

Shin-Etsu Silicone

Silicone Products for Personal Care

(For North and South America)

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1 Dimethyl Silicone Fluids

| Grade | Parameter | INCI | Viscosity 25°C mm ² /s | Specific Gravity 25°C | Refractive Index 25°C | Volatile Matter 150°C/24h % | Pour Point °C | Flash Point °C |
|----------------------|-----------|-------------|--------------------------------------|--------------------------|--------------------------|--------------------------------|------------------|-------------------|
| DM-FLUID-1cs | | TRISILOXANE | 1 | 0.818 | 1.382 | Boiling point 153°C | -86 | 37 |
| DM-FLUID-1.5cs | | DIMETHICONE | 1.5 | 0.853 | 1.388 | Boiling point 190°C | -86 | 64 |
| DM-FLUID-2cs | | DIMETHICONE | 2 | 0.852 | 1.388 | — | < -60 | 88 |
| DM-FLUID-5cs | | DIMETHICONE | 5 | 0.915 | 1.396 | — | < -60 | 102 |
| DM-FLUID-A-6cs | | DIMETHICONE | 6 | 0.925 | 1.397 | — | < -60 | 174 |
| DM-FLUID-10cs | | DIMETHICONE | 10 | 0.935 | 1.399 | 30 | < -60 | 176 |
| DM-FLUID-20cs | | DIMETHICONE | 20 | 0.950 | 1.400 | < 5.0 | < -60 | 264 |
| DM-FLUID-30cs | | DIMETHICONE | 30 | 0.955 | 1.401 | < 1.5 | < -55 | 280 |
| DM-FLUID-50cs | | DIMETHICONE | 50 | 0.960 | 1.402 | < 0.5 | < -50 | > 300 |
| DM-FLUID-100cs | | DIMETHICONE | 100 | 0.965 | 1.403 | < 0.5 | < -50 | > 300 |
| DM-FLUID-200cs | | DIMETHICONE | 200 | 0.970 | 1.403 | < 0.5 | < -50 | > 315 |
| DM-FLUID-300cs | | DIMETHICONE | 300 | 0.970 | 1.403 | < 0.5 | < -50 | > 315 |
| DM-FLUID-350cs | | DIMETHICONE | 350 | 0.970 | 1.403 | < 0.5 | < -50 | > 315 |
| DM-FLUID-500cs | | DIMETHICONE | 500 | 0.970 | 1.403 | < 0.5 | < -50 | > 315 |
| DM-FLUID-1,000cs | | DIMETHICONE | 1,000 | 0.970 | 1.403 | < 0.5 | < -50 | > 315 |
| DM-FLUID-3,000cs | | DIMETHICONE | 3,000 | 0.970 | 1.403 | < 0.5 | < -50 | > 315 |
| DM-FLUID-5,000cs | | DIMETHICONE | 5,000 | 0.975 | 1.403 | < 0.5 | < -50 | > 315 |
| DM-FLUID-6,000cs | | DIMETHICONE | 6,000 | 0.975 | 1.403 | < 0.5 | < -50 | > 315 |
| DM-FLUID-10,000cs | | DIMETHICONE | 10,000 | 0.975 | 1.403 | < 0.5 | < -50 | > 315 |
| DM-FLUID-12,500cs | | DIMETHICONE | 12,500 | 0.975 | 1.403 | < 0.5 | < -50 | > 315 |
| DM-FLUID-30,000cs | | DIMETHICONE | 30,000 | 0.976 | 1.403 | < 0.5 | < -50 | > 315 |
| DM-FLUID-50,000cs | | DIMETHICONE | 50,000 | 0.976 | 1.403 | < 0.5 | < -50 | > 315 |
| DM-FLUID-60,000cs | | DIMETHICONE | 60,000 | 0.976 | 1.403 | < 0.5 | < -50 | > 315 |
| DM-FLUID-100,000cs | | DIMETHICONE | 100,000 | 0.977 | 1.403 | < 0.5 | < -50 | > 315 |
| DM-FLUID-300,000cs | | DIMETHICONE | 300,000 | 0.977 | 1.403 | < 0.5 | < -50 | > 315 |
| DM-FLUID-500,000cs | | DIMETHICONE | 500,000 | 0.978 | 1.403 | < 0.5 | < -50 | > 315 |
| DM-FLUID-1,000,000cs | | DIMETHICONE | 1,000,000 | 0.978 | 1.403 | < 0.5 | < -50 | > 315 |

* The commercial name in US is DM-FLUID-xxx, outside of US is KF-96-xxx.

(Not specific values)

2 Volatile Silicones

| Grade | Parameter | INCI | Viscosity 25°C mm ² /s | Specific Gravity 25°C | Refractive Index 25°C | Freezing Point °C | Boiling Point °C | Flash Point °C | Surface Tension 25°C mN/m |
|---------|-----------|---------------------|--------------------------------------|--------------------------|--------------------------|----------------------|---------------------|-------------------|------------------------------|
| KF-995 | | CYCLOPENTASILOXANE | 4.0 | 0.96 | 1.396 | -40 | 210 | 77 | 17.8 |
| TMF-1.5 | | METHYL TRIMETHICONE | 1.5 | 0.85 | 1.386 | -83 | 191 | 61 | 16.8 |

(Not specific values)

3 Methyl Phenyl Silicone Fluids

| Grade | Parameter | INCI | Viscosity 25°C mm ² /s | Specific Gravity 25°C | Refractive Index 25°C | Volatile Matter 150°C/24h % | Pour Point °C | Flash Point °C |
|--------|-----------|------------------------------------|--------------------------------------|--------------------------|--------------------------|--------------------------------|------------------|-------------------|
| KF-53 | | DIPHENYL DIMETHICONE | 175 | 1.055 | 1.485 | < 0.3 | < -30 | > 300 |
| KF-54 | | DIPHENYL DIMETHICONE | 400 | 1.070 | 1.505 | < 0.3 | < -30 | > 300 |
| KF-56A | | DIPHENYLSILOXY PHENYL TRIMETHICONE | 15 | 0.995 | 1.498 | 15* | < -55 | > 100 |

* 105°C/3h

(Not specific values)

4 Amino Modified Silicones

| Parameter Grade | INCI | Viscosity 25°C mm ² /s | Specific Gravity 25°C | Refractive Index 25°C |
|--------------------|-------------------------|--------------------------------------|--------------------------|--------------------------|
| KF-8004 | AMODIMETHICONE | 800 | 0.980 | 1.408 |
| KF-8015 | AMINOPROPYL DIMETHICONE | 50,000-100,000 | 0.975 | 1.405 |
| KF-867S | AMODIMETHICONE | 1,300 | 0.980 | 1.407 |

(Not specific values)

5 Other Modified Silicone

| Parameter Grade | INCI | Modified Type | Melting Point °C | Specific Gravity 25°C |
|--------------------|---|---------------|---------------------|--------------------------|
| KF-7002 | STEAROXYMETHICONE/DIMETHICONE COPOLYMER | Stearoxy | 40-50 | 0.890 |

(Not specific values)

6 Fluid Compounds

| Parameter Grade | INCI | Appearance | Viscosity 25°C mPa·s | Specific Gravity 25°C |
|--------------------|-------------|-------------------------------|-------------------------|--------------------------|
| KS-66 | SIMETHICONE | Light gray translucent liquid | 300 | 1.01 |
| KS-69 | SIMETHICONE | Light gray translucent paste | 2,500 | 1.01 |

(Not specific values)

7 Dimethyl Silicone Blends

| Parameter Grade | INCI | Component A Component B | Viscosity 25°C mPa·s | Specific Gravity 25°C | Refractive Index 25°C | Dimethicone Gum Content % | Solvent |
|--------------------|--------------------|----------------------------|-------------------------|--------------------------|--------------------------|------------------------------|---------------|
| KF-9008 | DIMETHICONE | | 30,000 | 0.961 | 1.397 | 20 | KF-995 |
| | CYCLOPENTASILOXANE | | | | | | |
| KF-9011 | DIMETHICONE | | 1,600 | 0.959 | 1.397 | 10 | KF-995 |
| | CYCLOPENTASILOXANE | | | | | | |
| KF-9013 | DIMETHICONE | | 15,000 | 0.954 | 1.401 | 15 | DM-FLUID-20cs |
| | DIMETHICONE | | | | | | |
| KF-9014 | DIMETHICONE | | 6,000 | 0.960 | 1.397 | 15 | KF-995 |
| | CYCLOPENTASILOXANE | | | | | | |
| MK-15H | DIMETHICONE | | 45,000 | 0.958 | 1.402 | 20 | DM-FLUID-20cs |
| | DIMETHICONE | | | | | | |
| X-21-5495 | DIMETHICONE | | 3,000 | 0.961 | 1.397 | 15 | KF-995 |
| | CYCLOPENTASILOXANE | | | | | | |
| KF-9028 | DIMETHICONE | | 3,000 | 0.965 | 1.398 | 20 | KF-995 |
| | CYCLOPENTASILOXANE | | | | | | |
| KF-9030 | DIMETHICONE | | 5,000 | 0.955 | 1.401 | 20 | DM-FLUID-20cs |
| | DIMETHICONE | | | | | | |

(Not specific values)

8 High Polymerization Dimethiconol

| Grade | Parameter | INCI | Component A | Viscosity 25°C mPa·s | Specific Gravity 25°C | Refractive Index 25°C | Dimethiconol Content % | Solvent |
|------------------|-----------|------------------------------------|-------------|-------------------------|--------------------------|--------------------------|---------------------------|---------------|
| | | | Component B | | | | | |
| X-21-5613 | | DIMETHICONOL DIMETHICONE | | 5,000 | 0.957 | 1.401 | 20 | DM-FLUID-20cs |
| | | | | | | | | |
| X-21-5666 | | DIMETHICONOL CYCLOPENTASILOXANE | | 15,000 | 0.960 | 1.398 | 30 | KF-995 |
| | | | | | | | | |
| X-21-5849 | | DIMETHICONOL | | 100,000 | 0.977 | 1.403 | 100 | — |

(Not specific values)

9 Amino Gums

| Grade | Parameter | INCI | Component A | Viscosity 25°C mm ² /s | Specific Gravity 25°C | Refractive Index 25°C | Amino Gum Content % | Solvent |
|----------------|-----------|---|-------------|--------------------------------------|--------------------------|--------------------------|------------------------|---------------|
| | | | Component B | | | | | |
| KF-8017 | | AMINOPROPYL DIMETHICONE DIMETHICONE | | 2,000 | 0.956 | 1.401 | 10 | DM-FLUID-20cs |
| | | | | | | | | |
| KF-8018 | | AMINOPROPYL DIMETHICONE CYCLOPENTASILOXANE | | 2,000 | 0.961 | 1.397 | 10 | KF-995 |
| | | | | | | | | |
| KF-8020 | | AMINOPROPYL DIMETHICONE DIMETHICONE | | 40,000 | 0.956 | 1.401 | 20 | DM-FLUID-20cs |
| | | | | | | | | |

(Not specific values)

10 Silicone Emulsions

| Grade | Parameter | INCI | Composition % | Appearance | Viscosity 25°C mPa·s | Base Oil | Silicone Solvent | Silicone Content % | PH 25°C | Ionic Property |
|------------------|-----------|--|------------------|-------------------------|-------------------------|---------------------------|---------------------|--------------------------|------------|-------------------|
| | | | | | | | | | | |
| KM-901 | | Component A : DIMETHICONE Others | 50.0 | Milky white emulsion | 100 | DM-FLUID- 60,000cs | — | 50 | 3.0 | Nonionic |
| | | | 6.25 | | | | | | | |
| KM-902 | | Component A : DIMETHICONE Others | 50.0 | Milky white emulsion | 100 | DM-FLUID- 500,000cs | — | 50 | 3.0 | Nonionic |
| | | | 6.15 | | | | | | | |
| KM-903 | | Component A : DIMETHICONE Component B : DIMETHICONE Others | 18.0 | Milky white emulsion | 1,000 | Dimethicone gum | DM-FLUID- 200cs | 60 | 3.0 | Nonionic |
| | | | 42.0 | | | | | | | |
| | | | 6.25 | | | | | | | |
| KM-905 | | Component A : DIMETHICONE Others | 50.0 | Milky white emulsion | 100 | DM-FLUID- 20cs | — | 50 | 3.0 | Nonionic |
| | | | 6.25 | | | | | | | |
| KM-906A | | Component A : DIMETHICONE Others | 45.0 | Milky white emulsion | 1,000 | DM-FLUID- 100,000cs | — | 50 | 5.0 | Anionic |
| | | | 10.6 | | | | | | | |
| KM-910 | | Component A : DIMETHICONE Component B : DIMETHICONE Others | 36.0 | Milky white emulsion | 2,500 | Dimethicone gum | DM-FLUID- 200cs | 60 | 5.0 | Nonionic |
| | | | 24.0 | | | | | | | |
| | | | 6.75 | | | | | | | |
| KM-9729 | | Component A : DIMETHICONE/VINYL DIMETHICONE CROSSPOLYMER Others | 50.0 | Milky white emulsion | — | Silicone rubber powder | — | 50 | 5.0 | Nonionic |
| | | | 2.75 | | | | | | | |
| X-52-2042 | | Component A : DIMETHICONE Component B : DIMETHICONE Others | 33.0 | Milky white emulsion | 1,000 | Dimethicone gum | DM-FLUID- 200cs | 60 | 3.0 | Nonionic |
| | | | 27.0 | | | | | | | |
| | | | 6.25 | | | | | | | |

(Not specific values)

Silicone Emulsions

| Parameter Grade | INCI | Composition % | Appearance | Viscosity 25°C mPa·s | Base Oil | Silicone Solvent | Silicone Content % | PH 25°C | Ionic Property |
|--------------------|---------------------------------------|---------------|----------------------|----------------------|-------------------------|------------------|--------------------|---------|----------------|
| X-52-2127 | Component A : DIMETHICONE | 30.0 | Milky white emulsion | 4,000 | Dimethicone gum | DM-FLUID-200cs | 75 | 7.0 | Cationic |
| | Component B : DIMETHICONE | 45.0 | | | | | | | |
| | Others | 4.5 | | | | | | | |
| X-52-2162 | Component A : DIMETHICONE | 26.0 | Milky white emulsion | 3,000 | Dimethicone gum | DM-FLUID-200cs | 65 | 3.5 | Nonionic |
| | Component B : DIMETHICONE | 39.0 | | | | | | | |
| | Others | 5.25 | | | | | | | |
| X-52-2265 | Component A : AMODIMETHICONE | 40.0 | Milky white emulsion | — | Amino modified silicone | — | 40 | 6.0 | Nonionic |
| | Others | 10.1 | | | | | | | |
| X-52-2328 | Component A : AMINOPROPYL DIMETHICONE | 12.0 | Milky white emulsion | 2,000 | Amino modified gum | DM-FLUID-20cs | 60 | 7.0 | Nonionic |
| | Component B : DIMETHICONE | 48.0 | | | | | | | |
| | Others | 9.5 | | | | | | | |

(Not specific values)

11 Polyether Modified Silicones

| Parameter Grade | INCI | Viscosity 25°C mm ² /s | Specific Gravity 25°C | Refractive Index 25°C | Calculated HLB wt % EO/5 | Cloud Point °C |
|--------------------|--|-----------------------------------|-----------------------|-----------------------|--------------------------|----------------|
| KF-6011 | PEG-11 METHYL ETHER DIMETHICONE | 130 | 1.07 | 1.450 | 14.5 | 65 |
| KF-6011P | PEG-11 METHYL ETHER DIMETHICONE | 140 | 1.07 | 1.450 | 14.5 | 65 |
| KF-6012 | PEG/PPG-20/22 BUTYL ETHER DIMETHICONE | 1,600 | 1.03 | 1.446 | 7.0 | 35 |
| KF-6013 | PEG-9 DIMETHICONE | 400 | 1.03 | 1.436 | 10.0 | — |
| KF-6015 | PEG-3 DIMETHICONE | 150 | 1.00 | 1.420 | 4.5 | — |
| KF-6016 | PEG-9 METHYL ETHER DIMETHICONE | 150 | 1.01 | 1.417 | 4.5 | — |
| KF-6017 | PEG-10 DIMETHICONE | 600 | 1.01 | 1.420 | 4.5 | — |
| KF-6017P | PEG-10 DIMETHICONE | 850 | 1.01 | 1.420 | 4.5 | — |
| KF-6004 | PEG-32 METHYL ETHER DIMETHICONE | Solid (melting point 45°C) | — | — | 9.0 | — |
| KF-6028 | PEG-9 POLYDIMETHYLSILOXYETHYL DIMETHICONE | 900 | 1.00 | 1.420 | 4.0 | — |
| KF-6028P | PEG-9 POLYDIMETHYLSILOXYETHYL DIMETHICONE | 900 | 1.00 | 1.420 | 4.0 | — |
| KF-6038 | LAURYL PEG-9 POLYDIMETHYLSILOXYETHYL DIMETHICONE | 700 | 0.96 | 1.430 | 3.0 | — |
| KF-6043 | PEG-10 DIMETHICONE | 400 | 1.09 | 1.454 | 14.5 | 71 |

* P Grade: odorless versions created using an improved deodorization process.

(Not specific values)

12 Polyglycerin Modified Silicones

| Parameter Grade | INCI | Viscosity 25°C mPa·s | Specific Gravity 25°C | Refractive Index 25°C | Estimated HLB |
|--------------------|---|----------------------|-----------------------|-----------------------|---------------|
| KF-6100 | POLYGLYCERYL-3 DISILOXANE DIMETHICONE | 40,000 | 1.08 | 1.458 | Medium |
| KF-6104 | POLYGLYCERYL-3 POLYDIMETHYLSILOXYETHYL DIMETHICONE | 4,000 | 1.00 | 1.409 | Low |
| KF-6105 | LAURYL POLYGLYCERYL-3 POLYDIMETHYLSILOXYETHYL DIMETHICONE | 4,000 | 0.95 | 1.426 | Low |

(Not specific values)

13 Silicone Gels

| Parameter Grade | INCI | Component A | Appearance | Penetration (worked) 25°C | Refractive Index 25°C | Base Oil | Crosspolymer % |
|--------------------|---|-------------|--------------------------------|------------------------------|--------------------------|------------------|-------------------|
| | | Component B | | | | | |
| KSG-15 | DIMETHICONE/VINYL DIMETHICONE CROSSPOLYMER | | Colorless transparent paste | 420 | 1.397 | KF-995 | 4-10 |
| | CYCLOPENTASILOXANE | | | | | | |
| USG-103 | DIMETHICONE/VINYL DIMETHICONE CROSSPOLYMER | | Colorless transparent paste | 350 | 1.398 | KF-995 | 8-12 |
| | CYCLOPENTASILOXANE | | | | | | |
| KSG-16 | DIMETHICONE/VINYL DIMETHICONE CROSSPOLYMER | | Colorless translucent paste | 330 | 1.400 | DM-FLUID-A-6cs | 20-30 |
| | DIMETHICONE | | | | | | |
| KSG-1610 | DIMETHICONE/VINYL DIMETHICONE CROSSPOLYMER | | Colorless translucent paste | 380 | 1.389 | TMF-1.5 | 15-20 |
| | METHYL TRIMETHICONE | | | | | | |
| USG-106 | DIMETHICONE/VINYL DIMETHICONE CROSSPOLYMER | | Colorless transparent paste | 420 | 1.418 | ISODODECANE | 8-12 |
| | ISODODECANE | | | | | | |
| KSG-18A | DIMETHICONE/PHENYL VINYL DIMETHICONE CROSSPOLYMER | | Colorless transparent paste | 330 | 1.495 | KF-56A | 10-20 |
| | DIPHENYLSILOXY PHENYL TRIMETHICONE | | | | | | |
| KSG-41 | VINYL DIMETHICONE/LAURYL DIMETHICONE CROSSPOLYMER | | Colorless translucent paste | 400 | 1.455 | MINERAL OIL | 25-35 |
| | MINERAL OIL | | | | | | |
| KSG-42 | VINYL DIMETHICONE/LAURYL DIMETHICONE CROSSPOLYMER | | Colorless translucent paste | 380 | 1.422 | ISODODECANE | 20-30 |
| | ISODODECANE | | | | | | |
| KSG-43 | VINYL DIMETHICONE/LAURYL DIMETHICONE CROSSPOLYMER | | Colorless translucent paste | 400 | 1.442 | TRIETHYLHEXANOIN | 25-35 |
| | TRIETHYLHEXANOIN | | | | | | |
| KSG-44 | VINYL DIMETHICONE/LAURYL DIMETHICONE CROSSPOLYMER | | Colorless translucent paste | 380 | 1.447 | SQUALANE | 25-35 |
| | SQUALANE | | | | | | |
| KSG-210 | DIMETHICONE/PEG-10/15 CROSSPOLYMER | | Colorless milky white paste | 400 | 1.403 | DM-FLUID-A-6cs | 20-30 |
| | DIMETHICONE | | | | | | |
| KSG-240 | DIMETHICONE/PEG-10/15 CROSSPOLYMER | | Colorless milky white paste | 400 | 1.400 | KF-995 | 15-25 |
| | CYCLOPENTASILOXANE | | | | | | |
| KSG-310 | PEG-15/LAURYL DIMETHICONE CROSSPOLYMER | | Colorless milky white paste | 400 | 1.450 | MINERAL OIL | 25-35 |
| | MINERAL OIL | | | | | | |
| KSG-320 | PEG-15/LAURYL DIMETHICONE CROSSPOLYMER | | Colorless milky white paste | 400 | 1.420 | ISODODECANE | 20-30 |
| | ISODODECANE | | | | | | |
| KSG-330 | PEG-15/LAURYL DIMETHICONE CROSSPOLYMER | | Colorless milky white paste | 395 | 1.442 | TRIETHYLHEXANOIN | 15-25 |
| | TRIETHYLHEXANOIN | | | | | | |
| KSG-340 | PEG-10/LAURYL DIMETHICONE CROSSPOLYMER PEG-15/ LAURYL DIMETHICONE CROSSPOLYMER | | Colorless milky white paste | 430 | 1.445 | SQUALANE | 25-35 |
| | SQUALANE | | | | | | |
| KSG-710 | DIMETHICONE/POLYGLYCERIN-3 CROSSPOLYMER | | Colorless milky white paste | 400 | 1.400 | DM-FLUID-A-6cs | 20-30 |
| | DIMETHICONE | | | | | | |
| KSG-810 | LAURYL DIMETHICONE/POLYGLYCERIN-3 CROSSPOLYMER | | Colorless milky white paste | 380 | 1.450 | MINERAL OIL | 25-35 |
| | MINERAL OIL | | | | | | |
| KSG-820 | LAURYL DIMETHICONE/POLYGLYCERIN-3 CROSSPOLYMER | | Colorless milky white paste | 340 | 1.420 | ISODODECANE | 20-30 |
| | ISODODECANE | | | | | | |
| KSG-830 | LAURYL DIMETHICONE/POLYGLYCERIN-3 CROSSPOLYMER | | Colorless milky white paste | 380 | 1.442 | TRIETHYLHEXANOIN | 15-25 |
| | TRIETHYLHEXANOIN | | | | | | |
| KSG-840 | LAURYL DIMETHICONE/POLYGLYCERIN-3 CROSSPOLYMER | | Colorless milky white paste | 380 | 1.445 | SQUALANE | 25-35 |
| | SQUALANE | | | | | | |

(Not specific values)

14 Silicone Acrylates

| Parameter Grade | INCI | Component A | Viscosity 25°C mm ² /s | Content % | Solvent |
|--------------------|--|-------------|--------------------------------------|--------------|-------------------|
| | | Component B | | | |
| KP-541 | ACRYLATES/DIMETHICONE COPOLYMER | | 500-10,000 mPa·s | 60 | ISOPROPYL ALCOHOL |
| | ISOPROPYL ALCOHOL | | | | |
| KP-543 | ACRYLATES/DIMETHICONE COPOLYMER | | 100-1,000 | 50 | BUTYL ACETATE |
| | BUTYL ACETATE | | | | |
| KP-545 | ACRYLATES/DIMETHICONE COPOLYMER | | 100-500 | 30 | KF-995 |
| | CYCLOPENTASILOXANE | | | | |
| KP-549 | ACRYLATES/DIMETHICONE COPOLYMER | | 500-5,000 | 40 | TMF-1.5 |
| | METHYL TRIMETHICONE | | | | |
| KP-550 | ACRYLATES/DIMETHICONE COPOLYMER | | 100-3,000 | 40 | ISODODECANE |
| | ISODODECANE | | | | |
| KP-578 | ACRYLATES/ETHYLHEXYL ACRYLATE/ DIMETHICONE METHACRYLATE COPOLYMER | | 150-200 | 100 | — |
| KP-561P | ACRYLATES/STEARYL ACRYLATE/ DIMETHICONE METHACRYLATE COPOLYMER | | Solid (melting point 25-35°C) | 100 | — |
| KP-562P | ACRYLATES/BEHENYL ACRYLATE/ DIMETHICONE METHACRYLATE COPOLYMER | | Solid (melting point 45-55°C) | 100 | — |

(Not specific values)

15 Trimethylsiloxysilicates

| Parameter Grade | INCI | Component A | Viscosity 25°C mm ² /s | Specific Gravity 25°C | Refractive Index 25°C | Resin Content % | Solvent | Film Hardness |
|--------------------|-------------------------|-------------|--------------------------------------|--------------------------|--------------------------|--------------------|----------------|---------------|
| | | Component B | | | | | | |
| KF-7312J | TRIMETHYLSILOXYSILICATE | | 120 | 1.050 | 1.405 | 50 | KF-995 | Hard |
| | CYCLOPENTASILOXANE | | | | | | | |
| KF-7312K | TRIMETHYLSILOXYSILICATE | | 5,000 | 1.070 | 1.410 | 60 | DM-FLUID-A-6cs | Hard |
| | DIMETHICONE | | | | | | | |
| KF-7312T | TRIMETHYLSILOXYSILICATE | | 50 | 1.009 | 1.400 | 60 | TMF-1.5 | Hard |
| | METHYL TRIMETHICONE | | | | | | | |
| X-21-5249 | TRIMETHYLSILOXYSILICATE | | 60 | 1.034 | 1.404 | 50 | KF-995 | Medium |
| | CYCLOPENTASILOXANE | | | | | | | |
| X-21-5250 | TRIMETHYLSILOXYSILICATE | | 60 | 1.034 | 1.404 | 50 | KF-995 | Soft |
| | CYCLOPENTASILOXANE | | | | | | | |
| KF-9021 | TRIMETHYLSILOXYSILICATE | | 2,000 | 1.070 | 1.406 | 50 | KF-995 | Very hard |
| | CYCLOPENTASILOXANE | | | | | | | |
| X-21-5595 | TRIMETHYLSILOXYSILICATE | | 35 | 0.967 | 1.416 | 60 | ISODODECANE | Hard |
| | ISODODECANE | | | | | | | |
| X-21-5616 | TRIMETHYLSILOXYSILICATE | | 10 | 0.916 | 1.412 | 60 | ISODODECANE | Soft |
| | ISODODECANE | | | | | | | |

(Not specific values)

16 Silicone Powders

| Parameter Grade | INCI | Appearance | Volatile Content 105°C/3h % | True Specific Gravity | Average Particle Size µm | Hardness Durometer A |
|--------------------|--|---------------------------|--------------------------------|--------------------------|-----------------------------|-------------------------|
| KMP-590 | POLYMETHYLSILSESQUIOXANE | White spherical powder | 1.0 | 1.32 | 2 | — |
| KMP-591 | POLYMETHYLSILSESQUIOXANE | White spherical powder | 1.0 | 1.32 | 5 | — |
| KMP-598 | DIMETHICONE/ VINYL DIMETHICONE CROSSPOLYMER | White spherical powder | 0.1 | 0.97 | 13 | 30 |
| KMP-400 | DIMETHICONE/ VINYL DIMETHICONE CROSSPOLYMER | White amorphous powder | 0.1 | 0.97 | 30 | 30 |
| KSP-100 | VINYL DIMETHICONE/ METHICONE SILSESQUIOXANE CROSSPOLYMER | White spherical powder | 0.1 | 1.00 | 5 | 30 |
| KSP-101 | VINYL DIMETHICONE/ METHICONE SILSESQUIOXANE CROSSPOLYMER | White spherical powder | 0.1 | 0.98 | 12 | 30 |
| KSP-102 | VINYL DIMETHICONE/ METHICONE SILSESQUIOXANE CROSSPOLYMER | White spherical powder | 0.1 | 0.98 | 30 | 30 |
| KSP-105 | VINYL DIMETHICONE/ METHICONE SILSESQUIOXANE CROSSPOLYMER | White spherical powder | 0.1 | 0.99 | 2 | 75 |
| KSP-300 | DIPHENYL DIMETHICONE/VINYL DIPHENYL DIMETHICONE/SILSESQUIOXANE CROSSPOLYMER | White spherical powder | 0.1 | 1.11 | 5 | 40 |

(Not specific values)

17 Powder Treatment Agents

| Parameter Grade | INCI | Viscosity 25°C mm ² /s | Specific Gravity 25°C | Refractive Index 25°C | Volatile Matter 105°C/3h % |
|--------------------|--|--------------------------------------|--------------------------|--------------------------|-------------------------------|
| F-9W-9P | METHICONE | 20 | 1.00 | 1.396 | < 5 |
| KF-9901 | HYDROGEN DIMETHICONE | 20 | 0.97 | 1.398 | < 5 |
| KF-9908 | TRIETHOXYSIPLYLETHYL POLYDIMETHYLSILOXYETHYL DIMETHICONE | 60 | 0.97 | 1.412 | < 5 |
| KF-9909 | TRIETHOXYSIPLYLETHYL POLYDIMETHYLSILOXYETHYL HEXYL DIMETHICONE | 45 | 0.96 | 1.415 | < 5 |
| KP-574 | ACRYLATES/TRIDECYL ACRYLATE/TRIETHOXYSIPLYLPROPYL METHACRYLATE/DIMETHICONE METHACRYLATE COPOLYMER | 300 | 0.98 | 1.416 | < 5 |
| AES-3083 | TRIETHOXYCAPRYLYLSILANE | 2 | 0.88 | 1.417 | Boiling point 100°C/2mmHg |

(Not specific values)

18 Inorganic Powder Dispersions

| Parameter Grade | INCI | Powder | Solvent | Powder Content wt % | Appearance | Viscosity 25°C mPa·s | Specific Gravity 25°C |
|--------------------|--|------------------|---------|------------------------|-----------------------------|-------------------------|--------------------------|
| SPD-T5 | CYCLOPENTASILOXANE | TiO ₂ | KF-995 | 40 | White-light gray fluid | < 4,000 | 1.3 |
| | TITANIUM DIOXIDE | | | | | | |
| | POLYGLYCERYL-3 POLYDIMETHYLSILOXYETHYL DIMETHICONE | | | | | | |
| | ALUMINUM HYDROXIDE | | | | | | |
| | STEARIC ACID | | | | | | |
| SPD-Z5 | ZINC OXIDE | ZnO | KF-995 | 60 | White-light yellow fluid | < 4,000 | 1.7 |
| | CYCLOPENTASILOXANE | | | | | | |
| | POLYGLYCERYL-3 POLYDIMETHYLSILOXYETHYL DIMETHICONE | | | | | | |
| | TRIETHOXYSILYLETHYL POLYDIMETHYLSILOXYETHYL HEXYL DIMETHICONE | | | | | | |
| | | | | | | | |

(Not specific values)

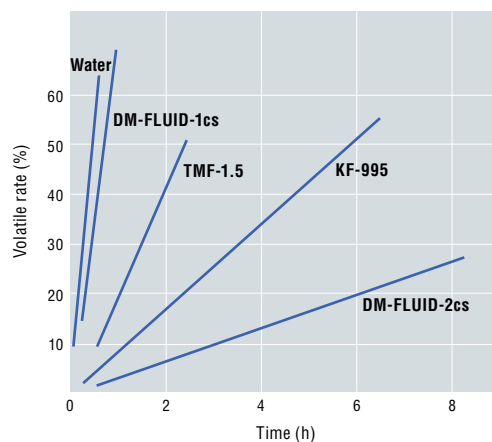
Dimethyl silicone fluid soluble in various solvents

DM-FLUID (dimethyl silicone fluid) : Solubility of medium viscosity grades
 Note that low viscosity grades of DM-FLUID (5mm²/s and below) also dissolve in ethanol and other solvents, so check prior to use.

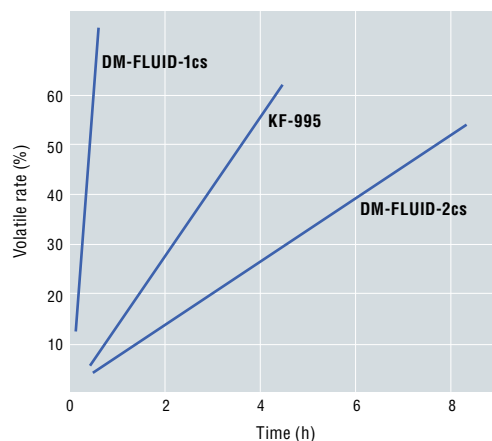
| Solvent | Result |
|---|-------------------|
| Solvent naphtha | Soluble |
| Industrial Gasoline | Soluble |
| Mineral Spirits | Soluble |
| Kerosene | Soluble |
| Cyclohexane | Soluble |
| n-Hexane | Soluble |
| n-Heptane | Soluble |
| Ethyl Ether | Soluble |
| Diisopropyl Ether | Soluble |
| Hexyl Ether | Soluble |
| Ethyl Acetate | Soluble |
| Butyl Acetate | Soluble |
| Isopropyl Ether | Soluble |
| Isopropyl Laurate | Soluble |
| Isopropyl Palmitate | Soluble |
| Isopropyl Myristate | Soluble |
| Methyl Ethyl Ketone | Soluble |
| Methyl Isobutyl Ketone | Soluble |
| Lauryl Alcohol | Soluble |
| Acetone | Partially Soluble |
| Dioxane | Partially Soluble |
| Butanol | Partially Soluble |
| 2-Ethylhexanol | Partially Soluble |
| Amyl Acetate | Partially Soluble |
| Glacial Acetate Acid | Partially Soluble |
| Naphthene-based Lubricating Oils | Partially Soluble |
| Methanol | Insoluble |
| Ethanol | Insoluble |
| Cyclohexanol | Insoluble |
| Ethylene Glycol | Insoluble |
| Carbitol | Insoluble |
| Glycerin | Insoluble |
| Diethylene Glycol Stearate | Insoluble |
| Propylene Glycol | Insoluble |
| Liquid Paraffin | Insoluble |
| Paraffin Wax | Insoluble |
| Petrolatums | Insoluble |
| Lubricating Oils | Insoluble |
| Fatty Acid (other than Glacial Acetic Acid) | Insoluble |
| Animal and Vegetable Oils | Insoluble |
| Methyl Phthalate | Insoluble |
| Water | Insoluble |

Volatile Data

Volatility at 25°C (measured by filter paper method)

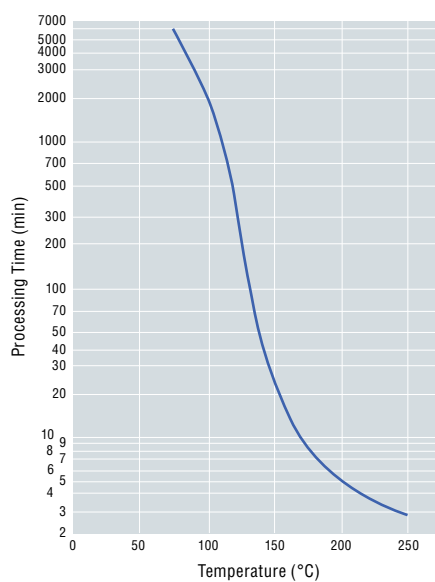


Volatility at 37°C (measured by filter paper method)



Bake-on Temperature and Processing Time Methyl Hydrogen Polysiloxane

(without solvent)



* Testing Condition
 Processing Liquid: 10 % F-9W-9P Solution
 Testing Substrate: Glass

Solubility Dimethicone

DM-FLUID-L · DM-FLUID

| Cosmetic Ingredient | Silicone Fluid : Cosmetic Ingredient | | | | | |
|---------------------|--------------------------------------|----------|-------------|----------|-------------|----------|
| | 10:1 | | 1:1 | | 1:10 | |
| | DM-FLUID-L* | DM-FLUID | DM-FLUID-L* | DM-FLUID | DM-FLUID-L* | DM-FLUID |
| Cetyl Alcohol | S | I | S | I | S | I |
| Bees Wax | I | I | I | I | S | I |
| Lanolin | I | I | I | I | I | I |
| Glycerine | I | I | I | I | I | I |
| Liquid Paraffin | S | I | S | I | S | I |
| Stearic Acid | P | I | I | I | I | I |
| Squalane | S | S | S | I | S | I |
| Jojoba Oil | S | I | P | I | P | I |
| Vaseline | I | I | I | I | S | I |

S: Soluble P: Soluble at 60 to 80°C I: Insoluble

* DM-FLUID-L: DM-FLUID-1 to 5 cs

Compatibility (20%) Polyether Modified Silicone Fluid, Polyglycerin Modified Silicone Fluid

| | KF-6011 KF-6011P | KF-6012 | KF-6013 | KF-6015 | KF-6016 | KF-6017 KF-6017P | KF-6028 KF-6028P | KF-6038 | KF-6043 | KF-6100 | KF-6104 | KF-6105 |
|---|---------------------|---------|---------|---------|---------|---------------------|---------------------|---------|---------|---------|---------|---------|
| DM-FLUID-A-6cs (Dimethicone) | I | I | PS | I | S | S | S | S | I | PS | S | S |
| TMF-1.5 (Methyl Trimethicone) | I | I | I | S | S | S | S | S | I | PS | S | S |
| KF-995 (Cyclopentasiloxane) | I | I | I | S | S | S | S | S | I | PS | S | S |
| KF-56A (Diphenylsiloxy Phenyl Trimethicone) | S | S | PS | S | S | S | S | S | I | I | S | S |
| Mineral Oil | I | PS | I | I | PS | PS | PS | S | I | I | I | S |
| Isotridecyl Isononanoate | I | S | S | S | S | S | S | S | I | PS | S | S |
| Triethylhexanoin | S | S | S | S | S | S | S | S | S | PS | PS | S |
| Ethyl Alcohol | S | S | S | S | S | S | S | PS | S | S | PS | PS |
| Isopropyl Alcohol | S | S | S | S | S | S | S | S | S | S | S | S |
| Propylene Glycol | S | I | S | I | I | S | I | PS | S | S | I | I |
| 1, 3-Butylene Glycol | S | I | S | I | I | S | I | PS | S | S | PS | PS |
| Glycerin | I | I | I | I | I | I | I | PS | I | S | PS | PS |
| Water | S | S | I | I | I | I | I | I | S | G | I | I |

S: Soluble PS: Partially Soluble I: Insoluble G: Gel

Handling Precaution

Quality, Storage and Handling

- Since changes in quality may occur due to exposure to heat, humidity, light or acidic or alkaline environments, be sure to close tightly and store in a cool, dark location.
- Do not leave products in an open state while working.
- Please read the Material Safety Data Sheet (MSDS) before use. MSDS can be obtained from our Sales Department.









Silicone Division Sales and Marketing Department I

6-1, Ohtemachi 2-chome, Chiyoda-ku, Tokyo, Japan
Phone : +81-(0)3-3246-5132 Fax : +81-(0)3-3246-5361

Shin-Etsu Silicones of America, Inc.

1150 Damar Drive, Akron, OH 44305, U.S.A.
Phone : +1-330-630-9860 Fax : +1-330-630-9855

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