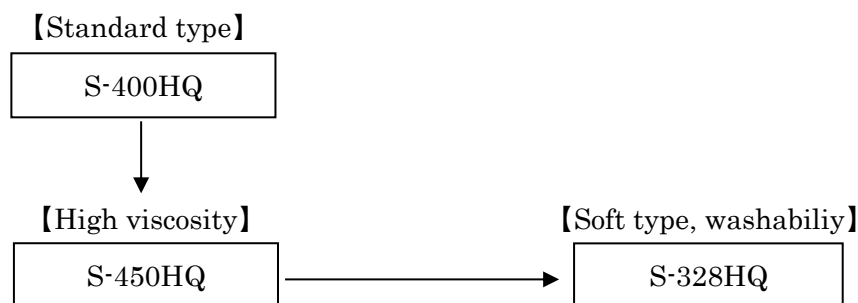


SUMIKAFLEX 328HQ

Type:	Ethylene-Vinyl acetate Copolymer Emulsion																																					
Properties:	SUMIKAFLEX 328HQ (S-328HQ) is an ethylene vinyl acetate copolymer emulsion with poly-vinyl alcohol as a protective colloid. This product has high viscosity, and its film has good washability. Moreover, it is good at adhesion and the following properties for materials since it is more flexible than SUMIKAFLEX 450HQ.																																					
Main application:	Adhesives for all Paper containers and crafts Construction and wood																																					
Physical properties:	<table> <tr> <td>Appearance</td><td></td><td>Milky white</td></tr> <tr> <td>Solid content</td><td>(%)</td><td>56.0 ± 1.0</td></tr> <tr> <td>Viscosity</td><td>(mPa·s)</td><td>3000 – 5000</td></tr> <tr> <td>pH</td><td></td><td>4.0 – 7.0</td></tr> <tr> <td>Ave. particle size</td><td>(μm)</td><td>0.6</td></tr> <tr> <td>Density</td><td>(g/cm³)</td><td>1.07</td></tr> <tr> <td>MFT</td><td>(°C)</td><td>0</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>–5</td></tr> <tr> <td>Tensile strength</td><td>(MPa)</td><td>9.0</td></tr> <tr> <td>Tensile elongation</td><td>(%)</td><td>700</td></tr> </table>		Appearance		Milky white	Solid content	(%)	56.0 ± 1.0	Viscosity	(mPa·s)	3000 – 5000	pH		4.0 – 7.0	Ave. particle size	(μm)	0.6	Density	(g/cm ³)	1.07	MFT	(°C)	0	Particle charge		Nonionic	Mechanical stability		Good	Tg	(°C)	–5	Tensile strength	(MPa)	9.0	Tensile elongation	(%)	700
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<Technical Information of SUMIKAFLEX 328HQ>

1. Grade positioning



2. Emulsion properties

	S-328HQ
Appearance	Milky white
Solid content (%)	56.0 ± 1.0
Viscosity (mPa·s)	3000 – 5000
pH	4.0 – 7.0
TI	0.3 – 0.4
Ave. particle size (μm)	0.6
Density (g/cm ³)	1.07
MFT (°C)	0
Particle charge	Nonionic
Mechanical stability	Good
Tg (°C)	–5

3. Film properties

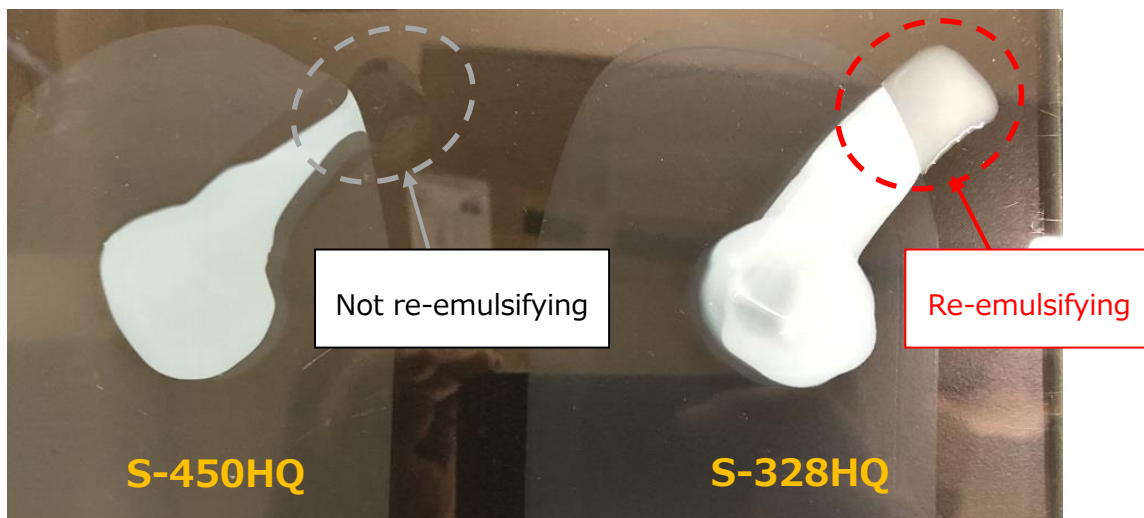
(1) Tensile strength

Item		S-328HQ	S-400HQ
Original	Elongation (%)	700	550
	Strength (MPa)	9.0	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 × 4 days
Measurement speed	: 500 mm/min

(2) Washability



Test method

Coat the emulsion on a glass plate by a 3 mil applicator

Dry at room temperature for about 3 hours

Drop approximately 0.2 cc of water on the coating surface

Check the re-emulsifying property after rubbing by with a finger

4. Applications

(1) Application of adhesion usage

		Open time (Time from coating to bonding)	
		Immediately	5 sec. later
Dry peeling strength (N/25mm)	S-328HQ	6.4	2.1
		Paper broken	Paper broken
	S-400HQ	4.8	0.5
		Paper broken	Interfacial peeling

Test method

Base material : Paper/PET film (Lumirror #75-T60)

Coating weight : 50 g/m² as wet on paper

Clamping : Hand roller

Aging : 4 days after clamping (23°C × 65%RH)

Dry peeling strength : 25 mm width, 180° angle peeling

Peel speed : 200 mm/min.