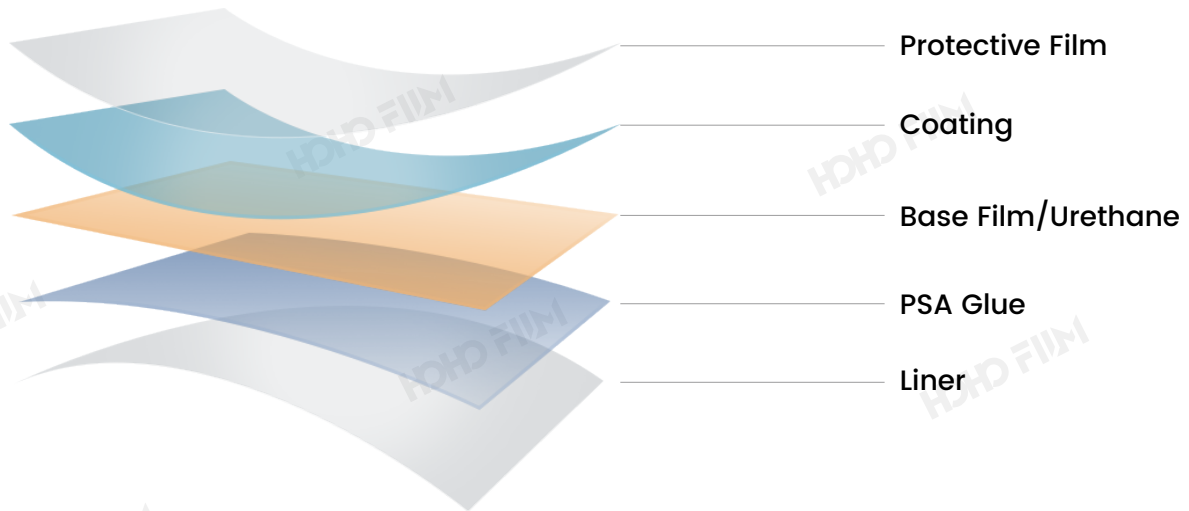


TPU-L90 PRO

1. Structure



2. Spec Data

2.1. Appearance Performance

| Item | Paint Protection Film | | |
|----------------|-----------------------|-------------|-------------|
| Function | Paint Protection | | |
| Type | TPU-L90 PRO | 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*12.7 cm is the counting interval for size and quantity evaluation.

2.2. Physical Performance

| Item | Paint Protection Film | |
|---------------------|----------------------------|-------------|
| Type | TPU-L90 PRO | Test Method |
| Gloss(60°) | ≥92(%) | GB 8807 |
| G Weight(Finished) | 400-430(g/m ²) | GB/T 4669 |
| G Weight (Glue) | 25~30(g/m ²) | |
| Product Thickness | 210±15(μm) | GB/T 7125 |
| Layer Thickness | 50±5(μm) | |
| Coating Thickness | 10±5(μm) | |
| Urethane Thickness | 180±5(μm) | |
| Glue Thickness | 20±5(μm) | |
| Liner Thickness | 75±5(μm) | |
| Tensile Strength | ≥380kg/cm ² | GB/T100401 |
| Peel Strength | ≥75N/cm | GB/T100401 |
| Elongation At Break | ≥350% | 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.

2.3. Characteristic

| Type | TPU-L90 PRO | Test Method |
|------------------------------|------------------------|-------------------|
| Self Healing Function | Heat 50°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.