

# **S**RUISIL

SILICONE AND SOLUTION FOR BEAUTY AND PERSONAL CARE

#### · Dimethicone Fluids

- Modified Silicone Fluids
- Gum Blends
- · Silicone Resin
- Silicone Waxes
- · Silicone Elastomer
- Silicone Emulsion

#### HANGZHOU RUIJIANG INDUSTRY CO., LTD

# **About Ruisil**

**RUISIL** is a technology-based chemical company, focusing on research and application of new silicone material and technology.

**RUISIL** concentrates on providing professional solutions, meeting customized demands, creating maximum value and growing together with our customers.

1999 Started in >90% Above Bachelor degree >30 Technical R&D and testing staff



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# **Dimethicone Fluids**

TRADE NAME	INCI NAME	Viscosity, cSt	Flash Point(C)	Features		
RJS-201-5		5±0.5	≥125			
RJS-201-10		10±1	≥165	Good spreading property. Soft and silky sensory on		
RJS-201-50		50±5	≥210	skin. Non-tacky emollient.		
RJS-201-100		100±5	≥310			
RJS-201-350	Dimethicone	350±17.5	≥315	Good spreading property. Non-tacky emollient. Skin Lubricty & De-soaping.		
RJS-201-1,000		1000±50	≥320	Skin protection. Spreads easily on both skin and hair.		
RJS-201-12,500		12500±5%	≥330	De-soaping (prevents foaming during rubbing).		
RJS-201- 60,000~1,000,000		60,000~1,000,000±5%	≥330	Excellent hair conditioning agent. Reduce dry combing force of hair significantly. Soft and smooth performance		

# Volatile Silicone Fluids

TRADE NAME	INCI NAME	Viscosity, cSt	<b>Specific Gravity(25</b> °C)	Features		
RJS-201-0.65	Disiloxane	0.65±0.065	0.760~0.770	Evention and the Manufacture latilization New groups		
RJS-201-1	Trisiloxane	1±0.1	0.815~0.825	Excellent spreading. Very fast volatilization. Non-greasy.		
RJS-201-1.5	Dimethicone	1.5±0.15	0.845~0.855			
RJS-201-2	Dimethicone	2±0.2	0.87~0.88	Soft and silky feel. Excellent spreading performance.		
RJS-5115	Cyclopentasiloxane	3.8~4.2	0.95~0.96	Soft and silky feel. Excellent spreading performance. Good		
RJS-5156	Cyclopentasiloxane (and) Cyclohexasiloxane	3~8	0.95~0.97	compatibility with cosmetic ingredients.		

# Gum Blends

TRADE NAME	INCI NAME	Gum Contnent, %	Viscosity, cSt	Features
RJS-1203	Dimethicone (and) Dimethiconol	10~25	1,200~2,500	
RJS-1205	Cyclopentasiloxane (and) Dimethicone	10~18	3,500~8,000	
RJS-1301	Dimethicone (and) Dimethiconol	10~20	3,000~5,000	They are blends of ultra-high viscosity Dimethicone or Dimethiconol in low viscosity diluents. Generally provide
RJS-1305	Cyclopentasiloxane (and) Dimethiconol	10~18	4,000~8,000	soft, silky feeling, long-lasting conditioning and excellent
RJS-1345	Cyclopentasiloxane (and) Cyclotetrasiloxane (and) Dimethiconol	11~15	5,000~9,000	spread of emollient. They are supported with tailor-made to suit your personalized formulation.
RJS-1403	Dimethicone (and) Dimethiconol	12.5~16.5	930~2,260	





# **Phenyl Modified Silicones**

TRADE NAME	INCI NAME	Viscosity, cSt	<b>Refractive Index(25</b> °C)	Featur
RJS-4351	Diphenyl Dimethicone	100~1,000	1.485~1.515	High glo
RJS-4356	Phenyl Trimethicone	15~30	1.455~1.465	boost S
RJS-4353	Aminopropyl Phenyl Trimethicone	1,000~5,000	1.490~1.510	High glo brings s
RJS-4355	Trimethyl Pentaphenyl Trisiloxane	150~200	1.5765~1.5785	Super h soft fee

# **Amino-Functional Fluids**

	TRADE NAME	INCI NAME	Viscosity, cSt	Amine Value	Featu
	RJS-3101	Amodimethicone	4,000~8,000	<0.2	Damag Hair co
	RJS-3122	Bis-Aminopropyl Dimethicone	5,000~15,000	<0.1	Exceller the was
	RJS-3108	Bisamino PEG/PPG-41/3 Aminoethyl PG-Propyl Dimethicone (and) Glycerin (and) Dipropylene Glycol	8,000	_	Superio protect provide

# **Caprylyl Silicone Fluids**

TRADE NAME	INCI NAME	Viscosity, cSt	<b>Refractive Index(25</b> °C)	Featur
RJS-4201	Caprylyl Methicone	2~5	1.41~1.43	Exceller ingredie of cosm

## Silicone Waxes

TRADE NAME	INCI NAME	<b>Specific Gravity</b> (25°C)	<b>Melting Point,</b> C	Featur
RJS-2512S	Stearyl Dimethicone	0.85	38±2	Film-for nourish boost. L
RJS-2505	C30-C45 Alkyl Dimethicone	0.920~0.970	65~75	Silky an Compat lubricat cosmeti



#### ires

gloss. It can improve spreading performance and SPF as well.

gloss. It has excellent conditioning for hair and sikin with long-lasting soft and silky feel.

high gloss, with ability of film forming, giving eel and water and long lasting performance.

#### ures

aged hair repairability. Hair suppleness improvement. color protection.

lent dry and wet combing performance for hair due to vash resistance ability. Great skin-friendly.

rior conditioning and softening effect. Color ection. No yellowing to hair. In hair dye cream it can de conditioning without affecting the dyeing effect.

#### ires

ent compatibility with a wide range of organic lients. Enhance the dispersibility and spreadability metics. Easy to formulate.

#### ires

orming performance, thickening, moisturing, shing, high gloss, good affinity with skin and SPF . Lubricity and non-greasy.

and moist feel. Moisture and nourishing performance. atible with many organic ingredients; Outstanding ating and glossing. Ideal ingredients for color etics.

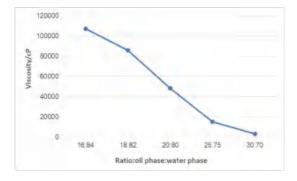
TRADE NAME	INCI NAME	Viscosity, cSt	Gum Content, %	Features	
RJS-1209	Dimethicone (and) Dimethicone/ Vinyldimethicone Crosspolymer	3,000~5,000	95~99	Soft silky and non-greasy feeling. Excellent smoothness. Long-lasting smooth sensory on skin and moist effect.	
RJS-1211	Dimethicone (and) Dimethicone Crosspolymer	4,000~8,000	15~25	Provide a luxurious silky feell, significant smoothness and softness. Unique rheology. Help smoothen hair cuticles in hair care products. D5 free.	
RJS-1208	Cyclopentasiloxane (and) Dimethiconol (and) Caprylyl Methicone(and)Dimethicone/ Vinyldimethicone Crosspolymer	7,000~15,000	18~28	Provide non-tacky, non-greasy sensory. Good spreadibility.	
RJS-1212	Cyclopentasiloxane (and) Dimethicone Crosspolymer	4,000~6,500	20~30	Provide a luxurious, silky, smooth and soft sensory. Unique rheology. Help smoothen hair cuticles in hair care products	

## Multifunctional Silicone Oils

# **Polyether Modified Silicone Fluids**

TRADE NAME	INCI NAME	Viscosity, cSt	Applicable System	Features
RJS-3290	PEG/PPG-15/15 Dimethicone	300~600	O/W	Excellent emulsifying and wetting performance. Foaming- stable properties.
RJS-3293	PEG-12 Dimethicone	200~500	O/W	Excellent water solubility, anti-static. Foaming- stable properties.
RJS-7320	Cyclopentasiloxane(and) PEG/PPG-18/18 Dimethicone	40~125	W/O, W/Si	As a formulation aid dispersing both polar and non-polar ingredients in formulation.
RJS-7321	Dimethicone (and) PEG/PPG-18/18 Dimethicone	50~1,000	W/O, W/Si	As a formulation aid dispersing both polar and non-polar ingredients in formulation.
RJS-7322	Lauryl PEG-8 Dimethicone	400~800	O/W, Si/W	Good Compatibility with silicones and organic oils.
RJS-7325	PEG-10 Dimethicone	400~1,600	W/O, W/Si	Easy to emulsify under cold or hot conditions.
RJS-7326	Lauryl PEG-9 Polydimethylsiloxyethyl Dimethicone	500~2,500	W/O, W/Si	Excellent dispersing ability of powders.
RJS-7329	Cetyl PEG/PPG-10/1 Dimethicone	700~2,300	W/O, W/Si, O/W/O, W/O/W	Excellent stability and non-sticky sensory. Compatible with a broad range of oils.

#### Emulsification Performance -- RJS-7329



Influence of phase ratio on emulsion viscosity.

#### Sensory Panel Test -- RJS-7329



Sensory panel test of RJS-7329 when 1(spreading) and 2(5 min after spreading).









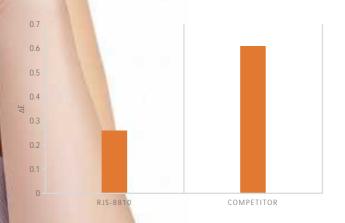
### **Silicone Resins**

TRADE NAM	E INCI NAME	Apperance	Bulk Density, g/cm <sup>3</sup>	Featur
RJS-8810	Trimethylsiloxysilicate	White powder	0.45~0.75	Excellen Enhance cosmeti
RJS-8810A	Trimethylsiloxysilicate	Colorless to light yellow, transparent liquid		Exceller with oth
RJS-8820	Trimethylsiloxysilicate (and) Polypropylsilsesquioxane	White powder	0.45~0.75	Excellen Enhance cosmeti perform

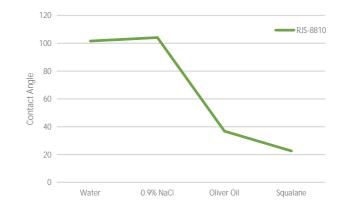
	TRADE NAME	INCI NAME	Viscosity, cSt	<b>Resin Content</b> , %	Featu
	RJS-8812	Trimethylsiloxysilicate (and) Dimethicone	300~800	40~60	Long-la booste
	RJS-8815	Trimethylsiloxysilicate (and) Cyclopentasiloxane	300~500	40~60	Excelle booste
	RJS-8819	Trimethylsiloxysilicate (and) Polypropylsilsesquioxane(and) Isododecane	100~1,000	75~80	Quick a comfor moistu

TRADE NAME	INCI NAME	Apperance	Average particle size, µm	Featu
RJS-8910			10	Good c spread differen
RJS-8902	Polymethylsilsesquioxane	White Powder	2	
RJS-8905		WillterOwder	5	
RJS-8907			7	

#### Color Transfer -- RJS-8810



#### Water & Oil Repellency -- RJS-8810



Water & Oil repellency of RJS-8810, including NaCl solution for human sweeting simulation, Olive oil for food imports simulation and Squalane for human sebum simulation.

#### RJS-8810 has a low color difference value and good anti-migration performance.



#### res

ent film-forming properties and hydrophobicity. ce the SPF value and long-lasting performance of the tics.

ent hydrophobicity. It is recommended to be used ther film formers to improve the film performance.

ent film-forming properties and hydrophobicity. ice the SPF value and long-lasting performance of the tics. Better anti-transfer and wash-off resistant mance than RJS-8810.

#### ures

-lasting moisturizing. Excellent water repellency. SPF ter.

ent film-forming properties and hydrophobicity. SPF ter. Washing durability.

and excellent film-forming properties for a ortable, non-tightening feel. Long-lasting turizing. SPF booster.

#### ures

oil control. Good lubricity and soft skin feel. Good dability and soft focus effects. They are available with ent grain diameters.



# Silicone Elastomers

TRADE NAME	INCI NAME	Viscosity, cSt	Non-volatile Content, %	Features
RJS-9040	Cyclopentasiloxane (and) Dimethicone / Vinyldimethicone Crosspolymer	250,000~580,000	13~17	Easy dispersion in oil phase. Provide cushioning and light silky, non-greasy sensory.
RJS-9041	Dimethicone (and) Dimethicone / Vinyldimethicone Crosspolymer	250,000~580,000	>70	Excellent spreading performance. Excellent silky, cushion, non-greasy sensory. Can be used as thickening agent in W/O systems.
RJS-9046	Cyclopentasiloxane (and) Dimethicone Crosspolymer (and) Dimethicone/ Vinyl Dimethicone Crosspolymer (and) Dimethiconol	250,000~450,000	14~17	Can be dispersed in oil phase easily. Act as a thickener in W/O systems. Silky, smoothing touch. Cold process. Slight sebum absorption. Reduce the stickiness of the formula.
RJS-9045	Cyclopentasiloxane (and) Dimethicone / Vinyldimethicone Crosspolymer	300,000~600,000	11~14	Easy dispersion in oil phase. Provides cushioning and light silky, non-greasy sensory. Slight sebum absorption.
RJS-9080	Caprylyl Methicone (and)Cyclopentasiloxane (and) Dimethicone Crosspolymer	150,000~300,000	16~18	Good compatibility with cosmetic ingredients. Strong smoothness and cushioning. Excellent spreading and durability. High transparent and low balling effect.
RJS-9086	Cyclopentasiloxane (and) Caprylyl Dimethicone Ethoxy Glucoside (and) Dimethicone Crosspolymer	2,000~50,000	22~32	Natural source of raw materials. Self-emulsifying property. Non-greasy sensory on skin. Provide cushion and light silky feel. Acts as a thickening agent for W/O and W/Si formulas.
TRADE NAME	INCI NAME	рН	Non-volatile Content, %	Features
RJS-9266	Dimethicone/Vinyldimethicone Crosspolymer (and) Laureth-3 (and) Laureth-25	5.0~7.5	62~68	Non-ionic O/W Suspension of silicone elastomer. Ease to formulate. Can be post-added. Cushion and silky sensory on skin. Reduce tackiness of the formulation.
RJS-9267	Dimethicone Crosspolymer (and) C12-14 Pareth-12	3.0~7.5	60~65	Non-ionic O/W emulsion. Long-lasting velvety feeling. Easy to use. Instant anti-wrinkle effect.

TRADE NAME	INCI NAME	Apperance	Average particle size, µm	Features
RJS-9106	Dimethicone/Vinyldimethicone Crosspolymer	White powder	20	Excellent absorption of oil and sebum. Reduce tackiness of the formulation. Provides cushion and non-greasy sensory.
RJS-9107	Dimethicone/Vinyldimethicone Crosspolymer (and) Silica	White powder	15	Long lasting powdery and smooth sensory. Capable of absorbing polar and non-polar oils. Soft focus effect.

# **Alkyl Dimethicone**

TRADE NAME	INCI NAME	Viscosity, cSt	<b>Specific Gravity (25</b> °C)	Features	
RJS-4110	Lauryl Dimethicone	2.0~6.0	0.810~0.840	Enhances gloss. Excellent compatibility with organic ingredients	
RJS-2502L	Cetyl Dimethicone	5~10	0.825~0.835	Enhances gloss & SPF value. Keeps skin moisty without clogging the pores. Excellent compability and spreadibility,	
RJS-2502H	Cetyl Dimethicone	150~280	0.915~0.925	which can increase the stability of formulation. Ideal to replace the Dimethicone in high-end cosmetics.	





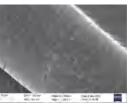
# Silicone Emulsions

INCL NAME		Silicone Content, %	Particle Size (D50)	
RJS-6315	Amodimethicone (and) Laureth-7 (and) Isolaureth-6 (and) Glycerin	≥30	<50 nm	
RJS-6334S	Amodimethicone (and) Laureth-3 (and) Laureth-9	20~23	<50 nm	
RJS-6318	Amodimethicone (and) Trideceth-5 (and) Trideceth-10 (and) Glycerin	20~26	<50 nm	
RJS-6230	Silicone Quaternium-18 (and) Trideceth-3(and)Trideceth-9	22~30	<0.2 μm	
RJS-6258	Dimethiconol (and) TEA-dodecylbenzenesulfonate (and) Laureth-12	50~55	<0.2 μm	
RJS-6461	Dimethicone (and) Trideceth-3 (and) Trideceth-10	58~64	<10 µm	
RJS-6314	Amodimethicone (and) Cetrimonium Chloride (and) Trideceth-12	33~37	<0.3 μm	
RJS-6314A	Amodimethicone (and) Cetrimonium Chloride (and) Trideceth-12	35~40	<0.3 μm	
RJS-6280	Bis-Cetearyl Amodimethicone (and) Ceteareth-7 (and) Ceteareth-25	40~50	<0.5 μm	
RJS-6412	Dimethiconol(and)TEA-dodecylbenzenesulfonate (and) Trideceth-10	54~58	<0.2 μm	
RJS-6422	Dimethiconol (and) TEA-Dodecylbenzenesulfonate (and) Trideceth-10	54~58	<0.3 μm	
RJS-6336B	Dimethiconol (and) TEA-Dodecylbenzenesulfonate	59~64	<1 µm	
RJS-6336BP	Dimethiconol (and) TEA-Dodecylbenzenesulfonate (and) Laureth-23	59~63	<1 µm	
RJS-6336C	Dimethiconol (and) TEA-Dodecylbenzenesulfonate	≥50	<1 µm	
RJS-6336D	Dimethiconol (and) Sodium dodecylbenzenesulfonate	48~54	<1 µm	
RJS-6260	Dimethicone (and) Laureth-4 (and) Laureth-23	65~70	<3 µm	
RJS-6480	Dimethicone (and) Cocamidopropyl Betaine (and) C12-15 Pareth-3 (and) Guar Hydroxypropyltrimonium Chloride	66~70	28-42 μm	
RJS-6488	Dimethicone (and) Laureth-4 (and) Laureth-23	66~70	15-45 μm	
RJS-6490	Dimethicone (and) Trideceth-6 (and) Trideceth-3 (and) Steareth-6	70~74	15-45 μm	

Clear Shampoo?	No For Natural Hair?	No Hair dying or styling? No	Need to maintenance /improve?
Yes	Yes	Yes	Yes
Microemulsion series	Light conditioning series	Repairing & fixing series	Repairing & fixing series
For Clear Shampoo	Design for hair "volume"	Hair fixing & heat protection	Solutions for different level of wet/ dry combing & smoothness
6436 Dimethiconol	6258 Dimethiconol	6314/6314LC Amodimethicone	6412 Dimethiconol 6336B/6336BP Dimethiconol Dimethicone
6318 Amodimethicone	6461 Dimethicone	6280/6280LC Bis-Cetearyl Amodimethicone	6480 Dimethicone64886422 Dimethiconol64886336D DimethiconolDimethicone
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#### Silicone Deposition -- RJS-6314





Bleached hair

Treated by RJS-6314

RJS-6314 dilution treatment leads to the deposition of silicone on hair surface, helping to smooth the scales.

#### Volume Performance -- RJS-6258







Bleached hair

SLES

6314

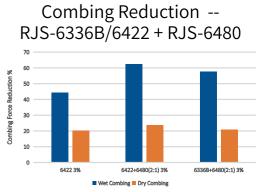
6258

The hair volume changes after the treatment by SLES, RJS-6314 or RJS-6258.

#### Shine Performance -- RJS-6336B



The change on hair gloss is observed before and after the treatment by RJS-6336B on the hair tress.



The shampoo containing RJS-6336B/6422 and RJS-6480 enhances the reduction of combing force.

# Foam Performance – RJS-6336B

Less effect on the foaming performance after RJS-6336B is applied in shampoo by 2%.