

Sumikaflex 752

Type:	Ethylene-Vinyl acetate Copolymer Emulsion																																					
Properties:	Sumikaflex 752 has a self-cross-linking functional group, and its film is hard texture. A film is superior in water and solvent resistance. It has also sanitation.																																					
Main application:	Non-woven fabric binder Impregnated paper binder Flocky finish Backing binder of paper, textile, and knitting	Glue for paper pipe, joined paper, bags made																																				
Physical properties:	<table> <tr> <td>Appearance</td><td></td><td>Milky white</td></tr> <tr> <td>Solid content</td><td>(%)</td><td>50 ± 1</td></tr> <tr> <td>Viscosity</td><td>(mPa·s)</td><td>400 – 1300</td></tr> <tr> <td>pH</td><td></td><td>4 – 7</td></tr> <tr> <td>Ave. particle size</td><td>(μm)</td><td>0.5</td></tr> <tr> <td>Density</td><td>(g/cm³)</td><td>1.09</td></tr> <tr> <td>MFT</td><td>(°C)</td><td>9</td></tr> <tr> <td>Particle charge</td><td></td><td>Nonionic</td></tr> <tr> <td>Mechanical stability</td><td></td><td>Good</td></tr> <tr> <td>Tg</td><td>(°C)</td><td>15</td></tr> <tr> <td>Tensile strength</td><td>(MPa)</td><td>23.0</td></tr> <tr> <td>Elongation</td><td>(%)</td><td>360</td></tr> </table>		Appearance		Milky white	Solid content	(%)	50 ± 1	Viscosity	(mPa·s)	400 – 1300	pH		4 – 7	Ave. particle size	(μm)	0.5	Density	(g/cm ³)	1.09	MFT	(°C)	9	Particle charge		Nonionic	Mechanical stability		Good	Tg	(°C)	15	Tensile strength	(MPa)	23.0	Elongation	(%)	360
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< Technical Information of Sumikaflex 752 >

1. Grade

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 state	Elongation (%)	360	> 1500
	Strength (MPa)	23.0	1.0
Wet strength	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: 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
Sumikaflex 752	H	3	3	3	3	3	2	2
Sumikaflex 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