Anti-Reflection Film HD Series

High durability optical film with superior abrasion of the anti-smudge layer

Product Name

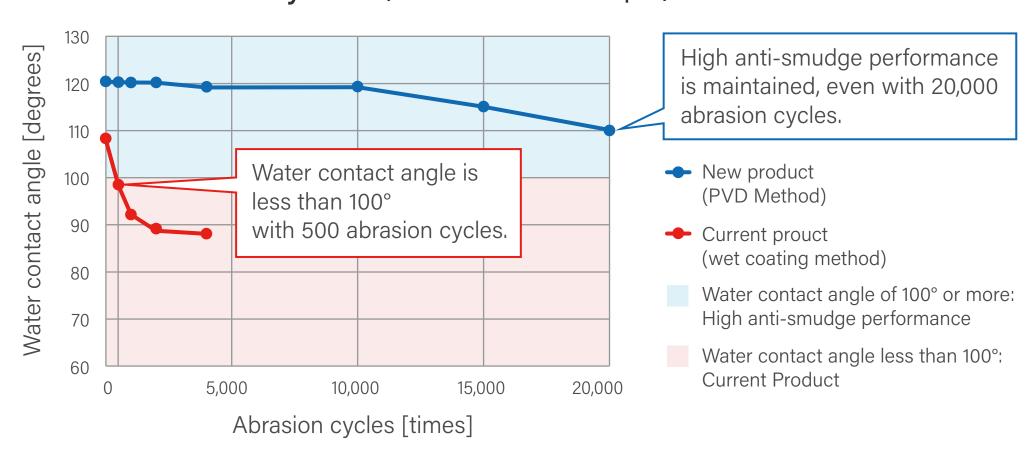
AR100-T081V-JD-HD AR100-T082V-AD-HD AR100-T062V-BD-HD

Features

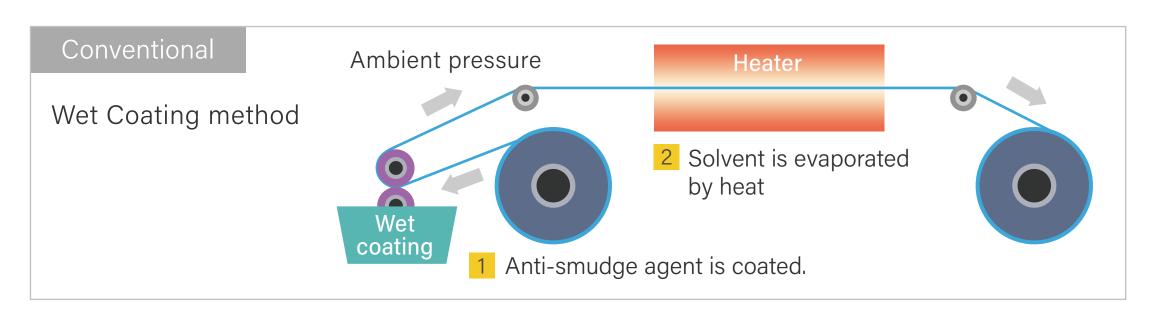


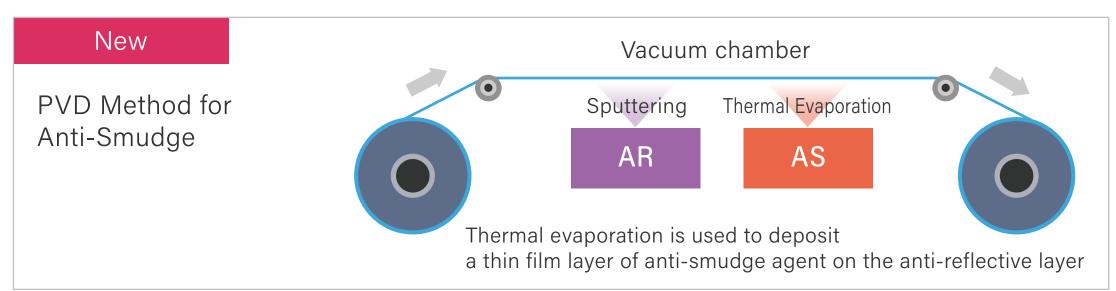
- High durability of the anti-smudge layer with significant increase in abrasion resistance due to applied vacuum deposition method.
- Improved anti-smudge function with increased initial water contact angle.

Abrasion Durability Test (nonwoven fabric wiper)



Comparison of anti-smudge layer forming methods

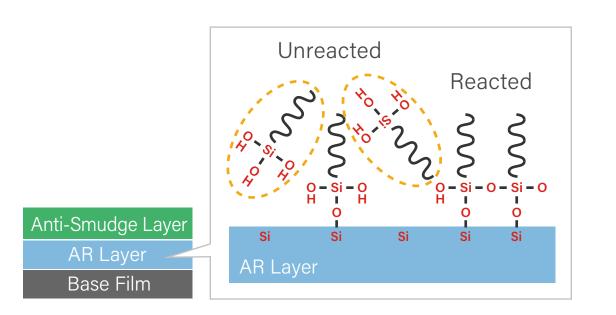




Mechanism of alignment of fluoropolymer

Wet Coating method

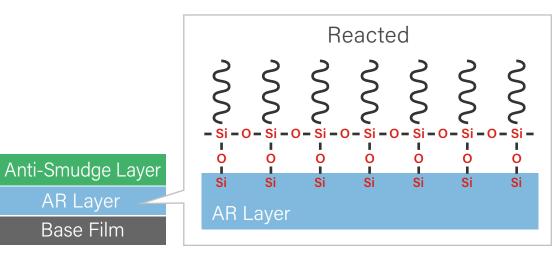
Some SiO₂ groups are not bound to fluoropolymer chains on anti-reflection layer



PVD method

Reacted groups are uniformly arranged and aligned. As a result:

- Bonding strength is higher
- Polymer is denser and harder
- Polymer is less permeable



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Specifications

		New product	Current product	Test condition
Product name		AR100-T081V-JD-HD	AR100-T081V-JD	
Method for forming the anti-smudge layer		Vacuum Deposition Method	Wet Coating Method	
Haze	%	0.3	0.3	JIS K7105-6.4
Total transmittance	%	96	96	JIS K7105-5.5
Luminous reflectance	%	0.17	0.17	JIS Z8701
Hue of Reflectance	a *	2.3	2.2	JIS Z8781
	b *	-8.2	-7.4	
Pencil Hardness		3H	3H	Measured with a load of 750 g based on JIS K5600-5-4
Scratch resistance		2,000 times No scratch	10 times No scratch	Steel wool abrasion test 1,000 gf

^{*1 :} Comparison with our company's current product (AR200-T0810-JD) using the abrasion durability test (nonwoven fabric wiper)

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The document was created in September 2021.

^{*2:} Based on our company test