

WACKER

CREATING TOMORROW'S SOLUTIONS

BELSIL®

**SPECIAL EFFECTS:
A GUIDE TO SILICONES
FOR THE COSMETICS
INDUSTRY**

PRODUCT PROPERTIES 2018

Product Type		Function/Benefits						
BELSIL® Name	INCI Designation	Viscosity [mm ² /s] (ca.)	Refractive Index n _D ²⁵	Density [g/cm ³] (*Bulk Density)	Melting Point Softening Point* [°C] (approx.) Glass Transition Temp** [°C]	Flashpoint [°C]	Appearance	Physical State
Volatile Silicones								
DM 0.65	Disiloxane	0.65	1.375	0.76	N/A	-6	clear/colorless	liquid
DM 1 plus	Dimethicone	1.1	1.384	0.83	N/A	32	clear/colorless	liquid
Dimethicones								
DM 5	Dimethicone	5	1.397	0.92	N/A	>120	clear/colorless	liquid
eco DM 5	Dimethicone	5	1.397	0.92	N/A	>120	clear/colorless	liquid
DM 10	Dimethicone	10	1.399	0.93	N/A	>172	clear/colorless	liquid
eco DM 10	Dimethicone	10	1.399	0.93	N/A	>172	clear/colorless	liquid
DM 20	Dimethicone	20	1.401	0.95	N/A	>233	clear/colorless	liquid
eco DM 20	Dimethicone	20	1.401	0.95	N/A	>233	clear/colorless	liquid
DM 100	Dimethicone	100	1.403	0.96	N/A	>275	clear/colorless	liquid
eco DM 100	Dimethicone	100	1.403	0.96	N/A	>275	clear/colorless	liquid
DM 350	Dimethicone	350	1.404	0.97	N/A	>300	clear/colorless	liquid
eco DM 350	Dimethicone	350	1.404	0.97	N/A	>300	clear/colorless	liquid
DM 500	Dimethicone	500	1.404	0.97	N/A	>300	clear/colorless	liquid
DM 1000	Dimethicone	1,000	1.404	0.97	N/A	314	clear/colorless	liquid
DM 12500	Dimethicone	12,500	1.404	0.97	N/A	>320	clear/colorless	liquid
DM 60000	Dimethicone	60,000	1.404	0.97	N/A	>320	clear/colorless	liquid/high viscosity fluid
eco DM 60000	Dimethicone	60,000	1.404	0.97	N/A	>320	clear/colorless	liquid/high viscosity fluid
DM 300000	Dimethicone	300,000	1.404	0.97	N/A	>320	clear/colorless	liquid/high viscosity fluid
DM 500000	Dimethicone	500,000	1.404	0.97	N/A	>320	clear/colorless	liquid/high viscosity fluid
DM 1000000	Dimethicone	1,000,000	1.404	0.97	N/A	>320	clear/colorless	liquid/high viscosity fluid
Dimethicone and Dimethiconol Emulsions								
DM 3560 VP	Dimethiconol, Sodium Dodecylbenzenesulfonate, Trideceth-10	approx. 40	N/A	1.00	N/A	N/A	milky white	emulsion
DM 3112 VP	Dimethiconol, Sodium Dodecylbenzenesulfonate	2,750	N/A	1.00	N/A	N/A	milky white	emulsion
DM 6101 E	Dimethicone, Trideceth-5	<10,000	N/A	1.00	N/A	N/A	milky white	emulsion
DM 5102 E	Dimethicone, Laureth-4, Laureth-23	<500	N/A	1.00	N/A	N/A	milky white	emulsion
DM 5700 E	Dimethicone, Caprylyl/Capryl Glucoside, Sorbitan Laurate	< 500	N/A	1.00	N/A	N/A	milky white	emulsion
Gum Blends								
CM 740	Cyclopentasiloxane, Dimethiconol	1,500	1.398	0.96	N/A	70	clear/colorless	liquid
CM 1000	Cyclopentasiloxane, Dimethiconol	6,250	1.398	0.96	N/A	73	colorless/slightly hazy	liquid
CM 3092	Cyclopentasiloxane, Dimethiconol	7,750	1.397	0.96	N/A	70	colorless/slightly hazy	liquid
DM 3096	Dimethicone, Dimethiconol	6,000	1.399	0.93	N/A	139	colorless/slightly hazy	liquid
GB 1020	Dimethicone, Dimethiconol	1,600	1.399	0.93	N/A	139	colorless	liquid
Amino-Functional Silicones								
ADM 1370	Amodimethicone	<4,000	1.408	0.98	N/A	<100	clear/colorless	liquid
ADM 1650	Amodimethicone	1,000	1.408	0.99	N/A	118	clear/colorless	liquid
ADM 6057 E	Amodimethicone, Cetrimonium Chloride, Trideceth-10	10	N/A	1.00	N/A	N/A	milky white	emulsion
ADM 6102 E	Amodimethicone, Trideceth-10	<200	N/A	0.99	N/A	N/A	milky white	emulsion
ADM 6300 E	Amodimethicone/Morpholinomethyl Silsesquioxane Copolymer, Trideceth-10	<200	N/A	0.99	N/A	N/A	milky white	emulsion
ADM 8301 E	Amodimethicone/Morpholinomethyl Silsesquioxane Copolymer, Trideceth-5, Glycerin	<200	N/A	0.99	N/A	N/A	colorless	emulsion
ADM 8105 E	Amodimethicone, C11-15 Pareth-7, Laureth-9, Glycerin, Trideceth-12	<500	N/A	0.99	N/A	N/A	colorless	emulsion
ADM 9000 E	Amodimethicone, Trideceth-12, Cetrimonium Chloride	<5,000	N/A	0.99	N/A	N/A	milky white	emulsion
Phenyl-Modified Silicones								
PDM 20	Trimethylsiloxyphenyl Dimethicone	20	1.437	1.00	N/A	170	clear/colorless	liquid
PDM 1000	Trimethylsiloxyphenyl Dimethicone	1,000	1.461	1.07	N/A	285	clear/colorless	liquid
PF 22	Phenyl Trimethicone	23	1.459	0.98	N/A	133	clear/colorless	liquid
PF 200	PEG/PPG-20/20 Phenylisopropyl Caprylyl Dimethicone	500	1.458	1.02	N/A	129	clear/yellowish	liquid
Alkyl/Alkoxy-Modified Silicones								
CDM 3526 VP	C26-28 Alkyl Dimethicone	N/A	N/A	0.86 (at 100°C)	approx. 35	183	cream-colored	soft-solid
CM 7026 VP	C26-28 Alkyl Methicone	N/A	N/A	0.86 (at 80°C)	70	>150	white	solid, flakes
SDM 5055 VP	Stearyl Dimethicone	460 (at 50°C)	N/A	0.86 (at 50°C)	30	160	white/opaque	solid
W 3230	Bis-Stearoxydimethylsilane, Stearyl Alcohol, Dimethicone	N/A	N/A	0.84 (at 50°C)	35	160	white	solid
Polyether-Functional Silicones								
DMC 6031	PEG/PPG-25/25 Dimethicone	800	1.452	1.04	N/A	>100	clear/yellowish	liquid
DMC 6038	Bis-PEG-15 Methyl Ether Dimethicone	52.5 (at 80°C)	1.458 (at 35°C)	1.05	30	241	white	solid
OW 1500	PEG/PPG-20/20 Copolymer, PEG/PPG-20/20 Dimethicone	800	1.452	1.04	N/A	>100	clear/yellowish	liquid
OW 2100 DE NEW!	PEG-12 Dimethicone	350	1.454	1.07	N/A	>110	clear/hazy	liquid
Silicone Polyglycosides								
SPG 128 VP	Cyclopentasiloxane, Caprylyl Dimethicone Ethoxy Glucoside	50	1.400	0.96	N/A	72	yellowish	liquid
WO 5000	Dimethicone, Caprylyl Dimethicone Ethoxy Glucoside	100	1.400	0.95	approx. -65	139	yellowish	liquid
Silicone Resins								
PMS MK Powder	Polymethylsilsesquioxane	N/A	Film: 1.422	0.50	>50*	N/A	white	solid, powder
SPR 45 VP	Polyphenylsilsesquioxane	N/A	Film: 1.569	1.34	>50*	N/A	colorless/opaque	solid, flakes
TMS 803	Trimethylsiloxyisilicate	N/A	Film: 1.422	0.25	>50*	N/A	white	solid, powder
Silicone Elastomer Resin Gels								
EG 5	Cyclopentasiloxane, Dimethicone/Vinyl Dimethicone Crosspolymer	226,000 ¹	N/A	0.96	N/A	63	colorless/opaque	gel
EG 6000	Dimethicone, Divinylmethicone/Dimethicone Crosspolymer	100,000	N/A	0.90	N/A	89	clear/colorless	gel
RG 90	Isododecane and Vinyltrimethyltrimethylsiloxyisilicate Stearyl Dimethicone Crosspolymer	36,600	N/A	0.82	N/A	48	clear/colorless	gel
RG 100	Cyclopentasiloxane, Dimethicone/Vinyltrimethylsiloxyisilicate Crosspolymer	124,000	N/A	0.97	N/A	>65	colorless/opaque	gel
REG 102	Cyclopentasiloxane, Dimethicone/Vinyltrimethylsiloxyisilicate Crosspolymer	100,000	N/A	0.95	N/A	63	clear/colorless	gel
REG 1102	Dimethicone, Dimethicone/Vinyltrimethylsiloxyisilicate Crosspolymer	100,000	N/A	0.93	N/A	> 140	clear/colorless	gel
Silicone Polyvinyl Acetates								
P 1101	Alcohol, Crotonic Acid/ Vinyl C8-12 Isoalkyl Esters/VA/Bis-Vinyl Dimethicone Crosspolymer	1,000	1.3991	0.921	N/A	12	colorless	liquid
Pyrogenic Silica								
HDK® N20	Silica	N/A	N/A	approx. 0.04***	N/A	N/A	white	powder
HDK® T30	Silica	N/A	N/A	approx. 0.04***	N/A	N/A	white	powder
HDK® H15	Silica Dimethyl Silylate	N/A	N/A	approx. 0.04***	N/A	N/A	white	powder
HDK® H18	Silica Dimethyl Silylate	N/A	N/A	approx. 0.04***	N/A	N/A	white	powder
HDK® H20	Silica Dimethyl Silylate	N/A	N/A	approx. 0.04***	N/A	N/A	white	powder
HDK® H30	Silica Dimethyl Silylate	N/A	N/A	approx. 0.04***	N/A	N/A	white	powder
HDK® H2000	Silica Silylate	N/A	N/A	approx. 0.2***	N/A	N/A	white	powder

*** Tap density DIN EN ISO 787-11
¹ converted from cP to [mm²/s]