Create silicone-enabled protective film solutions for modern electronic devices

With low-adhesion, low-migration silicone PSAs and a high-performance silicone hard coating from Dow Corning
High-value opportunities for enterprising film fabricators

From mobile phones, tablets and electronic tattoos to televisions and interactive store displays, modern electronic devices are changing the way we work, play and communicate. They also are creating a need for innovative manufacturing, packaging and protection solutions.

• Touch-screen mobile devices are quickly replacing notebook computers in popularity – a trend that is expected to grow and spread.

• TFT and LCD flat-panel displays and touch panels also are growing in popularity, with a manufacturing process that calls for an average of eight to 10 protective films per panel.

• The rapid introduction of new electronic devices is driving the evolution of optical films, polarizers, diffusers, ITO-coated glass and a variety of filter media.

• The electronics industry has a critical need to provide consumers with a better touch-screen experience and to reduce waste and scrap of costly components during manufacturing.

These trends have dramatically increased the demand for low- and ultralow-adhesion protective films across the electronic device value chain – to carry and protect delicate components during shipping, handling, storage and manufacturing and to protect them throughout consumer use.

This is a fast-growing market with unmet needs and new opportunities for you to offer device and accessory manufacturers and users high-value solutions – protective films fabricated with innovative silicone technologies and technical support from Dow Corning.
What Film Users Want

**Solutions for today's protective film applications**

- Surface protection for TFT and LCD screens, touch panels, optical films, flexible printed circuit boards and components with sensitive surfaces during die cutting, processing, assembly, handling, shipping and storage
- Screen protectors for consumer use

**Answers to these protective film performance challenges**

- Stable adhesion over time
- Self-adhering – good wetting of the PSA onto the surface to be protected and easy air-bubble removal
- Good anchorage of the PSA to the carrier film – no migration or leaching that could impact subsequent laminating steps
- Clean removal – no adhesive residue or transfer to device or component
- Resistance to abrasion, heat, cold, temperature shifts and UV light
- Optical clarity – non-yellowing; no residual bubble images
- Rework/reposition ability
- Resistance to moisture, oil and grease permeation
- Anti-glare, anti-static, anti-fingerprint performance

**Answers you can deliver …**

… when you fabricate your protective films with **Dow Corning® Low-Adhesion, Low-Migration Silicone PSAs** and **high-performance Dow Corning® AY42-260 Hard Coating**.

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**Dow Corning® Low-Adhesion, Low-Migration Silicone PSAs**

To meet your diverse application needs, these silicone PSAs can be formulated to deliver adhesion strength that ranges from ultralow (1-3 grams/inch) to medium (200-300 grams/inch).

Compared to organic PSAs on PET film, **Dow Corning® Low-Adhesion, Low-Migration Silicone PSAs** provide:

- Better wettability – fast wet-out; self-adhesive
- Better low-adhesion capability – reworkability
- More stable adhesion over time
- Greater optical clarity – non-yellowing
- Less potential for residue or transfer over time

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**Dow Corning® AY42-260 Hard Coating**

This high-performance silicone coating is designed especially for use on PET film. Compared with an acrylate coating on PET, **Dow Corning® AY42-260 Hard Coating** provides:

- Superior water repellency
- Better mar resistance
- Greater hardness
- High transmittance
- Superior anti-graffiti performance – better ink repellency
- Better grease-removal capability – easier to clean

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**Diagram**

[Diagram showing various layers and components of a display, including Front Cover/Bezel, Frame, Optical Films, Light Bar, Heat Sink, Integration Back Cover, Back Cover (for repair), Power Board, and Stand with ESD Protection.]
Work With a Leader

With more than 50 years of experience as a global provider of silicone-based solutions for the pressure sensitive industry, Dow Corning has earned a reputation for innovation, proven performance and cost-effective solutions accompanied by unique service offerings.

We are focusing our innovative spirit on finding new ways to help you:

- Improve your film-making efficiency
- Reduce your fabricating costs
- Take advantage of new opportunities in the fast-growing protective film market

Put Our Protective Film Samples to the Test

- Adhere
- Release
- Remove
- Repel
- Resist
- Reposition

And see for yourself what silicone technology from Dow Corning can help you do.

Whether you are producing a complex protective film laminate like this one – or any part or variation of it – Dow Corning can provide you with silicone know-how, proven technology and product development support.
For information and assistance

For product information, application troubleshooting, product samples and formulation advice, visit dowcorning.com/psi.