SUMIKAFLEX 408HQE

Type:	Ethylene-Vinyl acetate Copolymer Emulsion
Properties:	SUMIKAFLEX 408HQE (S-408HQE) is an unprecedented high ethylene content grade of ethylene vinyl acetate copolymer emulsion. It is better than existing high ethylene grades for hard adhesion base materials, alkali resistance and flexibility in low temperature.
Main application:	Plastic lamination Adhesion for all papers and fabrics Polymer plasticizers

Physical properties:

Appearance		Milky white
Solid content	(%)	50 ± 1
Viscosity	(mPa·s)	50 – 500
pH		4 – 7
Ave. Particle size	(μm)	0.9
Density	(g/cm^3)	1.03
MFT	(°C)	0
Particle charge		Nonionic
Machine stability		Good
Tg	(°C)	–30
Tensile strength	(MPa)	5.0
Tensile elongation	(%)	650

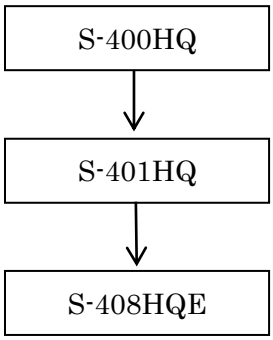
< Technical Information of SUMIKAFLEX 408HQE >

1. Grade positioning

[Standard type]
(Tg: 0°C)

[Low Tg Type]
(Tg: –18°C)

[Low Tg Type]
(Tg: –30°C)



2. Emulsion properties

		S-408HQE
Appearance		Milky white
Solid content	(%)	50 ± 1
Viscosity	(mPa·s)	50 – 500
pH		4 – 7
Ave. particle size	(μm)	0.9
Density	(g/cm^3)	1.03
MFT	(°C)	0
Particle charge		Nonionic
Mechanical stability		Good
Tg	(°C)	–30

3. Film properties

(1) Film tensile strength

	S-408HQE	S-401HQ	S-400HQ
Elongation (%)	650	850	550
Strength (MPa)	5.0	6.2	12.7

Test method

Film thickness	: 0.15 mm
Film forming condition and aging	: 23ºC × 65%RH × 7 days
Shape of film	: Dumbbell No.3
Dry film strength	: 23ºC × 65%RH
Wet film strength	: Dipped film in water for 24 hours at 23ºC, measured in wet condition
Measurement speed	: 500 mm/min

(2) Film tensile strength at low temperature

	S-408HQE	S-401HQ	S-400HQ
Elongation (%)	110	2	0
Strength (MPa)	52	50	13

Test method

Film thickness	: 0.15 mm
(Film forming condition and aging	: 23ºC × 65%RH × 7 days)
Shape of film	: Dumbbell No.3
Measurement condition	: –20ºC
Measurement speed	: 500 mm/min

4. Applications

(1) Adhesion for various base materials

			S-408HQE	S-401HQ	S-400HQ
Adhesive properties*1	Dry-peeling strength (N/25 mm)	PET	4.0	4.0	2.0
		OPP	4.0	3.0	1.0
		Al	16.0	9.0	8.0
Low temperature adhesive*2 (5ºC: Dry)			Paper broken	Interface exfoliation	Interface exfoliation

*1: substrate: cotton broad #40/ various substrate, adhesion strength: 180º peel strength

*2: substrate: quality paper/ PVC film, measurement: shock peeling by hand (perform adhesive measurement at 5ºC)