

Technical Data of 【 Silkware EK 】

Grade ★★

1) Film properties

Item	Test method	Result
Adhesion	Cross cut adhesion test 【JIS K5600-5-6】	100/100
Hardness	Pencil hardness (rt.) 【JIS K5600-5-4】	Over H
Hardness	Pencil hardness (200°C) 【JIS K5600-5-4】	Over HB
Heat resistance	Heat at 250 °C for 100Hrs, followed by cross cut adhesion test 【JIS K5600-5-6】	100/100
Boiling water resistance	Immersion into boiling water at over 90 °C for 100Hrs 【Daikin standard】	No defect
Boiling salt water resistance	To put 5% salt water into a pot (aluminum or aluminum die-cast) and cover it, leaving it in a thermo-hygrostat bath at 80 °C 【JIS S2010】	Over 72Hrs
Acid resistance	To drop acetate solution in 5% concentration on the coating film and leave it for 16Hrs at a room temperature. 【Daikin standard】	No defect
Alkaline resistance	To drop sodium carbonate solution in 5% concentration on the coating film and leave it for 16Hrs at a room temperature. 【Daikin standard】	No defect
Metal spatula abrasion resistance test	To slide a metal spatula with the load of 280±20g on the coating film, after heating the film at 200 ±°C.	Over 100,000times
Scotch-Brite abrasion resistance test	To slide a Scotch-Brite (8x4cm) with 5% detergent solution on the coating film with the load of 4.5kg.(Scotch-Brite is changed at every 1000 times.)	Over 8000times
Contact angle test	Distilled water 【Daikin standard】	Over 110°
Releasing property test	-Mix eggs, soy sauce, sugar and place on the coating film. -Heat the film at 260°C for 20Min. -Wipe the stain with a wet cloth, followed by cleaning it with sponge and detergent. 【Daikin standard】	No defect

2) Coating properties

	Primer	Topcoat	Comments
Solid content (mass%)	30-36	40-46	230°C30min→380°C30min
Viscosity (cP)	200-400	200-400	Rotating viscosimeter
pH	8-10	8-10	pH meter
Shelf life	6 months	6 months	—

3) Test panel condition

Substrate	Aluminum plates, aluminum die-casts
Pretreatment of workpiece	After baking workpiece 10min above 380°C, Sandblasting
Application method	Air spray
Application process	Coating (Primer) → Drying (100°C for 10 Min.)
2C2B	→ Cooling at room temp. → Coating (Topcoat) → Drying (100°C for 10 Min.) → Baking (380 °C for 20 Min.)
Film thickness	Primer : 10–15 μm / Top Coating : 15–25 μm