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# P1 Coatings Guide: How To Spray Peelable Paint

## Introduction and Application Guide

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# ***COATINGS***

*Peelable car paint*

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## Company Background

Based in Belgium and with a background in peelable coatings since 2009, P1 Coatings passion for both cars and customisation motivated us to develop the P1 Coatings peelable paint system. Our pursuit for perfection is the result of thousands of hours in research and development, producing the highest quality in the peelable coatings market today.

Whether it's a clear paint protection solution (clear bra, liquid PPF) or a customised colour, our solution allows auto bodyshops, dealerships, customisation shops, manufacturers and many other markets the ability to provide a paint system that's 100% removable without having the drawbacks of current wrapping systems out in today's market. Although P1 Coatings provides Easypeel® technology combined with extreme durability, it's easily mistaken as OEM paint, even by the most skilled painters.



P1 Coatings protects the surface of your car against scratches, abrasion, debris, dirt, dust, oil, grease, rust, corrosion, and many other factors that may harm your vehicle. Although the P1 Coatings system also allows for a high degree of customisation, it also provides the look and feel of original car paint. The ability to retain the same characteristics as automotive paint, the installer/customer still has the option and flexibility to sand, polish, or wax their vehicle while maintaining the desired peel-ability.

- Low consumption
- ECO-friendly
- Apply like real paint
- Clear paint protection solution
- Minimised booth time
- Sand, polish, wax, fuel resistant
- Life span is up to 5 years



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## P1 Coatings Products

P1 Coatings paint system is comprised of a water based line of products (P1 Primer, P1 Base) and solvent based Topcoats (P1 Hypergloss® and P1 Frozen Matte).

### P1 Primer (Peelable Base Coat with optimised adhesion level)



P1 Primer is the first layer touching the car and ensures perfect peelability even after prolonged periods of time - up to or beyond 5 years. The Primer is designed to offer the optimum balance between the adhesion level and peelability regardless of the environmental conditions it may be exposed to like temperature and humidity. One of the challenges of peelable coatings is to have a constant adhesion level across a wide temperature range spanning from -18°C to +35°C. **The P1 Primer is perfectly transparent making it ideal for Clear Paint Protection (Clear Bra). Tinting is not possible as it can affect its performance.**

### P1 Base (Peelable Base Coat)



P1 Base is the four layers sandwiched between the Primer and Topcoat and ensures that the whole system is strong enough to be peeled without breaking into small pieces. **The P1 Base is available in Clear, but can be tinted White, Black or other colours.** Used as a base for pearl effects, as a binder for pearls and pigments or in Clear form used as is for Clear Paint Protection (Clear Bra), Complete Clear Vehicle Protection. The liquid coating is easily applied manually by spraying. Upon drying, P1 forms a tough, flexible and durable film, providing excellent resistance and strength.

- High solids - 1,3 litres has the same amount of solids like 1 gallon (3,785 litres) of other competitors on the market
- Extreme coverage - up to 20 m<sup>2</sup> per litre
- Peelable from the first coat
- Environmentally friendly
- VOC-free - this ensures that the applicators are not put at risk when spraying
- Self-Leveling
- Cheaper shipping options

- Less volume to be shipped
- Non dangerous goods
- Replacement of spray cabin air filters not necessary more often than when using regular car paints
- Easy to spray no matter the ambient temperature (5°C to 35°C). Recommended 20°C to 25°C
- 70 000 OEM colours available
- Eye Candy pearls (solid, chameleon, flakes, etc.) are mixed into the clear base for customised colours.

## P1 Hypergloss (Solvent Based Topcoat)

The P1 Hypergloss System is a 2k clear coat used to seal in the P1 Base. The P1 Hypergloss system must be used to keep the base (water-based) from the weathering while offering the highest gloss levels of any other coating available on the market today. **Must be used with P1 Coatings Activator & Thinner (see page 13).**



- High Gloss, real High Gloss
- Sprayable with the same gun as P1 Base and P1 Clear
- Replacement of cabin air filters more often than normal not necessary
- Self-Leveling
- Fast drying - 35 min at 60°C or overnight at 20°C
- Can be sanded, polished, buffed, waxed just like any OEM paint
- The car can be driven through automatic car washes without issues
- No special care, treat it like OEM paint
- Consistent performance under any ambient temperature
- Durable high build finish
- Gasoline resistant

*Photo Courtesy of: Car Porn Racing / P1 Coatings Philippines*



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## P1 Frozen Matte (Solvent Based Topcoat)



The P1 Frozen Matte Topcoat is a 2k clear coat used to seal in the P1 Base. The P1 Frozen Matte system must be used to keep the base (water-based) from the weathering while offering a wonderful frozen matte that always looks and feels smooth. Must be used with P1 Coatings Activator & Thinner.

- Frozen Matte Finish
- Sprayable with the same gun as P1 Base and P1 Clear
- Self-Leveling
- Fast drying - 35 min at 60°C or overnight at 20°C
- DO NOT sand, polish, or wax.
- The car can be driven through automatic car washes without issues
- No special care, treat it like OEM paint
- Consistent performance under any ambient temperature
- Gasoline resistant



## Spraying equipment

Standard HVLP or RP gravity fed spray gun with 1.2-1.4 needle - spray at 32 PSI/2.2 Bars. Any brand works. We recommend DeVilbiss or SATA.

Gun settings for SATA 5000B RP - 1,3 nozzle:

Fan open 80%

Product volume open 1,5 turns to fully open, depending on the speed of the painter applying the product

Spray distance 6-8 in / 15-20 cm from surface

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## Application Guide

### Masking/Taping the Car

Although P1 Coatings is a peelable coating, the P1 Coatings Hypergloss acts and performs like a typical automotive gloss system, so masking is important. Be sure to tape and mask off any areas that you do not want painted just as you would with a traditional paint job but take into account that the peelable coating needs to wrap around the edge of the panels to avoid any premature wear caused by rubbing on the edges. For better results, we recommend removing things like headlights, brakes lights, license plate, badges, door handles, etc. Sometimes we take it a step further and remove bumpers, hoods, and side skirts. Recommend the taping of door jams to prevent overspray which may become difficult to remove later. The preparation of the car is key to a good application process.

### Degreasing the Car

Clean the surface thoroughly!! Any leftover residue such as oils, dirt, grease, etc., may cause P1 Coatings not adhere to the surface properly leading to unwanted lifting, fisheyes, or texture. Remember, P1 is a water-based solution and will have an adverse effect against oils, grease, silicones, etc. Ensure all corners and edges are degreased thoroughly. i.e. door seals, bonnet, fuel cap cover, rear edge of trunk, or anywhere else that you may think a lot of rubbing can occur. There's really no restrictions on degreasers. Any standard isopropyl alcohol based degreaser or solvent based degreaser can be used but for best results we recommend using the P1 Degreaser while using a CLEAN, LINT FREE Microfibre towel:



P1 Degreaser - Waterborne Prep-Clean which removes all water-soluble contaminants such as wax, polish, tar, silicon, and old finishes.



## Basic Usage Chart

Planning the coats (example car is 2015 Mercedes-Benz A-Class or 2016 Mustang Convertible):

### Invisible Protection (Clear Bra Hood / Bumper)

Product	Coats	Liters
P1 Base (Black / White)	-	-
P1 Base (Clear)	4	1
P1 Hypergloss	2	.5
Total	6	1.5

### Invisible Protection (Clear Bra / Full Car)

Product	Coats	Liters
P1 Base (Black / White)	-	-
P1 Base (Clear)	4	4
P1 Hypergloss	2	2,3
Total	6	6,3

### Color change with Pearls (Full Car)

Product	Coats	Liters
P1 Base (Black / White)	1	1
P1 Base (Clear)	3	3
P1 Hypergloss	2	2,3
Total	6	6,3

- NOTE 1: P1 Hypergloss requires P1 Activator / P1 Thinner (See Page 12).

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- NOTE 2: Apply a minimum of (2) gloss coats of Hypergloss to seal base in.
  - NOTE 3: Amounts vary depending on size of the vehicle / surface.
  - NOTE 4: White base may need additional coats.

## Spraying Application of P1 Base (Clear or Colour)

The P1 Base is ready to be used as an invisible protection or tinted with P1 Tints as a base for pearl coats. If a custom colour is desired, see “Application of Base Coat” on page 8. Shear mixing is not required.



Settings and application will be the same for any of the base products.

- Spray fan is 80% open
- Spray distance no more than 6-8 inches
- Coats are sprayed wet with overlapping of 60%
- 32 PSI / 2.2 bar
- Volume 1- 1.5 turns

### Application of P1 Base (Clear Paint Protection/Clear Bra)

1. Open the P1 Base litre can(s), stir / mix well.
2. Add P1 Coatings Adhesion promoter into the litre.
  - Adhesion promoter **IS NOT** required but recommend for the first coat.
  - Installer can control the level of adhesion to the peelability.
  - DO NOT go above 2% (volume). Ex: 2% - 1 litre = 20 grams of adhesion promoter.
  - Slowly add adhesion promoter into the litre while stirring to avoid “clumping”.
3. First coat should be a medium wet coat. Our rule of thumb is that one litre should cover one pass on a medium sized vehicle.
  - If Adhesion Promoter is added, ensure all corners, edges, and areas of where high rubbing may occur (hood, trunk, body lines, etc.)
4. Wait for the coat to dry before applying second coat.
  - In a normal spray booth equipped with blowers for water based paints, each coat should dry in about 5-10 minutes. Always inspect coating for wet patches. If present, wait until fully dry before applying the next coat.
5. Once first coat is dry, apply second and remaining coats the same as the first.
  - Adhesion promotor **is not** needed after the first coat.
6. Apply a minimum of (4) coats of P1 Coatings Clear Base.
  - Although P1 Coatings will peel after 2 coats, a minimum of (4) coats of P1 Coatings Clear Base should be applied to ensure clean peelability, strength, and durability.
7. After the 4th coat of base has dried, apply P1 Coatings Hypergloss (see Hypergloss instructions below).



**IMPORTANT:** Please note that the P1 Coatings base has a milky color. As the base dries, the milky white colour slowly transforms into clear. The product does not dry uniformly. During the drying process, white patches may appear but will go away when completely dry. This is not a negative reaction, it is the normal way of drying.

It means that the black will at first appear gray and only after drying will turn black.

In all cases, the product should be fully dry before it is removed or another layer is sprayed.



For example: A vehicle painted with only a **full** clear paint protection solution (clear bra):

- 4 Litres of P1 Coatings Base Clear
- 2 Litres of P1 Coatings Hypergloss
- 1 Litre of P1 Coatings Activator (Typically 1 litre of Activator for every 3 of Hypergloss)
- 12 to 18 Grams of P1 Coatings Thinner (Dilution 5-10%)

### **Application of Black / White Base coat**



1. Open the P1 Base liter can(s), add P1 Tints (minimum 10 g/l black or 50-100 g/l white), stir/mix well.

2. Add P1 Coatings Adhesion promoter into the litre.

• *Adhesion promoter IS NOT required but recommend for the first coat.*

• *Installer can control the level of adhesion to the peel-ability.*

• *DO NOT go above 2% (weight). Ex: 2% - 1 litre = 20 grams of adhesion promoter.*

• *Slowly add adhesion promoter into the litre while stirring*

*to avoid “clumping”.*

3. First coat should be a wet coat. Our rule of thumb is that one litre should cover one pass on a medium sized vehicle. If full colour coverage is not achieved, spray a second coat.

- *If Adhesion Promoter is added, ensure all corners, edges, and areas of where high rubbing may occur (hood, trunk, body lines, etc.)*

4. Wait for the coat to dry before applying second coat.

- *In a normal spray booth equipped with blowers for water based paints, each coat should dry in about 5-10 minutes. Always inspect coating for wet patches. If present, wait until fully dry before applying the next coat.*

5. Once first coat is dry, apply second and remaining coats the same as the first.

- *Adhesion promotor is not needed after the first coat.*

6. Apply a minimum of (4) coats of P1 Coatings Black / White Base.

- *IMPORTANT: If you are using Eye Candy pearls for a customised colour, you ONLY need to spray (1-2) base coats of Black / White. The remaining (2-3) coats will be the pearl coats mixed with P1 Coatings Base*



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*Clear. See Application of Pearls*

- *See Using Pearls below for customised colours.*

7. After the 4th coat of base and/or pearl coats have dried, apply P1 Coatings Hypergloss. See “Application of Pearls” for customised colours.

**IMPORTANT:** Please note that the P1 Coatings black base has a greyish colour when wet and will dry black. The product does not dry uniformly. This is not a negative reaction, it is the normal way of drying. In normal circumstances only 1 coat of P1 Base Black is required to have full black coverage. For P1 Base White more coats might be required.

## **Application of Pearls (Customized Colors)**

P1 Coatings is not only known for their Clear Paint Protection (Clear Bra). Installers around the world are also using our technology with Eye Candy pearls for customised paint options.

Eye Candy pearls and colours can be purchased from your local P1 representative.

P1 Coatings can also match up to 70K factory OEM colours. If you have the paint code, we can match it! Contact us for more details.



1. Follow Steps 1-4 in “Application of Black/White Base Coats” on page 9.

- *After step 4, you should have 1-2 coats of black base on the vehicle.*

2. Open the P1 Base liter can(s), stir/mix well.

- *Typically mid size vehicles average 2-3 litres for good pearl coverage.*
- *Recommend pouring P1 Base Clear litres into a clean/new bucket for easier mixing of pearls*

3. Pearls should be dissolved in a cup of water before adding the mixture to the P1 Base Clear. This helps the pearls to liquify and pass through the filter.

- *10 to 25 grams of pearls are more than enough to provide a good colour coverage*
- *Ensure to check Eye Candy usage recommendations*

4. Once pearls are dissolved, pour pearls into the bucket of clear P1 Base. Mix well!!

- *Ensure that the pigments are evenly dispersed. High shear mixing not required.*
- *Depending on the specific gravity of each pearl, sedimentation can occur. If you see pearl deposits on the bottom of the can/bucket, mix slightly before use.*
- *If lumps of pearls are noticed in the product immediately after mixing, allow 1 to 3 hour for the product to disperse the pearls automatically.*



5. Pour the P1 Base mix with pearl through a 125 mesh filter into the gun cup. PPS cups with an incorporated filter is recommended.

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- *Some installers prefer not to use filters to avoid pearls catching in the bottom of the filter. In this case the paint should be filtered prior to the addition of pearls.*

6. Spraying pearls, the gun settings may vary due to painter, pearls, technique, etc.

Our general recommendations are as follows:

*Gun settings for SATA 5000B RP*

- *1.3 nozzle:*
- *Fan open 80%*
- *Product volume open 1-1,5 turns*
- *Spray distance 6-8 in / 15-20 cm from surface*
- *32 PSI / 2.2 Bars*

7. Spray P1 Base mixed with pearls in minimum 3 full wet coats.

- *Applying pearls, it's important to apply evenly with at least 50/50 overlap to help prevent striping. Some users will overlap up to 80/20.*

8. Wait for each coat to dry before applying additional coats.

- *In a normal spray booth equipped with blowers for water based paints, each coat should dry in less than 15 minutes.*
- *Always inspect coating for wet patches. If present, wait until fully dry before applying the next coat.*



**ATTENTION:** *Some pearls might require to walk the full length of the car while spraying or to be sprayed at a 45° angle or even vertically. These pearls, if sprayed one panel at a time might cause pearl buildup at the edges of the panel.*

9. After the pearl coats have dried, apply P1 Coatings Hypergloss. (See Page 12)

- *Once pearl coats are complete, the colour will have a satin looking finish.*

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Example: A vehicle painted with a customised colour would need:

- 1 Litre of P1 Base Black
- 3 Litres of P1 Base Clear (mixed with 15-50 gr of Eye Candy pearls)
- 2 Litres of P1 Hypergloss Topcoat
- 1 Litre of P1 Hypergloss Activator (Typically 1 liter of Activator for every 3 of Topcoat)
- 12 to 18 Grams of P1 Hypergloss Thinner

## Mixing Ratio P1 Hypergloss

	Per volume	Per weight
P1 Hypergloss Topcoat	3	100 g
P1 Hypergloss Activator	1	36 g
P1 Hypergloss Thinner	0,2-0,3	6-9 g

## Spraying P1 Hypergloss or P1 Frozen Matte

The P1 Hypergloss system requires the usage of P1 Coatings Base coats for peelability and is a 3:1, 2K Clear Coat system. Activator and Thinner are required to be used with the Hypergloss. **All applications require a minimum of TWO coats of Hypergloss!**

The actual spraying of Hypergloss is equivalent to spraying any 2k automotive clear. We understand that automotive painters may have their own personal settings and application styles. Below are recommendations.

**IMPORTANT!! Please do not attempt to use any other products as it could adversely effect the peelability.**

## Gun Settings

Recommended tip size is 1.2 -1.4.

Spray pressure: 32 psi

Spray distance: 4-6 inches

Applied wet coats. (2 Coats *minimum*)

Flash time between coats: 15-20 minutes *"Flow coating is optional"*

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## Drying

### Spray booth

Bake at 60°C for 30 minutes. Allow to cool down for 1 hour. If possible, allow an extra day to cure even more before handing it over to the customer.

### Air dry

Dust-free in 2,5 hour. Dry to handle in 4,5 hours. More detailed TDS sheets to follow.

## Sanding and polishing

Sanding and polishing is possible, just like with any other car paint. However, extra care has to be taken when performing these actions to prevent damage to the peelable paint. Wet sanding recommended.

For any questions, please contact your local representative.

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