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**GSUIT**  
PAINT PROTECTION FILM

**GSUIT IS BEING EXPORTED ALL AROUND THE WORLD**



## **GSUIT Advantages**

- 1) GSUIT is one of the excellent products as PPF from Ad-winner for car paint protection. This is the most effective way to protect vehicles from environmental, physical and chemical damages.
- 2) The actual meaning of GSUIT is a safe gear that pilots wear to protect themselves in flight. Implying the characteristic of the pilot safe suit, our product, GSUIT, keeps vehicles intact from any external substance.
- 3) GSUIT is an Anti-chipping film made of thermoplastic polyurethane. It is not only used as an interior design element, but also exterior decoration. The painted surface of various vehicles including cars, bicycles, motorcycles, boats, airplanes etc. can be wrapped with our GSUIT to get protection.



## **GSUIT Advantages**

GSUIT has been getting credit for the highest quality and meets market requirements and standards. In along the way to its outstanding performance, GSUIT has been not just going through various tests, but applied knowledge accumulated over a long period of extensive research and development.

- Long-term durability
  - Superior stain resistance & Anti - permeation
  - Discoloration
- Easy installation
  - Super stretched high elongation
  - Outstanding adhesion
  - Easy to remove without residue
- Perfect gloss & clarity
- Super hydrophobic & easy to clean
- Excellent self healing



## GSUIT PPF Products Feature

Test Item		Special	Ultra	Aegis	Matt	Testcondition
Appearance		Clear	Clear	Clear	Clear	
Top coating		○	○	○	○	
Gloss	%	> 98%	> 96%	> 96%	> 20 %	60°
Transparency	%	> 95 %	> 95 %	> 96%	> 90 %	Hazemeter
Hydrophobic	°	> 95	> 95	> 96	> 90	Angle contact
Self-healing	℃	> 120	> 120	> 180	> 60	Heatgun
Anti-permeation		★★★★	★★★★	★★★★★	★★★	Permanentmarker
Anti-yellowing	ΔE	★★★★★	★★★★★	★★★★★	★★★★★	Q-UV 1,000hrs
Stain resistance		★★★★	★★★★★	★★★★★	★★★★	Motor waste oil
Anti-chipping		★★★★★	★★★★★	★★★★★	★★★★★	SAEJ400
100% Modulus	kg/cm <sup>2</sup>	< 90	< 100	< 200	< 100	ASTM D412
Tensilestrength	kg/cm <sup>2</sup>	> 300	> 190	> 300	> 200	ASTM D412
Elongation	%	> 500	> 300	> 300	> 300	ASTM D412
Peel adhesion	g/in.	> 1,400	> 1,400	> 1,400	> 1,200	ASTM D3654
Thickness	μm	184±2	185±2	185±2	190±2	

## GSUIT PPF Products Feature

Test Item		Black High Glossy	Black Matt	Head Light				Black carbon	Test condition
				Soft Black	Dark Black	Gray	Violet		
Top coating		○	○	○	○	○	○	○	
Gloss	%	> 96%	< 20%	> 96%	> 96%	> 96%	> 96%	> 96%	60 °
Transparency	%			> 80 %	> 40 %	> 70 %	> 60 %		Haze meter
Hydrophobic	°	> 95	> 90	> 95	> 95	> 95	> 95	> 95	Angle contact
Self-healing	℃	> 100	> 60	> 100	> 100	> 100	> 100	> 100	Heat gun
Anti-permeation				★★★★	★★★★	★★★★	★★★★		Permanent marker
Anti-yellowing	△E	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	Q-UV 1,000hrs
Stain resistance		★★★★★	★★★★★	★★★★	★★★★	★★★★	★★★★	★★★★★	Motor waste oil
Anti-chipping		★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	SAE J400
100% Modulus	kg/cm <sup>2</sup>	< 170	< 100	< 90	< 90	< 90	< 90	< 150	ASTM D412
Tensile strength	kg/cm <sup>2</sup>	> 300	> 200	> 300	> 300	> 300	> 300	> 300	ASTM D412
Elongation	%	> 400	> 300	> 500	> 500	> 500	> 500	> 350	ASTM D412
Peel adhesion	g/in.	> 1,400	> 1,200	> 1,400	> 1,400	> 1,400	> 1,400	> 1,400	ASTM D3654
Thickness	μm	150±2	150±2	184±2	184±2	184±2	184±2	280±5	



## Product Description

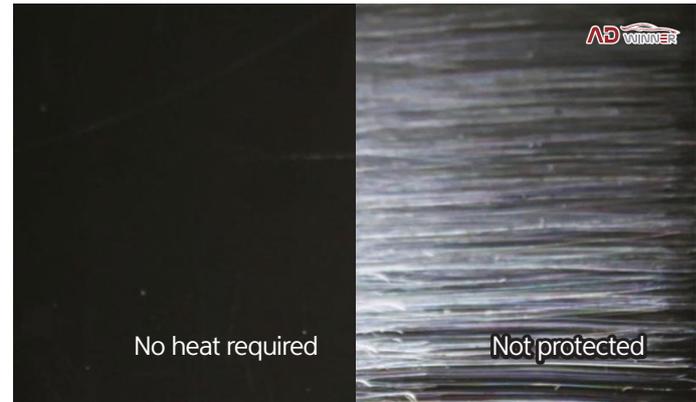
Test Item	Unit	GSUIT	A	B	C	Test Condition
Gloss	%	>97	>90	>96	>95	60°
Transparency	%	>95	>94	>94	>94	Haze meter
Water repellency		O	O	O	X	
Water-Spot	★	★★★★★	★★★★★	★★★★★	★★★★★	Spray rainwater on the film and leave it at 60 degrees,3days
Stain Resistance	★	★★★★★	★★★★	★★★★	★★★★	Motor waste oil
Heat-resistance	★	★★★★★	★	★★★★	★★	120°C(Oven)/100hr
Anti-Yellowing	★	★★★★★	★★★★	★★★★★	★★★	QUV, 1,000hr
Anti-Permeation	★	★★★★	★★★★	★★★★	★	Permanent marker
Anti-chipping	★	★★★★★	★★★★★	★★★★★	★★★★★	SAE J400
Hardness	kg/cm <sup>2</sup>	<115	<125	<130	<130	ASTM D412
Tensile Strength	kg/cm <sup>2</sup>	>250	>250	>200	>250	
Elongation	%	>450	>400	>300	>400	
Peel Adhesion	g/in	>1,300	>1300	>1100	>1050	ASTM D3654
Thickness	μm	185±2	200±2	190±2	200±2	Thickness Gauge



## GSUIT Prime

### 1) Instant self – healing performance without applying heat.

Unique surface coating technology ensures the scratch resistance. It can help dented surface to bring back within seconds at room temperature without applying heat. Fine scratches such as swirl mark are immediately restored.





## GSUIT Aegis

### 1) Superior stain resistance & anti-permeation

- Excellent stain resistant from dirt, oil, tar, bird dropping and bug splatter.
- GSUIT Aegis is equipped with anti-permeation coating in order to remove contaminants easily.

### 2) Super hydrophobic & easy to clean

Super hydrophobic surface helps to clean your vehicle effortlessly and also remains a clean-car look for longer



## GSUIT Ultra

### 1) Outstanding stain resistance

Bug splats, water spots, bird droppings, and road tar are some of the most common threats to every vehicle and they can happen at anytime. GSUIT PPF's topcoat prevents a film and your vehicle from damage by providing continuous stain resistance.

### 2) Excellent self healing

Ultra PPF has self-healing layer. If you get minor scratches and swirl marks on your vehicle, just apply heat to where damages are and then they go away. Your vehicle can have long durability with GSUIT Ultra.

Self healing  
test with  
heat gun



Anti  
Permeation  
test





## GSUIT Special

### 1) Perfect gloss & clarity

Instant self – healing performance without applying heat.

Marvelous coating film processing technology provides excellent gloss and transparency. Its durable optical clarity gives your car a shiny and lustre look.

### 2) Excellent workability

It is easy to apply and transform thanks to high elongation and surface treatment technology. GSUIT PPF offers repeatable adhesion and an excellent edge finish with no residue after film removal.



## **GSUIT Matt**

### **1) Unique matte coating**

GSUIT Matt has exceptional visual properties – enhancing the look of vehicle and quality of smooth matte finish. When installed on a glossy paint, the vehicle looks completely new

### **2) Super hydrophobic & easy clean**

Super hydrophobic surface helps to clean your vehicle effortlessly and also remains a clean-car look for longer



## GSUIT Black Matt

### 1) Unique matte coating

GSUIT Matt has exceptional visual properties – enhancing the look of vehicle and quality of smooth matte finish. When installed on a glossy paint, the vehicle looks completely new

### 2) Super hydrophobic & easy clean

Super hydrophobic surface helps to clean your vehicle effortlessly and also remains a clean-car look for longer



## GSUIT Black High Glossy

### 1) Black TPU

The difference between our black TPU and the other competitors' TPUs is they coat, dye or color products in black, but our product is born to be black because the resource(resin) of which it is made is originally black

### 2) Unique black high gloss

GSUIT Black High glossy is a distinctive black color (Piano Black) film with noticeable color depth, so your vehicle looks much more luxurious with the blackness and clarity of the piano black. Plus, it provides super high gloss finish, so the vehicle turns shiny and changes any color of a car panel into black.





## GSUIT Headlight

### 1) Unparalleled high gloss & transparency

Unique film coating technology provides excellent gloss and transparency.

### 2) Enhance vehicle aesthetics with luxurious colors

if you care about style of your vehicle, you should invest in a luxurious look with a variety of color headlights.

### 3) Protect your headlight from rock chips

Located in the very front of vehicles, the headlights are highly likely to damage since stone-like objects flying in or hitting them can happen while driving on the highway. The GSUIT headlight PPF keeps your headlight safe from such damage.



## GSUIT Carbon

### 1) Strong firmness

- Products added to film fabric with carbon to increase durability
- This product has no surface discoloration with strong durability to life and crack unlike the existing PVC film

### 2) Scratch resistance

Paint surface on your vehicle can be effectively protected from scratches, stone chip and so on.

### 3) Three / four dimensional and luxurious design

It is a carbon-patterned PPF with a three / four dimensional design that creates a luxurious atmosphere not only through the exterior but also through interior work. It is generally very popular in areas such as side mirrors, spoilers, rear wings and front bumpers.



- ◆ **GSUIT windshield** is specialized for protecting the windshield of automobiles by using the **TPU (Thermoplastic polyurethane)** material developed by itself with excellent technology.
- ◆ **Most of the windshields** were made of PET material, which was inconvenient to install and remove, and lacked scratch resistance and **Anti-chipping** properties.
- ◆ **But** this film is to **protect the windshield and sunroof from stone chips** very well. It is a film that protects automobile glass from physical damage caused by small falling objects such as stone chips when driving on the road.
- ◆ **Also** used main sheet with TPU, **easy to install and remove** compared any other windshield films.
  - **Excellent Anti-chipping**  
Perfect glass protection against damage from stone chips.
  - **Comfortable workability**  
to install / Easy to remove / No thermoforming
  - **Top Coating**  
Water repellency / Self healing performance
  - **Visibility**  
It provides **clear vision** without blurring with **94% transmittance**.
  - **Versatility**  
It can also be used for PPF on painted surfaces with little curvature.



## Composition



**Top coating**

**TPU sheet**

**Adhesive**

Item	Materials/Thickness
Protective Film	PET / 38 $\mu$ m
Top coating	Functional agent / 7 $\pm$ 2 $\mu$ m
Main Sheet	Aliphatic TPU / 150 $\pm$ 5 $\mu$ m
Adhesive	Solvent based acryl adhesive / 15 $\pm$ 2 $\mu$ m
Release liner	PET / 50 $\mu$ m



## Technical Data

TEST	UNIT	TPU W.S	TEST CONDITION
Anti-chipping		★★★★★	SAE J400
Self-healing	°C	>120(Direct)	Heat gun & Hot Water
Hydrophobic	°	>95	Angle contact
Working time	Solvent based acryl adhesive / 15 $\pm$ 2 $\mu$ m	★★★★★	
* Notice : deep scratches may not self-heal, mechanical properties,			

Mechanical property	UNIT	TPU W.S	TEST CONDITION
100% Modulus	kg/cm <sup>2</sup>	<110	ASTM D412
Tensile Strength	kg/cm <sup>2</sup>	>200	ASTM D412
Elongation	%	>250	ASTM D412
Peel Adhesion	g/in	>500	ASTM D3654
Transparency	%	>94	Haze meter



## Precautions for installation

- Apply on **wet surface condition**
- The peel of the film **may not be as clean as PET film** due to the nature of the raw material.
- **The peel** of the film may vary **depending on the installation**. Apply with enough suds.
- If you use a hard squeeze or apply pressure to the squeeze, it will affect the peel of the film, **so use a soft squeezes softly**.
- When installation, **without stretching** as much as possible.(it can occur distorted vision)
- There may be problems such as blurred vision immediately after installation. However, it takes about **1 ~ 3 days to stabilize the surface visibility**.
- In order to maintain the surface function of the film for a long time, it is helpful to use a glass ceramic coating.



## Notice

- GSUIT recommends **GSUIT windshield** to be stored at +10°C ~+32°C, and 40%~60% RH.  
The film should be used after purchase
- GSUIT gives a **warranty to be free** of any manufacturing or workmanship defects for **1 years** from the data of purchase. This warranty does not cover damage caused by misuse, accidents, misapplication, normal wear and tear, dents from road debris impact, collisions, and/or intentional damage of any kind.
- The warranty is void if the product has been subjected to abuse, improper care, or uncontrollable circumstances. GSUIT is not liable for any losses, damages, or expenses resulting from any one or more of the following:
  1. Sandstorms, hail, tornadoes, hurricanes, or any other weather condition; or
  2. Product abuse, normal wear, accident, collision, negligence, misuse, abuse, neglect, mishandling, alteration, maladjustment, modification, customization, alteration or vandalism; or
  3. Chemicals and caustic materials (including cleaners with solvents, such as IPA, or other corrosive materials) or cleaning or scrubbing the product on the windshield with abrasive material; or
  4. Products not supplied by us, service by anyone other than us or an installer approved by us, misapplication, faulty installation, or any installer action or inaction; or
  5. Any other acts, occurrences, defects, faults, damages not caused by GSUIT, or if the product is altered or has any labels damaged or tampered.

The product is to be used in compliance with all applicable local laws, statutes, rules, regulations, and ordinances (“Laws”) of the applicable country, state, province, or local jurisdiction.



## Notice

- **GSUIT windshield** films may require a drying time. This period may lengthen in cold or non-sunny weather, and shorten in warm weather or with direct sun exposure.
- As the film will dry completely in due course, **a slow drying time** is not a cause for concern.
- After installation, do not release the car during **rain conditions**.
- Do not Operate your windshield wipers until the film is **completely dry**.



## Contact

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**Sales Department** TEL : 82 - 53 - 719 - 3410 FAX : 82 - 53 - 719 - 3411

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**Website** [www.gsuit.co.kr](http://www.gsuit.co.kr)

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## **Limited Product Warranty**

GSUIT (the “Company”) expressly warrants to the owner that, for a period of ten (10) years (the “Warranty Period”) from the date of initial installation.

The Company will cover defects on the GSUIT PPF (the “Product(s)”) such as: yellowing, staining, cracking, blistering, and delaminating. This Limited Warranty only applies to the Company’s Products which are professionally installed in the manner recommended by the Company.



- The Company will, at its option, remove or replace the Product without charge if the Product fails or does not perform as warranted solely due to a manufacturing defect within the Warranty Period, subject to the exclusions set forth in this Limited Warranty.
- During the entire Warranty Period, the Company's obligation as to repair or –replacement shall further be limited to repair or replacement with the Products that are available at the time of the repair or replacement, shall be limited to the repair or replacement of only the specific Product that fails due to a manufacturing defect.
- Any repaired or replaced product shall also remain subject to the Warranty Period, and any repair or replacement shall not extend the original Warranty Period in any manner or start a new warranty period.
- This Limited Warranty is transferable only when the new owner submits to the Company proof of the original date of installation. Transfer of the Limited Warranty only entitles the new owner coverage for the remainder of the original Warranty Period.



## Disclaimer Of Warranties

The Company's Products must be stored, handled, installed, used, and maintained in accordance with instructions provided by the Company, and this Limited Warranty is conditioned upon compliance with all such instructions.

This Limited Warranty does not cover defects caused by:

1. Non-compliance with the Company's guide or instructions. Such failures include, but are not limited to, exposure to physical abuse, including, but not limited to chemical abuse (e.g. harsh cleansers and solvents), thermal abuse or shock (e.g. excessive heat or cold) or misuse;
2. Improper storage, installation, handling and/or use of the Product;
3. Damage not resulting from manufacturing defects that occur while the Product is in the customer's possession;

4. Products installed with known or visible manufacturing defects at the time of installation, including, but not limited to scratches, scuffs, scrapes, chips to the painted surface;
5. Minor conditions such as stains, and scratches;
6. Damage to the wrapped surface due to improper wash techniques, automatic car washes or incorrect wash tools that may cause abrasion or by third parties not authorized by the company;
7. Scratches, scuffs, scrapes, chips to the painted surface;
8. Water spots – water spots are caused by mineral deposits, which if left to dry on the paint protection film may leave a stain, water spots are not covered;
9. Damage caused by collision, accidental damage, vandalism, fire, hail, flood, surface rust, rail dust, physical damage, paint overspray, or paint manufacturer’ defects, which may be covered under manufactures protection plan; and
10. Use in non–automotive applications

Other than the limited warranty set forth herein,  
the company makes no other warranties, express or implied.  
The company's sole obligation under this warranty shall be repair or  
replacement of non-conforming products, or at the option of the company,  
return of the product and a refund of the purchase price.  
Buyer assumes all risk whatsoever as to the result of the use of  
the products purchased, whether used singularly or in  
combination with any other products or substances.

### Warranty Support:

Any questions concerning this Limited Warranty should be addressed to:



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