

KH-PPF Nano-level double coating technology

- ✓ Great stain resistance
- ✓ Super glossiness
- ✓ Keeping Self-Healing Performance Longer
- ✓ Extra top coating thickness and excellent anti-scratch

Properties		Value	Test Method
Physical Properties	Thickness (Substrate)	200±10 μm	Thickness gauge
	Thickness (Overall)	300±15 μm	Thickness gauge
	Elongation at Break	315%	ASTM D412
	Tensile Strength	8.55kgf/inch	ASTM D412
Adhesion	Adhesion Force	463gf/inch	JIS K 6854-2
	Type of PSA	Acrylic PSA	-
	Residual Adhesive	None	Put on painting plate then peel off with reverse direction after exposing to 80C for 24hr, -4C for 24hr, 20C for 12hr in sequence
Optical Properties	Gloss	102.6%	Glossmeter (@60°)
	Surface Uniformity	No deformation (crater, pin-hall, fish-eye)	Put on orange peel test plate / Sensory Tester
	Transmittance	Blackish	Put on black acrylic plate /Sensory Test
		Transparency	Put on transparent acrylic plate /Sensory Test
Surface Properties	Anti Scratch (5pt)	3pt	Copper brushing @RT (20°C)
	Self-Healing @RT (1hr, 5pt)	1.5pt	Copper brushing @RT (20°C) Stand-alone under RT (20°C)
	Thermal Recover (70°C, 5pt)	5pt	Copper brushing @RT (20°C) Exposure to hot water (70°C)
	Chemical Resistance	No damaged for 45 seconds	DMF (Dimethylformamide)
		No damaged for 110 seconds	Carburetor cleaner (CARB CLEANER)

	Hydrophobicity	R9~R10	JIS P-8137
	Anti-Fouling	Easily Erasable	Permanent pen
	Stickiness @80C	Smooth not sticky	After aging under 80°C for 1hr.
Durability	For Self-Healing	Recover to 70% @20C 25~35min. at 1st year 30~40min. at 3rd year	Measure Self-Healing performance with time on stream
	For Surface Enthalpy	No any drop	After immerse in 70C water-bath for 12hrs
	For Anti-Fouling	No any drop	After immerse in 70C water-bath for 12hrs
	Discoloring	$\Delta E < 1.0$	QUV Tester (6500W) 2000hrs Measure Lab
	Guarantee Period	8 years	for Yellowing, Crack, Residual Adhesive