

**Shin-Etsu Silicones
for
Personal Care**

Product Brochure

Pigment Treatments Series

Shin-Etsu

New Surface Treatment Agents to Enhance Your Powders

Traditional surface treatment agents for inorganic powders are based upon silicone with a reactive Si-H group (Methicone), but recently new silicone treatment agents have been developed which use reactive ethoxy modified silicones. These new treatment products system offer several advantages: they do not form a hard resin after the reaction, the treated pigment has an enhanced soft, silky feel and there is no worry about the generation of hydrogen.

FEATURES:

- No Agglomeration
- Excelent Water Repellency
- Enhanced Soft, Silky Feel
- Excellent Dispersion with a Variety of Oil Diluents
- Reduced Surface Activity of Powder

The Physical Properties

Type	INCI	Viscosity (mm ² /s) 25 °C	Specific Gravity 25 °C	Refractive Index 25 °C	Volatile Matter 105 °C/3 h(%)	Reactive Function
Methyl H Type F-9W-9	Methicone	20	1	1.396	5 max	Si-H
Dimethyl Methyl H Type KF-9901	Dimethicone/ Methicone Copolymer	20	0.97	1.398	5 max	Si-H
Branched Silicone OEt Type KF-9908	Triethoxysilylethyl Polydimethylsiloxyethyl Dimethicone	60	0.97	1.412	5 max	Si-OEt
Branched Alkyl & Silicone OEt Type KF-9909	Triethoxysilylethyl Polydimethylsiloxyethyl Hexyl Dimethicone	45	0.96	1.415	5 max	Si-OEt
Acryl Silicone OEt Type KP-574	Acrylates/Tridecyl Acrylate/ Triethoxysilylpropyl Methacrylate/ Dimethicone Methacrylate Copolymer	300	0.98	1.416	5 max	Si-OEt

This brochure is not intended to serve as a certificate of quality guarantee, please contact our sales department for details.

Water Absorbability

Product name	Absorbability (min)
F-9W-9	180
KF-9901	180
KF-9908	50
KF-9909	120
KP-574	50
Not Treated	1

Measurement method:

- 1) A mixture of 1 part treatment agent and 10 parts IPA is sprayed onto titanium dioxide (CR-50, Ishihara Sangyo Co.)
- 2) Mix well.
- 3) Dry at 150 °C for 3 hours.
- 4) Press sample at 200 kg/cm².
- 5) Place 1 drop of 50 % butylene glycol solution onto the pressed sample.
- 6) Observe time for absorption.

Oil Dispersion

Product name	DM-FLUID A-6cs	Mineral Oil	Triethylhexanoin
F-9W-9	1	1	3
KF-9901	1	1	3
KF-9908	2	2	2
KF-9909	2	2	3
KP-574	3	2	3
Not Treated	1	1	1

1: poor, 2: good, 3: excellent

Measurement method:

- 1) A mixture of 5 parts treatment agent and 5 parts IPA is sprayed onto 100 parts titanium dioxide (CR-51, Ishihara Sangyo Co.)
- 2) Mix well.
- 3) Dry at 150 °C for 3 hours.
- 4) Mix treated TiO₂ and Oil diluent at 1/19 ratio.
- 5) Disperse by ultrasound for 90 min.
- 6) Degree of dispersion is compared and rated.

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