

■ Anti-reflection Films (Surface Treatment Films)



Improvement of image visibility on displays

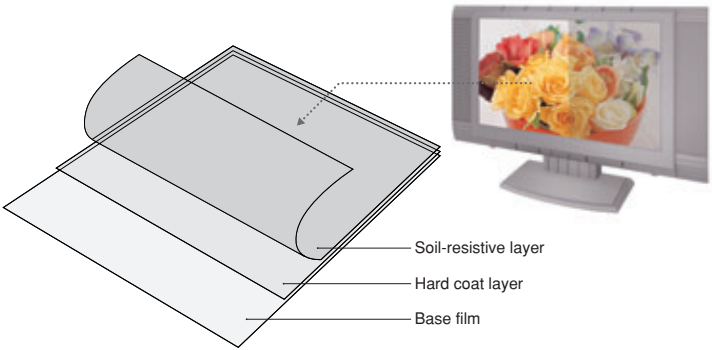
Surface treatment film is an optical film to be laminated on the front surface of a display in order to reduce reflection of outside light and images. Moreover, this film effectively protects displays by reinforcing physical properties, durability, and anti-soiling. Toppan provides a variety of surface treatment films, such as Low Reflection (LR) and Clear Hard Coat (CHC), which are suitable for large size screens, and Anti Glare (AG), which is excellent in high contrast while also having anti glare properties.

LR—Low Reflection CHC—Clear Hard Coat
AG—Anti Glare

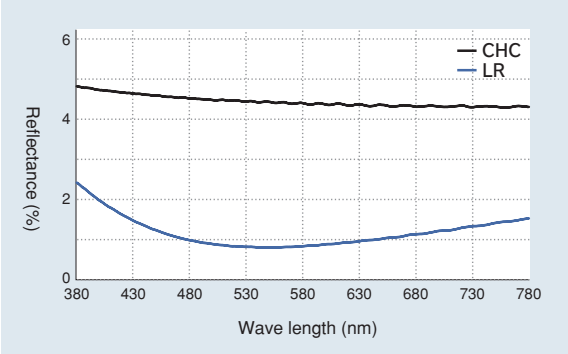
Features of the product

- Roll-to-roll type, allowing mass production
- Overall production including hard coat and saponification process

Structure of Surface Treatment Film



Reflectance property (TAC basis)



Product type	Wet		
	LR	CHC	AG
Reflectance	0.7~1.0%	4.0%	—
Structure	<div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">LR layer</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">(AS layer)</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">Hard coat</div> <div style="border: 1px solid black; padding: 2px;">Base film (TAC)</div>	<div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">Hard coat (CHC)</div> <div style="border: 1px solid black; padding: 2px;">Base film (TAC)</div>	<div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">Hard coat (AG)</div> <div style="border: 1px solid black; padding: 2px;">Base film (TAC)</div>
Features	<ul style="list-style-type: none"> • Excellent combination of reflectance and mass productivity • Availability of Anti-Static(AS) function 	<ul style="list-style-type: none"> • Excellent cost performance 	<ul style="list-style-type: none"> • Anti Glare features • Line-up of various haze
Main applications	<ul style="list-style-type: none"> ● Large size displays TV, monitor, notebook PC, etc.		