

Sumikaflex 950HQ

Type:	Ethylene-Vinyl acetate-Vinyl ester of versatic acid Terpolymer Emulsion	
Properties:	Sumikaflex 950HQ is a designed grade that has a good contact adhesive for non-polar materials such as polyolefin. It is used for adhesive materials of plastic film and foam. For example, it can be used for packaged adhesives, papers and filmed adhesives.	
Main application:	Contact adhesive Water proof sheet adhesive Packaged adhesive Paper and film adhesive	
Physical properties:		
Appearance		Milky white
Solid content (%)		53 ± 1
Viscosity (mPa·s)		1000 – 2000
pH		4 – 7
Ave. particle size (µm)		0.6
Density (g/cm ³)		1.00
MFT (°C)		0
Particle charge		Nonionic
Mechanical		Good
Tg (°C)		– 30
Tensile strength (MPa)		0.2
Elongation (%)		> 1700

< Technical information 950HQ >

1. Emulsion properties

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Mechanical stability		Good
Tg	(°C)	– 30

2. Film properties

(1) Tensile strength

		Typical value
Original state	Elongation (%)	> 1700
	Strength (MPa)	0.2
Wet state	Elongation (%)	> 1700
	Strength (MPa)	0.2

Test method

Thickness of film: 0.15 mm

Shape of film: Dumbbell No.3

Original state: 23°C × 65%RH

Wet state: After 24 hours in water, test pieces was measured on wet condition.

Measurement: 500 mm/min

(2) Water resistance of film

		S-950HQ	S-400HQ
Water resistance	Solve rate (%)	2	5
	Absorb rate (%)	23	16

Test method

Thickness of film: 0.15 mm

Water resistance: In water for 4 days at room temperature

3. Application

(1) Contact adhesive

	Double spread			Single spread		
	Adhesive strength (N/25 mm)		Cohesion (min)	Adhesive strength (N/25 mm)		Cohesion (min)
	Original	Wet		Original	Wet	
S-950HQ	23.7	12.0	5	18.9	12.3	5
A	18.6	1.0	120	2.0	2.0	120
B	9.8	0	12	3.9	0	13

Test method

Substrate: Flexible board / EP rubber (Water resistance sheet)

Lamination: a. Double spread

Spread: $120 \text{ g/m}^2 \times 2$ Open time: 60 min

b. Single spread

Spread: $240 \text{ g/m}^2 \times 2$ on flexible board Open time: 60 min

Pressure: Hand roller Aging: 1 week

Adhesive: a. Original state: Angle 180° Peeling speed: 100 mm/min

b. Wet state ... The test pieces was in 50°C water for 7 days and cooled to room temperature. Peeling speed: 100 mm/min

c. Cohesion: Adhesive area $25 \times 25 \text{ mm}$, 50°C , 500 g of static load measure the time of the weight falls down.

(2) Application of plastic /paper adhesive

	PET		OPP	
	Original	Wet	Original	Wet
S-950HQ	Substrate failure	Substrate failure	Substrate failure	Substrate failure
EVA emulsion	Adhesive failure	Adhesive failure	Adhesive failure	Adhesive failure
VAC/acrylic emulsion	Adhesive failure	Adhesive failure	Adhesive failure	Adhesive failure
Acrylic emulsion	Cohesion failure	Substrate failure	Cohesion failure	Substrate failure

Substrate failure means paper broken.

Test method

Emulsion was coated to 3 mils thickness on the film. Then, a bond paper (100 g/m²) was laminated on the film. After 3 days aging at room temperature, the test pieces were peeled and observed the condition of adhesive failure.

Water resistance: After test pieces in water for 1 hour, they were peeled with wet condition and observed the condition of adhesive failure.

(3) Application of adhesive

	Tackiness (Bawl No.)	Adhesive (N/25 mm)		
		SUS	PE	PP
S-950HQ	7	7.4	5.5	7.6
Acrylic emulsion for adhesive	11	7.5	2.3	4.8

Test method: Emulsion was coated to thickness 25 μ m (dry) on the PET. After dried, measured adhesive properties.

Tackiness: J Dow method

Adhesive strength: Peeling angle: 180° Peeling speed: 300 mm/min