

HAS-PPF

Paint Protection Films

Application Guide for Professional Applicators

Technical Update

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Installation

This TPU film must be applied with wet method **ONLY**, using water / soap mixture / alcohol mixture

Installation stages:

- Cleaning of elements with soap liquid, hand cleaning of all organic and nonorganic contaminations, washing off soap liquid
- Cleaning of elements using abrasive clay for cleaning contaminations
- Degreasing of elements, decreasing of curved surfaces where film will be bend
- Drying of elements, checking the surface for contaminations, measuring and marking of film on elements
- Cleaning of dust from elements using sticky dust wipes
- Applying of liquid on element, taking off the liner, watering the glue surface of TPU film, installing of TPU on element
- Forming of film on element, rolling of film using instrument, bending of film, heating the element
- Cleaning of liquid excesses, drying of wrapped element, polishing element

Installation liquid

For application of PPF film, several mixtures can be used. They have different characteristics and effects.

1. Water

Doesn't soften glue; the glue stays active. Water is not recommended when PPF is applied on big surfaces, because there is a risk of complete solidification of glue.

2. Soap mixture

Soap mixture is mixture of liquid soap and water in the following proportion, 3-15 parts of soap with 100 parts of water. It's very important that soap PH is 0 (zero). The soap mixture softens glue, the films slides on element. PPF is easier to be applied and formed; air and water bubbles can be moved out more easily. However, it takes more time to apply PPF using soap mixture.

3. Alcohol mixture

Alcohol mixture - mixture of 95% alcohol and water in the following proportion, 3-4 parts of alcohol and 6-7 parts of water. This liquid activates glue and strengthens its adhesion with surface. When used, there is a risk of early adhesion of glue with surface and signs form uneven stretching. Installation with alcohol mixture saves time.

General recommendations on instruments and application liquids

- It's recommended to use hard polyurethane squeegees (for example, Blue Max) for rolling of TPU film from middles to edges. It's recommended to use softer Teflon squeegees for bending of vinyl edges. Any instrument used for application **MUST** be with proper edges and **MUST** be kept clean. The edges on instrument must be sharpened (for example with sandpaper 2000m).
- The cleanliness and quality of water directly affect the quality of installation. The water sprayer should also be kept clean.
- It's recommended to use soft black or red disk for polishing, installed on standard polishing machine. It's recommended to use synthetic non-abrasive wax (for example, Maguire). Polishing should be done at high speed (approximately 2500-3000 turns/min), and not increasing the temperature of vinyl more than 59-62 Celsius.
- Cutting of applied PPF is prohibited, but in rare cases when needed OLFA TS-1 can be used to cut film.

General recommendations for application of PPF

- Any material can be damaged from uneven stretching; PPF is not exclusion. Material should be stretched evenly and properly. It should be stretched when it's already on surface. It shouldn't be lifted up when stretched. When lifted, material absorbs heat faster and there is a risk of uneven stretching. The failure of proper application can be seen as broken reflections on PPF.
- It's recommended to use alcohol mixture or clean water for small and simple elements (surface under door handles, protection of back wheel arches, simple doorways, etc.) for fastening of application process.
- It's recommended to use combination of soap mixture and alcohol mixture for elements of medium difficulty and medium sizes. The alcohol mixture should be used at edges for more strong attachment.
- Its recommended to use **ONLY** soap mixture for difficult elements
- The edges of PPF should be significantly overheated. The temperature of PPF can be raised to higher than 80 Celsius when edges are formed and bended, slowly drying glue surfaces and forcing PPF to lose its memory.
- The protective layer on the top of PPF that protects film during transportation should be pulled off right after rolling of film on element because it will hinder PPF forming and bending.
- The surface of PPF should always be moistened with soap liquid during application, because smooth sliding of instruments prevents PPF from damaging.