

## H190

### Physical Properties

The values displayed are the results of illustrative lab test measures made according to the indicated external norm and shall not be considered as a commitment from NAR.

Characteristic	Value	Contents
Material	TPU	
Self-healing	Heat Self-healing	
Hydrophobic, Hydrophilic	Hydrophobic	
Color	Transparent	
Thickness	Protection Film	50(μm)
	TPU&HC&Adhesive	185(μm)
	PET Liner	75(μm)
Adhesive	Pressure sensitive adhesive	
Adhesive appearance	Clear	
Adhesion on automotive paint	Initial adhesion force	≥8 (N/25mm)
	24-hour, 180 ° peel force	≥15(N/25mm)
Glossy	≥94°	
Elongation(Hard coating/MD)	110~130 (%)	
Product Elongation at break	≥250 (%)	
Finished product release force	≤0.35 (N/25mm)	
Anti-yellowingΔE	ΔE≤ 2	
Application method	Wet only	
Application temperature	15°C-25°C	
Warranty	7 years	Bubbles,cracking,and discoloration

#### \*Testing Method Direction:

1. About Scratch Repairment ,use copper wire brush with a thickness of 0.1mm or less. After the coating surface is brushed 10 times in a circle, and visually inspect the disappearance of fine scratches after heating with a baking gun or 100 °C boiling water.
2. Acid and alkali resistant, 10% soluble hydrochloric acid, 0.1mol/L Naoh, apply to the surface of the sample and let it sit naturally for 24 hours. Evaluate the appearance of the sample for any visible coating defects such as bubbles and cracks。
- 3.About Anti-stain, use the equipment with UV radiation, heating and spraying to destroy the sample. The parameter setting refers to the corresponding regulations of GB/T 16422.2.

**Storage Condition:**

Temperature : 15~25 (°C) , Humidity: 40~60 (%)

Remarks: NAR PPF need to be stored in their original packing and with the original protection materials. In order to avoid loss of quality, After the package is removed, the remaining parts must be removed the protective film in time, or else it is possible to cause arching and fogging during the surface.

**Application Condition:**

Temperature: 15~25 (°C) , Humidity 40~80 (%)

Cleanness degree Clean, no visible dust

Out of sunlight, original container in clean and dry area.

Bring the film to room temperature before use.

Remarks:

1. All PPF paint protection film products shall be cut and engraved in the corresponding environment during the use process to avoid the influence of temperature and static electricity on the product appearance and performance.
2. Before the construction, the cleaning and pretreatment of the automobile paint surface must be done strictly to avoid the abnormal quality of the last issue caused by the residual particles and oil stains on the paint surface;
3. Within one week of construction, the car washing shall be avoided to avoid the continuous drenching of rain water, ensure that the adhesive and paint surface are fully got wet, and give full play to the best adhesion effect.

**Warranty Conditions**

Remarks:

1. All NAR PPF paint protection film products shall meet the specified storage conditions and the requirements of standard construction procedures;
2. All items within the warranty scope of PPF paint protective film products must strictly comply with the product use and maintenance specifications.