

Test Performance	Category	Inspection Method	V75 Series	V575
Repair Method	Thermal Repair Snap Repair	-	Thermal Repair	Snap Repair
Coating Type	Hydrophobic/Hydrophilic	Use a hydrophobic (oleophobic) or hydrophilic (oleophilic) pen to draw on the coating surface. Observe whether there are scratches. It can be restored at room temperature.	Hydrophilic	Hydrophobic
	Water - break test	Use a water - break tester to draw a circle on the coating surface (5 - point average)	82±1	94±3
Physical Performance	Repair Repeatability (Thickness Measurement)	Optical Thickness Gauge (Ellipsometer)	3.5µm	3.5µm
	Film Thickness	Ellipsometer	30µm	30µm
	Adhesion Strength	Cross - Cut Adhesion Tester	75µm	75µm
	Tensile Elongation	25mm×100mm long film specimen, stretch 100mm to 300mm and stop for 2min and then recover	109mm	108mm
Mechanical Performance	Tensile Strength	100mm×200mm specimen, use a tensile testing machine for testing (Unit: N) (JB/T 7766) Tensile force, 25mm specimen, 300mm/min speed	120.3	69.4
	Elongation at Break/%	(JB/T 7766) Tensile force, 25mm specimen, 300mm/min speed [Formula: (L - L0)/L0×100%]	39.94	45.09
Optical Performance	Before Stretching	20 - degree Angle Light Density	Light Density Meter	93.8
		60 - degree Angle Light Density	Light Density Meter	100
		85 - degree Angle Light Density	Light Density Meter	101
	After Stretching	20 - degree Angle Light Density	Light Density Meter	92.2
		60 - degree Angle Light Density	Light Density Meter	100
		85 - degree Angle Light Density	Light Density Meter	100
	b* (Transmittance)	Spectrophotometer	-	-
	b* (Reflectance)	Spectrophotometer	0.12 - 0.13	0.1 - 0.11

Adhesion	Initial Tack/N	25mm substrate, 304 stainless steel plate, 1kg roller reciprocated twice, cured at room temp for 10 mins (JB-126B)	11.36	10.22
Holding Power/N	25mm substrate, same test conditions	16.89	13.45	
Residual Adhesion	Cross - Cut Test (3M 610 Tape)	5B	5B	
Substrate Bonding	25mm×300mm film bonded to surface, heat - cured at 80°C for 12hrs	No residue	No residue	
Solvent Resistance	Gasoline/Water - based cleaner/Alcohol	Minor residue	Noticeable residue	
Scratch Recovery	Steel brush abrasion + 50°C water healing	Excellent	Excellent	
Aging Resistance	Hydrolysis Test (150hr cycles @85°C)	28.56→5.11 MPa	32.05→4.98 MPa	
QUV Aging (1000hrs)	ΔYellowness 4E Value	0.1153	0.1872	