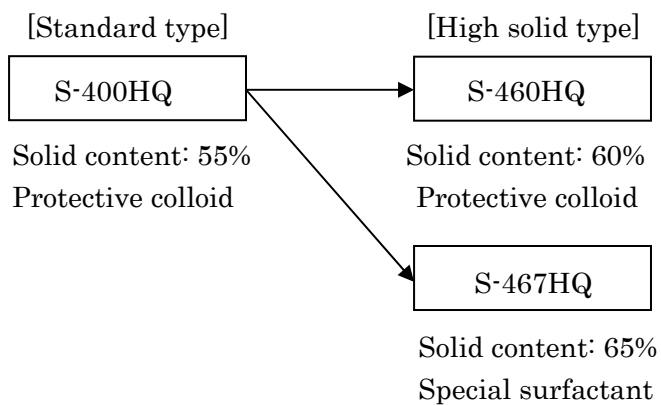


## Sumikaflex 467HQ

Type:	Ethylene-Vinyl acetate Copolymer Emulsion	
Properties:	Sumikaflex 467HQ is a high solid content of ethylene vinyl acetate copolymer emulsion, which gives excellent adhesiveness against each plastic. In specific, it has outstanding for set time, water resistance and heat resistance for creep, along with good miscibility for filler, can be easily worked for additive duties.	
Main application:	Adhesive used	
Physical properties		
Appearance		Milky white
Solid content	(%)	65 ± 1
Viscosity	(mPa·s)	2000 – 6000
pH		4 – 7
Ave. particle size	(μm)	0.8
Density	(g/cm³)	1.08
MFT	(°C )	0
Particle charge		Nonionic
Mechanical stability		Good
Tg	(°C )	0
Tensile strength	(MPa)	5.8
Elongation	(%)	790

## < Technical Information of Sumikaflex 467HQ >

### 1. Grade



### 2. Emulsion properties

	Emulsion properties
Appearance	Milky white
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MFT (°C )	0
Particle charge	Nonionic
Mechanical stability	Good
Tg (°C )	0

### 3. Film properties

#### (1) Tensile strength

		Value
Original	Elongation (%)	790
	Strength (MPa)	5.8
Wet	Elongation (%)	840
	Strength (MPa)	2.0

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

Wet: film in water at room temperature for 24 hours

#### (2) Water drop examination

	S-467HQ	S-400HQ	S-460HQ
Whiting time (min.)	> 120	2	5

Test method

Foam film (the thickness is 0.15 mm) on the slide glass in the laboratory. The slide glass is on the 8 point Chinese character of the newspaper. Measure the time when the film is whitened after one droplet of water when we can't read it.

#### (3) Water resistance and Alkali liquid resistance

		S-467HQ	S-400HQ	S-460HQ
Water resistance	Elusion (%)	1	5	9
	Absorption (%)	12	16	19
Alkali liquid resistance	Elusion (%)	1	9	12
	Absorption (%)	15	20	28

Test method

Thickness of film: 0.15 mm

Water resistance: Film in water for 4 days at 23°C

Alkali liquid of resistance: Film in 1 N NaOH for 4 days at 23°C

#### 4. Application

##### (1) Set time

	S-467HQ	S-400HQ	S-460HQ
Set time (sec)	12	22	18

Test piece: Liner paper (basic weight 200 g/m<sup>2</sup>)/Wood free (basic weight 90 g/m<sup>2</sup>)

Coating: Coating weight is 75 g/m<sup>2</sup>. Coat glue on liner paper.

Lamination: Laminate soon after coating and press by hand roller.

Measure: Peel soon after lamination and measure the time when the paper is broken completely.

##### (2) Adhesion for PET or OPP and Cotton textile

		S-467HQ	S-400HQ	S-460HQ
Original strength (N/25 mm)	PET	4.3	0.7	0.6
	OPP	3.1	0.8	0.9
Wet strength (N/25 mm)	PET	3.6	0.2	0.3
	OPP	1.9	0.8	0.7

Test piece: Cotton textile # 40/ Plastic film (PET or PP) PP is corona treatment.

Coating weight: 100 g/m<sup>2</sup> (as wet)

Lamination: Laminate soon after coating and press

Aging: 4 days 23°C × 65%RH

Original adhesive strength: Peel 200 mm/min 180°

Wet adhesive strength: Peel 200 mm/min 180° after 24 hours in water

##### (3) PVC sheet to plywood

		S-467HQ	S-400HQ	S-460HQ
Original adhesive strength	(N/25 mm)	47	49	48
Wet adhesive strength	(N/25 mm)	18	15	16
60° C creep	(mm/hr)	20	40	38

#### Test method

PVC sheet: Half semi rigid PVC sheet

Plywood: Lauan Type I 3 ply 3 mm thick

Formulation: Emulsion / toluene = 100/6

Coating weight: Wet 130 g/m<sup>2</sup>

Clamping: 50 kg/30 cm×30 cm for 20 hours (23 °C × 65%RH)

Aging: 6 days after clamping (23 °C × 65%RH)

Original adhesive strength: Peel 100 mm/min of 180° angle

Wet adhesive strength: After in the water for 20 hours, peel 100 mm/min of 180° angle

60 °C Creep: 60 °C, 90° for 500 g weight of 90° angle of the static load test

#### (4) Adhesive for textile / textile

	S-467HQ	S-400HQ	S-460HQ
Original adhesive strength (N/25 mm)	44	43	45
Wet Adhesive strength (N/25 mm)	18	5	7
80 °C creep (mm/hr)	12	14	14

#### Test method

Textile: Cotton #40

Coating: 100 g/m<sup>2</sup> (40% concentration emulsion)

Dry in 80°C × 10 min

100 g/m<sup>2</sup> (emulsion)

Lamination: Laminate soon after coating and press by hand roller.

Clamping: 2 kg/15 cm×15 cm for 20 hours (23°C × 65%RH)

Aging: 7 days after clamping (23°C × 65%RH)

Original adhesive strength: Peel 200 mm/min of 180° angle

Wet adhesive strength: After in the water for 20 hours, peel 200 mm/min 180° angle

80 °C creep : 80 °C, 500 g weight of static load test