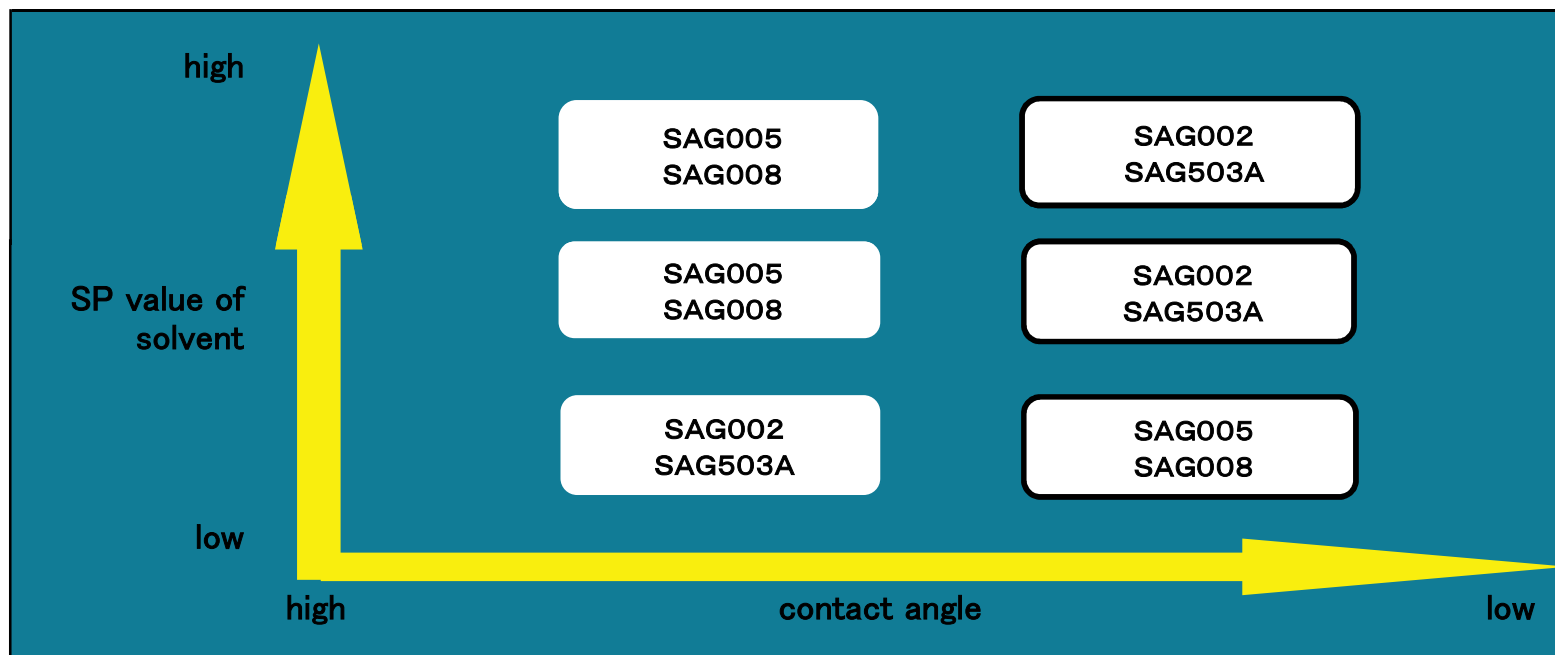


SILFACE SAG series

~Silicone Surface Controller~

SILFACE SAG series are silicone additives, which have improvement effects of wetting and slipping.

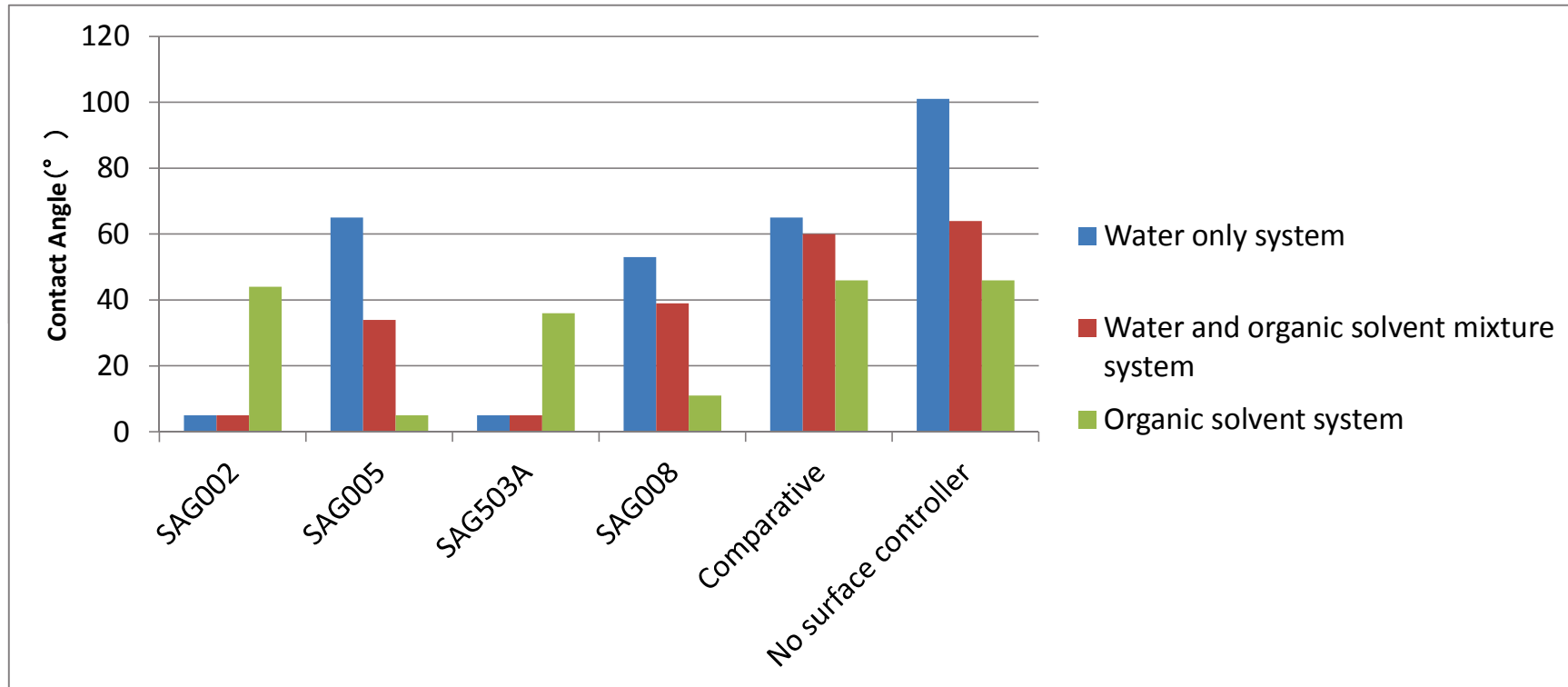


<recommendation> high & middle SP value solvent: SAG002、SAG503A

low SP value solvent: SAG005、SAG008

※ Measured in water only system, water : propylene glycol = 1:1 system, propylene glycol only system.

● Contact Angle when added for variety of solvent system

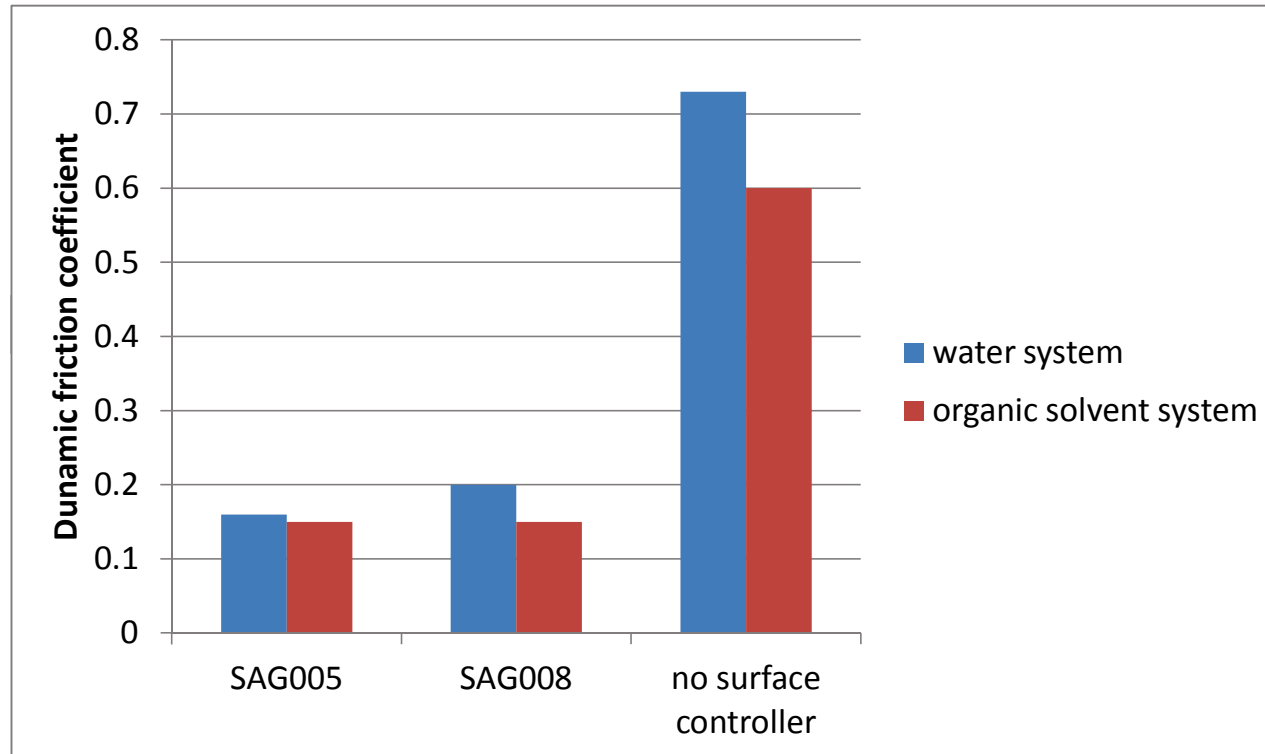


※Organic solvent ... Propylene glycol
 ※Comparative ... Acetylene glycol

SILFACE SAG002、SAG503A: When added for water only system or water and organic solvent mixture system, shows good wetting property and prevent defects.

SILFACE SAG005、SAG008: When added for organic solvent only system, shows good wetting property and prevent defects.

● Slipping properties of coatings containing surface controller



• SILFACE SAG005、SAG008 : When added emulsion or organic solvent varnish, can improve slipping property of coating. Therefore, can improve strength of coating.

○General Properties, Characteristics and Applicability

<Typical value>

Products Name	SAG002	SAG005	SAG503A	SAG008
Major Component	Polyether modified silicone			
Major Solvent	—	—	—	—
Non-volatile Matter(%)	>95	>97	>94	>95
Appearance	Light brown & clear liquid	Brown & slight muddiness	Light brown & slight muddiness	Light brown & clear liquid
HLB value	12	7	11	7
Viscosity(mm ² /s)	20	170	80	800
Specific gravity	1.01	1.02	1.05	1.03
Characteristics	Wettability Low contact angle Low surface tension	For general coating industries	Wettability Low contact angle Low surface tension	For organic solvent system of coating
Application	Low foaming wetter and penetrator for inks Dispersant for pigment			
Static surface tension(mN/m)				
Water system	21	22	20	24
Water:Propylene glycol=1:1 system	20	23	19	25
Propylene glycol system	33	21	29	20

Evaluation Methods

1) Static surface tension

Instrument : Full Automatic Equilibrium Electro Surface Tension Meter (Model: ESB-V)
by Kyowa Interface Science Co. Ltd.

Sample : Water Solutions at various Concentrations(23°C)

2) Contact Angles

Instrument : Automatic Contact Angle Meter by Kyowa Interface Science Co. Ltd..

Sample : Water or Solvent solutions at various Concentrations(23°C)

Basement : SUS304

Time : measured 30 seconds after a liquid drop contact to the basement.

3) Slipping Property

Samples : Add 0.2% SILFACE SAG surface controller against solid to Liquid containing polymer

(water system : Polyvinyl Chloride Emulsion Organic solvent system : polyvinyl acetate-polyvinyl chloride copolymer solution),

desolve with stirrer, coat $3\text{g}/\text{m}^2$ on PET film, and dried at $150^\circ\text{C} \times 10\text{min}$.

Measurement : confirm to JIS K 7125