

SUMIKAFLEX 752

Type:	Ethylene-Vinyl acetate Copolymer Emulsion	
Properties:	SUMIKAFLEX 752 (S-752) has a self-cross-linking functional group, and its film has a hard texture. A film is superior in water and solvent resistance. It also has sanitation properties.	
Main application:	Non-woven fabric binder Impregnated paper binder Flocky finish Backing binder for paper, textile, and knitting	Glue for paper pipe, joined paper, and bags made
Physical properties:	Appearance Solid content (%) Viscosity (mPa·s) pH Ave. particle size (μm) Density (g/cm³) MFT (°C) Particle charge Mechanical stability Tg (°C) Tensile strength (MPa) Tensile elongation (%)	Milky white 50 ± 1 400 – 1300 4 – 7 0.5 1.09 9 Nonionic Good 15 23.0 360

< Technical Information of SUMIKAFLEX 752 >

1. Grade positioning

SUMIKAFLEX 752: self-crosslinked type of hard emulsion (Tg: 15°C)



SUMIKAFLEX 755: self-crosslinked type of soft emulsion (Tg: -15°C)

2. Emulsion properties (representative value)

	S-752	S-755
Appearance	Milky white	Milky white
Solid content (%)	50 ± 1	51 ± 1
Viscosity (mPa·s)	400 – 1300	500 – 1500
pH	4 – 7	4 – 7
Ave. particle size (μm)	0.5	0.5
Density (g/cm ³)	1.09	1.05
MFT (°C)	9	0
Particle charge	Nonionic	Nonionic
Mechanical stability	Good	Good
Tg (°C)	15	-15

3. Film properties

(1) Tensile strength

		S-752	S-755
Tg (°C)		15	-15
Original	Elongation (%)	360	> 1500
	Strength (MPa)	23.0	1.0
Wet	Elongation (%)	380	1000
	Strength (MPa)	3.0	0.9

Test method

Thickness of film	: 0.15 mm
Shape of film	: Dumbbell No.3
Film forming condition and aging	: 23°C × 65%RH × 7 days
Measurement speed	: 500 mm/min

4. Application

(1) Compared EVA emulsion, another emulsion and latex

	Texture	Adhesive	Light resistance	Heat resistance	Cleaning resistance	Dry cleaning resistance	Heat sealing ability	High frequency treatment ability
S-752	H	3	3	3	3	3	2	2
S-755	S	2	3	3	3	2	2	2
Acryl emulsion	M	3	3	3	2	3	2	2
NBR latex	M	2	1	1	1	3	1	1
SBR latex	M	2	1	1	2	2	1	1

Texture H: hard, M: middle, S: soft, excellent 3 – 2 – 1 no suitable

(2) Non-woven binder

		S-752	S-755	Acrylic emulsion A
Basic weight (g/m ²)		47.0	46.5	45.7
Dry Pick Up (%)		28.4	26.9	27.9
Dry strength	Strength (N/5 cm)	55.3	27.6	21.1
	KGSC value*	2353	1187	923
Wet strength	Strength (N/5 cm)	15.9	13.3	10.1
	KGSC value*	677	572	442
Cantilever method (mm)		290	175	160
Dry cleaning resistance	Absorption (%)	4.0	9.9	5.1
	KGSC value	451	245	343
Heat resistance		14.6	15.1	15.2
Light resistance (yellow index)		7.0	6.9	7.1

*: KGSC value = strength (N/cm)/basic weight (g/cm²)

Test method

Substrate: Rayon (basic weight 35 ~ 40 g/m²)

Dipping: Mangle condition (sandwich non-woven between nylon mesh)

Nip pressure: 0.1 MPa

DPU: 25 ~ 30%

Drying: 150°C × 48 sec

Curing: 130°C × 5 min

Strength: JIS L-1085

Texture (cantilever method): JIS L-1085

Dry cleaning resistance: JIS L-1085

Heat resistance: After 150°C × 60 min, measure by hunter color different measurement with Greenfilter

Light resistance: After Fade-O-Meter for 80 hours, measure by hunter color different measurement

(3) Application for impregnated paper

			S-752	S-755	Acrylic emulsion A
Dry Pick Up (%)			27.7	26.3	26.7
Dry tensile strength 130°C × 3 min.		Strength (N/1.5 cm)	111	69	72
		Breaking length (km)	4.82	3.08	3.11
Wet strength	Strength (N/1.5 cm)	130°C × 1 min	19.0	9.3	19.6
		130°C × 3 min	37.2	19.9	30.6
		130°C × 5 min	41.7	25.3	35.6
	Breaking length (km)	130°C × 1 min	0.82	0.41	0.85
		130°C × 3 min	1.61	0.89	1.32
		130°C × 5 min	1.81	1.13	1.54
Sizing degree (sec)		130°C × 1 min	5	31	17
		130°C × 3 min	6	64	36
		130°C × 5 min	10	112	41
Folding resistance (time) 130°C × 3 min			381	641	585
Tear strength (g) 130°C × 3 min			154	146	145

Test method

Master paper: filter paper No.2 (basic weight: 120 g/m²)

Dipping: Mangle condition

20% Concentrated emulsion

Nip pressure: 0.2 MPa

DPU 26 – 28%

Drying: At room temperature

Curing: 130°C × 1, 3, and 5 min