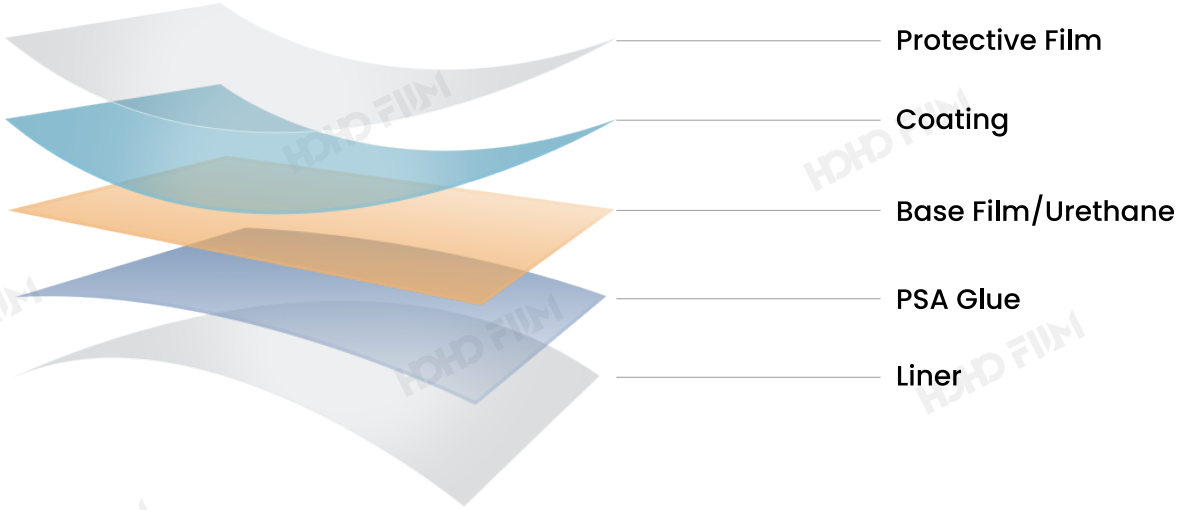
TPU-V10

1.Structure



2.Spec Data

2.1. Appearance Performance

Item	Paint Protection Film		
Function	Paint Protection		
Type	TPU-V10		Test Method
Liner Bubbles	Visually Invisible		Visual Test
Dust	Visually Invisible		Visual Test
Crystal Points	0.1-0.6mm	Allowed	Visual Test
	0.7-2.9mm	<10	Visual Test
	≥3.0mm	1 Max	Visual Test
Coated Dump	Visually Invisible		Visual Test
Glue Line	Visually Invisible		Visual Test

Test Method Description:

- For coated dumb strips
  After removing the HC protective film, check the surface of the sample with natural vision;

- For crystal points
  Take the most dense area of sampled crystal points as the measuring area, and take 12.7cm*12.7cm is the counting interval for size and quantity evaluation.

2.2. Physical Performance

Item	Paint Protection Film	
Type	TPU-V10	Test Method
Gloss(60°)	≥92(%)	GB 8807
G Weight(Finished)	410-420(g/m²)	GB/T 4669
G Weight(Glue)	25-30(g/m²)	
Product Thickness	230±15(μm)	GB/T 7125
Layer Thickness	50±5(μm)	
Coating Thickness	10±5(μm)	
Urethane Thickness	200±5(μm)	
Glue Thickness	20±5(μm)	
Liner Thickness	75±5(μm)	
Tensile Strength	≥380kg/cm²	GB/T100401
Peel Strength	≥75N/cm	GB/T100401
Elongation At Break	≥420%	GB/T 1040.1
Shrinkage(MD)	≤0.5(mm)	FTM 14
Shrinkage(TD)	≤0.4(mm)	
Release Force	≤0.35(N/25mm)	GB/T 2792
Tack	≥9(N/25mm)	FTM 9
24h, 180°Peel	≥18(N/25mm)	GB/T 2792
Maximum Temperature	120°C≥5min	GB/T 2423.1

Test Method Description:

- Elongation at break of finished products, according to "GB/T 1040.1 Determination of Tensile Properties of Plastics Part 1 General Rules", record the elongation at break value of finished products when film breaks in the tensile test.

2.3. Characteristic

Type	TPU-V10	Test Method
Self Healing Function	Heat 25°C	(0.1mm)Brush&Heat
Water Contact Angle	≥103°	DL/T864
Anti Acid	Oxalate 72(Pass)	Lab Test
Yellowness Index	≤2	QUV
Anti-Fouling	Strongest Marker(Pass)	Lab Test

Test Method Description:

- Scratch Repairing Function
  Use a copper brush with a copper wire within 0.1mm. After brushing the coating surface for 10 times in a circular manner, after heating it with a baking gun or 100°C boiling water, visually inspect the disappearance of fine scratches; disappearance of fine scratches;

- Acid and Alkali Resistance
  10% hydrochloric acid, 0.1mol/L sodium hydroxide solution, after smearing the surface of the sample and leaving it for 24 hours, evaluate the appearance of the sample without visible bubbles, cracks and other coating defects;

- Anti-Stain
  Use equipment with UV radiation, heating and spraying functions to damage the sample, refer to the corresponding provisions of GB/T 16422.2 for parameter setting, and the spraying water uses general industrial water.

3. Storage

Shelf Life(before application):
The shelf life of this film is 1 year when stored upright in its original packaging in a dust-free environment at a temperature ranging from +15 °C to +25 °C (+59 °F to +77 °F) with relative humidity of 50 %.

4.Warranty

Warranty Coverage:
Valid from date of purchase. Covers defects in materials and manufacturing against yellowing, cracking, blistering, and delaminating.
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.
You must retain a copy of this warranty and proof of purchase identifying the name of the original installer/dealer, purchase price, product, and coverage areas. These documents are needed to process your claim.