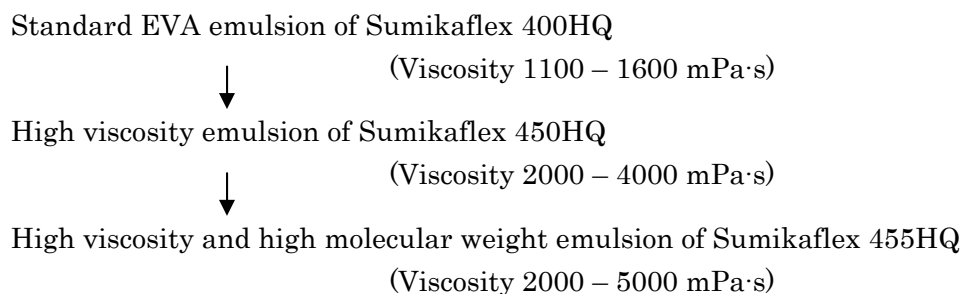


## Sumikaflex 455HQ

Type:	Ethylene-Vinyl acetate Copolymer Emulsion	
Properties:	Sumikaflex 455HQ is an ethylene-vinyl acetate copolymer emulsion with high molecular weight. It has good heat resistance and organic solvent resistance. Its viscosity is higher than general EVA emulsion. Furthermore, it can be used for adhesiveness, especially non-creep for plastic over lay plywood.	
Main application:	Adhesive use	
Physical properties:		
Appearance		Milky white
Solid content (%)		$55 \pm 2$
Viscosity (mPa·s)		2000 – 5000
pH		4 – 7
Ave. particle size (µm)		0.8
Density (g/cm <sup>3</sup> )		1.07
MFT (°C)		0
Particle charge		Nonionic
Mechanical stability		Good
Tg (°C)		0
Tensile strength (MPa)		11.0
Elongation (%)		500

## < Technical Information of Sumikaflex 455HQ >

### 1. Grade



### 2. Emulsion properties

	Emulsion properties
Appearance	Milky white
Solid content (%)	55 ± 2
Viscosity (mPa·s)	2000 – 5000
pH	4 – 7
Ave. particle size (μm)	0.8
Density (g/cm <sup>3</sup> )	1.07
MFT (°C)	0
Particle charge	Nonionic
Mechanical stability	Good
Tg (°C)	0

### 3. Film properties

#### (1) Tensile strength

		S-455HQ	S-450HQ	S-400HQ
Original	Elongation (%)	500	540	550
	Strength (MPa)	11.0	13.0	12.7

#### 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) PVC sheet to plywood

		S-455HQ	S-450HQ	S-400HQ
Original adhesive strength (N/25 mm)		50	50	51
Wet adhesive strength (N/25 mm)		12	12	12
80° Creep (mm)	1 hour	0.5	25	27
	24 hours	4	—	—

#### Test method

PVC sheet: Half semi rigid PVC sheet

Plywood: Lauan Type I 3 ply 3 mm thick

Formulation: Emulsion / Ammonia / Urethane Dispersion / Toluene / Thickener  
= 100 / 0.2 / 34 / 5 / 1

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

Clamping: 50 kg/30 cm × 30 cm at 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

80°C Creep: 80°C, 500 g weight and 90° angle of static load test