedy:

If it is slightly whitish, wait for it to dry and then polish it with polishing wax to remove the bad parts. In the case of severe whitish board, there will be moisture remaining in the paint film. Let it dry and re-spray it after finishing.

### Blistering and blistering



During the painting process, the surface of the coating film bulges like a sea, or bubbles are generated in the coating film.

#### Cause:

Even the best paint film will still be penetrated by water vapor. Therefore, a small amount of moisture often enters the paint film. When it forms enough pressure, the adhesion between the coating films or the adhesion of the overall coating to its substrate may result in the formation of bubble-like protrusions containing water. This situation is more likely to occur in hot and humid weather.

- ① Improper surface cleaning and treatment (main reason): When sanding and cleaning the primer or substrate, the water used for wet grinding is not completely dried, which is enough to cause blistering. In addition, if the primer is sanded with gasoline, the presence of water-soluble additives or impurities in it may also cause blistering and rust.
- ② The primer layer is too thick or the time interval between the coatings is too short: insufficient drying time, too thick spraying of the primer, are enough to prevent the solvent in the primer from completely evaporating. When it evaporates afterwards, it may cause blistering in the topcoat layer.
- ③ The thinner evaporates too quickly and the paint viscosity is too high.
- ④ The primer uses a bad thinner, the primer is not dry enough, and after spraying the surface residue, the paint surface is heated and the primer thinner evaporates, which will also cause prickly heat, blistering and other phenomena.
- ⑤ The drying time is short, and the temperature rises too quickly when the coating is dried.
- ⑥ The drying temperature is too high.
- ⑦ The spraying air pressure is too high, or the dry spraying primer causes the primer to become porous.

#### Repair method:

Sand the coating until all the solvent bubbles are removed, and then re-spray

### Orange peel, cypress peel



When spraying, wrinkles similar to orange peel and grapefruit peel appear on the surface of the coating. This is mainly because the atomized fine paint particles cannot flow between each other when they reach the paint surface, and the combination is poor.

#### Cause:

- ① Due to improper dilution ratio, the paint viscosity is too good and the leveling is poor.
- ② Use of poor or weak dissolving diluents, or diluents that dry too quickly.
- ③ The environmental temperature is too high, and the paint has lost a lot of solvent when it reaches the paint surface, resulting in poor leveling.
- ④ Spray gun adjustment or technical errors (most common):  
A The spraying distance is too far or too close, and the coating is sprayed too thick or too thin, which will cause poor leveling of the paint surface:  
B The spraying air pressure is too high or too low. If the pressure is too low, the paint is not fine enough, so that the paint becomes granular when it reaches the surface of the car body, forming grapefruit peel; if the air pressure is too high, the paint will be wrinkled
- ⑤ If the primer is uneven, the topcoat will have poor leveling like orange peel.
- ⑥ The drying time is too short, the leveling time of the paint layer is insufficient, and it enters the baking room too early.

#### Prevention methods:

- ① Select the thinner according to the following factors: ambient temperature, workpiece size, and air circulation speed.
- ② Use a ruler to measure the correct proportion to ensure normal construction viscosity.
- ③ Use the correct spraying method and adjust the spray gun parameters.
- ④ Each paint layer ensures sufficient drying time,
- ⑤ Correctly prepare and prime the base material.
- ⑥ The temperature of the coated object should be cooled to below 50°C, and the temperature in the spraying room is preferably around 20°C.

#### Remedial methods:

After the paint surface is completely dry, depending on the severity of the orange peel wrinkles, use very fine sandpaper or coarse wax to grind off the orange peel; if the situation is serious, use fine sandpaper to smooth it and then spray again.



### Pinholes

The phenomenon of needle-like holes or leather-like holes on the paint film is called pinholes. It not only has pits on the surface, but also reaches deep into the bottom layer.

#### Cause:

Mainly caused by solvents or gases that accumulate in the primer layer or topcoat layer and cannot evaporate.

- ① Continuous spraying is too thick, and there is not enough drying time, so that the solvent and air in the paint layer are in the process of escaping. When they reach the surface of the paint and break through the skin, the paint has dried on the surface. The resulting pores will not be restored, forming pinholes
- ② There are small holes in the primer layer. When removing the top coat before painting, air is contained in it, and the air is exposed after polishing. Small holes are formed,
- ③ Improper dilution ratio or use of poor diluent: If a diluent that dries too quickly is used, pinholes are likely to occur.
- ④ Improper surface cleaning or handling; if there is moisture on the surface of the primer, it will evaporate through the surface of the topcoat and produce pinholes.
- ⑤ Improper spray gun adjustment or technique: Improper spray gun adjustment causes the sprayed paint film to be too wet, or the spray gun is too close to the work surface, causing air to enter the paint film, and excessive air or solvent escapes during the drying process, causing pinholes
- ⑥ Insufficient drying after spraying, too rapid temperature rise during drying, and too dry surface.



- ⑦ The temperature of the object being coated is too high.

#### Remedial methods:

- ① Grind the paint film to the protective paint layer, fill the pinholes, spray the primer locally, polish and smooth it, and then spray again.
- ② For the pinholes exposed after the putty layer is polished, a layer of putty should be applied with a scraper at a 90° angle to the coated surface. This ensures that the putty can be pressed into the hole and will not be dragged out due to random movement of the knife.

#### Poor adhesion, paint peeling



Poor contact between the topcoat and the primer, or between the topcoat and the old paint layer, or between the primer and the metal surface will occur.

#### Cause:

- ① Improper surface cleaning or preparation (most common). If the sanding dust on the primer layer or other surface contaminants are not completely removed, the topcoat layer will not be in stable contact with the primer layer, resulting in poor adhesion.
- ② The primer and topcoat are not matched, or the primer and the base material are not matched, or the topcoat is sprayed before the protective paint layer is completely dry.
- ③ The surface to be coated is too smooth, the polishing is not sufficient or not polished at all,
- ④ The quality of the thinner is not good, and the solubility is too poor.
- ⑤ In the two-tone system, the first color topcoat is applied before it is properly dried.
- ⑥ When spraying metallic silver paint, the interval between the coatings is too short or the viscosity of the paint is too high.
- ② After the metallic base paint is sprayed, it is left for too long (exceeding the recommended permitted time), and then the clear paint is sprayed, and the adhesion between the clear paint and the base paint becomes poor.
- ⑥ When spraying the midcoat, the weather is humid, or the midcoat is left overnight in a sunny environment after preparation, forming an invisible water film on the midcoat film, and then the topcoat is sprayed,
- ⑨ The color paint is allowed to dry for too long before removing the masking tape.

#### Remedial methods:

In severe cases, remove the exposed base material and repaint.  
If it is caused by a mistake in masking technology, grind the damaged area and then re-spray.



#### Bite/slow corrosion of solvents

After spraying the topcoat, the base coating is bitten, resulting in wrinkles, swelling, blistering and other phenomena, which is called bite.

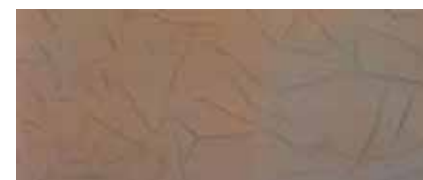
#### Cause:

- ① The next layer of paint is sprayed before the lower layer is completely dry (in a semi-dry state), or the interval between the base and top coatings is unreasonable
- ② The coatings are not matched, the base material and the primer layer have poor solvent resistance, or the solvent dissolving power of the upper paint is too strong, which can swell the base coating,
- ③ The base material adhesion of the previous coating is not good.
- ④ Spraying too thick at one time

#### Compensation method:

Grind off the paint film in the defective area. Be careful not to expose the paint film that may cause the same problem. After sealing the polished surface, re-apply. For sensitive substrates, be careful to apply thin layers. Sufficient evaporation time should be maintained between each layer. If the coating is severely bitten, it must be completely removed before spraying.

#### Cracking, cracks and wrinkles



The paint film breaks or cracks irregularly, usually near the gaps or edges of the boards that are filled on the substrate. Paint film cracks often form irregular cracks with varying depths, and more serious cracks can reach the substrate directly.

#### Cause:

- ① There are cracks on the old paint film itself, and the topcoat is sprayed after not being thoroughly polished.
- ② The paint layer on the repaired surface has hardened over the years or has been baked at high temperatures, resulting in different solubility, and it is bitten when the topcoat is sprayed.
- ③ Improper surface treatment of the substrate, too coarse sandpaper, unclean cleaning or improper gap filling.
- ④ Thermosetting paint is sprayed on an incompletely cured paint film or on a thermoplastic acrylic paint film.
- ⑤ In the case of repair coating, the topcoat layer cracks due to cracking of the putty layer.
- ⑥ The topcoat or overall coating is sprayed too thick. In normal use, the thicker the topcoat layer (especially self-drying spray paint), the worse the cold resistance and the easier it is to crack.
- ⑦ The paint is not mixed evenly before spraying, the thinner is insufficient or the model is wrong.
- ⑧ When spraying, the temperature of the substrate is too high or too low.

#### Remedy:

When the crack is light and only affects the topcoat layer, the crack can be sanded with sandpaper until the complete surface is exposed, and then the topcoat is re-sprayed. If the crack penetrates the primer, the paint layer in the defective area should be completely removed, and the base defect should be completely repaired, and then re-sprayed.

#### Wrinkling



During the drying process of the coating, due to the inconsistent drying speed of the inner layer and the surface layer, the surface of the paint film shrinks sharply and retracts upward, resulting in an uneven surface. The size of the wrinkles is different, some form irregular wrinkles, and small ones form skin-like wrinkles.

#### Cause:

- ① The coating is sprayed too thick, resulting in the coating being dry on the surface but not dry on the inside.
- ② Poor drying environment: low temperature, high temperature or excessive air flow on the surface after spraying or no ventilation.
- ③ Insufficient drying time for each coating, or high temperature accelerated baking and drying, or exposure under the scorching sun,
- ④ Improper selection of diluent: Using a diluent with high penetration will swell the bottom layer and wrinkle.
- ⑤ Drying the coating in polluted air (also occurs in poorly ventilated environments).
- ⑥ Some synthetic resin paints are prone to small wrinkles if they are dried for too long and then baked after the surface is dry.
- ⑦ On the old nitro paint film, if it is re-sprayed with polyurethane topcoat, wrinkles are likely to occur if it is repaired again.

#### Remedial method:

First, let the paint film dry fully. For lighter defects, grind it flat and then polish it. If the defects are serious, scrape it up to the base material and re-paint it.

1K/2K Toners Characteristics Table

No	Name	Property	Toner color	1:1 BP-6301
BP-6301	Pure white	Standard bright white		
BP-6302	Black	Standard black toner		
BP-6303	Blue-toned	Standard blue toner, with green hue		
BP-6304	Brilliant blue-purple	Blue toner, high chroma		
BP-6305	Purple	Standard purple toner, with red-blue hue		
BP-6306	Blue-Green	Toner with blue-green -blue hue		
BP-6307	Yellow-Green	Toner with yellow-green -yellow hue		
BP-6308	Mud yellow	Darker yellow, with red hue, low chroma		
BP-6309	Medium yellow	With red hue Yellow toner		

1K/2K Toners Characteristics Table

No	Name	Property	Toner color	1:1 BP-6301
BP-6310	Lemon yellow	Yellow masterbatch with green hue		
BP-6311	Brilliant yellow	High chroma and green hue		
BP-6312	Orange red	Red masterbatch with yellow hue		
BP-6313	Iron red	Dark red with yellow hue and low chroma		
BP-6314	Bright red	Standard bright red with high chroma and yellow hue		
BP-6315	Purple red	Red masterbatch with dark purple hue		
BP-6316	Rose red	Red masterbatch with purple hue and high chroma		
BP-6317	Silver flash	Standard silver masterbatch with strong sparkle		
BP-6318	Gold flash	standard gold masterbatch with strong sparkle		