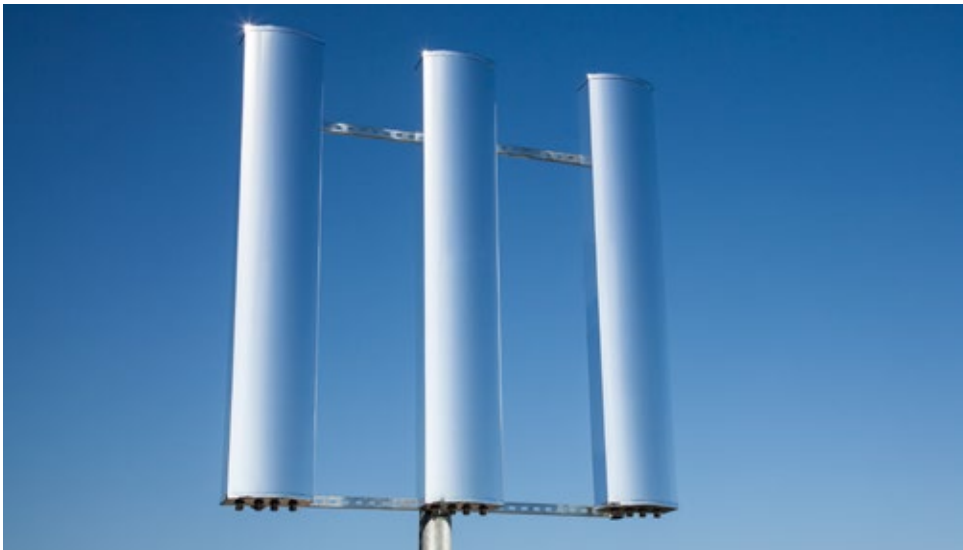


Communication Markets Division

# 3M™ Conceal Film

## Product Description

3M™ Conceal Film is a new generation of 3M’s high performance non-metallic reflective film technology. Reflective over the full visible spectrum and RF-transmissive into the microwave range, 3M Conceal Film is specially formulated with an adhesive backing to provide long-life in outdoor environments and excellent UV irradiance stability. 3M Conceal Film is also optimized for glare reduction and contains a protective layer to provide abrasion resistance and permit mild cleaning.



3M™ Conceal Film

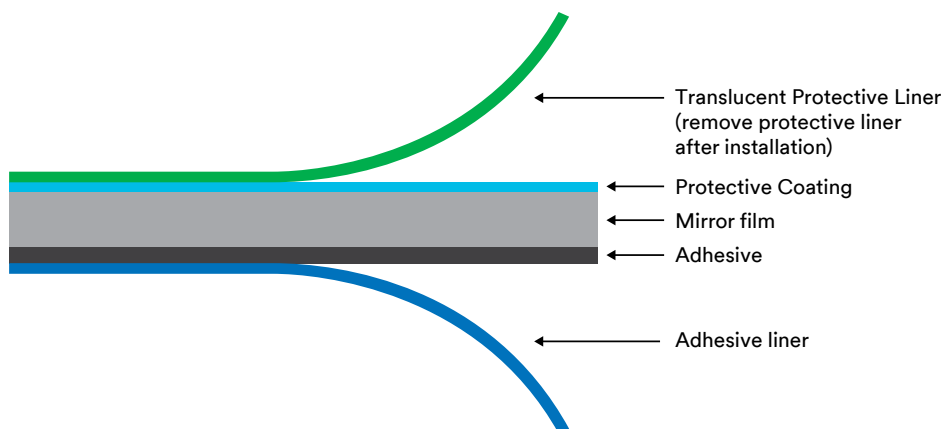


Features	Benefits
RF transparent, non-metallic	Does not affect cellular signal/RF transmission
Mirror-like surface adapts to changing weather conditions	Blends antenna into its environment, no custom color matching required
Light scattering properties	Helps reduce intensity of reflected sun glare
Expected performance life of 10 years (unwarranted period applied to a flat, vertical, outdoor surface)	Long-term outdoor performance with minimal maintenance
Abrasion resistant coating	Reduced mechanical erosion and wear
Easy, even application using 3M adhesive technology	Clean, no fuss installation
Utilizes existing mounting hardware	No change to today’s installation methods; less costly than custom solutions

## Product Construction/ Material Description

3M™ Conceal Film is constructed using proprietary 3M technologies, combined to provide the ultimate in durable infrastructure concealment, while maintaining ease of installation. The core of 3M Conceal Film is a high efficiency mirror film constructed of alternating polymeric layers. It achieves broad band, high reflectivity without using any metal.

Protecting the mirror film is an overcoat that is field proven to provide years of UV protection as well as mechanical durability and abrasion resistance. The 3M Conceal Film is anchored to the object to be concealed using 3M™ Controltac™ Graphic Film with 3M™ Comply™ Adhesive system. This highly engineered adhesive provides simple, initially repositionable, bubble-free application using a “dry” application method.



### 3M™ Conceal Film

Property	Value
Total film thickness (with temporary protective film and adhesive liner)	16 mil (0.016 in., 0.406 mm)
Total film thickness (without temporary protective film and adhesive liner)	7 mil (0.007 in., 0.178 mm)
Construction	100% polymeric

### 3M™ Conceal Film Physical Properties and Performance Characteristics

Property	Method	Value
Photopic Reflectivity	ASTM E1164/E308	> 90 %
Dielectric constant	IEC 61189-2-721	2.80 @ 5.6 GHz
Dielectric loss tangent (tan δ)	IEC 61189-2-721	0.022 @ 5.6 GHz
Cold temperature exposure	IEC 60068-2-1	-55° C
Hot temperature/Dry exposure	IEC 60068-2-2	70° C
Hot temperature/Humid exposure	IEC 60068-2-78	40°C/95% RH
Adhesive		Pressure activated with air release channels
Adhesion (typical, 24 hours after application)	ASTM D3330	3 pounds/inch, FRP (fiberglass) 7 pounds/inch, PVC
Salt fog corrosion resistance	ASTM B117	5% salt solution, 720 hrs

3M, Controltac and Comply are trademarks of 3M Company.

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