



Silicone Alternatives Guide 硅油替代产品手册

Known for their broad versatility and appealing sensory benefits, silicones have long been a “go-to” ingredient for beauty care formulators. Despite their historical popularity, silicones like dimethicones and cyclomethicones have been criticized of late for their lack of biodegradability and the potentially harmful health implications of their buildup on skin and hair. With increasing consumer interest in silicone-free products, as well as tighter regulatory restrictions on silicones, the cosmetic industry is actively searching for high performance alternatives to replace silicones that meet exceptional performance, safety and environmental standards.

硅油因功能多样、肤感优异而被人们所熟知，长期以来一直是个人护理产品配方师的首选成分。尽管硅油在历史上很受欢迎，但是近年来，聚二甲基硅氧烷和环状硅油等硅油成分由于缺乏生物降解性，以及其在皮肤和头发上的累积会对健康造成潜在危害而饱受诟病。随着消费者对“无硅产品”兴趣的提高，以及各国法规对硅油的监管和限制的愈加严格，化妆品行业正在积极寻找硅油的高性能替代品，以满足性能、安全和环保的要求。

● = IECIC Listed 已列入 IECIC 🌱 = ISO 16128 Natural Origin Index > 0.5 ISO 16128 天然来源指数 > 0.5 (以碳原子计)
*Based on its structure and/or the biodegradability of its components 由其结构和/或组分的生物降解性推算

When Formulating for Hair Care 头发护理

SILICONE 硅油	ATTRIBUTES 特性	INOLEX ALTERNATIVES 英狄士硅油替代产品	INCI	BIODEGRADABILITY 生物降解性
Cyclomethicone 环状硅油	Volatility & low viscosity Fast spreading Decreased dry time Active carrier 具有挥发性 & 粘度低 易铺展 快干 可作活性物载体	● 🌱 LexFeel™ D5 CN	triheptanoin (and) C13-15 alkane (ISO:1) 三庚精 & C13-15 烷 (ISO:1)	Readily 易于生物降解
		● 🌱 LexFeel™ WOW-A DT	C13-15 alkane (and) heptyl undecylenate (ISO:1) C13-15 烷 & 十一烯酸庚酯 (ISO:1)	Inherently* 固有生物降解*
		● LexFeel™ D4	neopentyl glycol diheptanoate (and) isododecane 新戊二醇二庚酸酯 & 异十二烷	Inherently* 固有生物降解*
		● LexFeel™ D5	neopentyl glycol diheptanoate (and) isododecane 新戊二醇二庚酸酯 & 异十二烷	Inherently* 固有生物降解*
	Improved wet & dry combing 改善干湿梳理性	● 🌱 LexFeel™ D5 CN	triheptanoin (and) C13-15 alkane (ISO:1) 三庚精 & C13-15 烷 (ISO:1)	Readily 易于生物降解
		● 🌱 LexFeel™ WOW-A DT	C13-15 alkane (and) heptyl undecylenate (ISO:1) C13-15 烷 & 十一烯酸庚酯 (ISO:1)	Inherently* 固有生物降解*
Dimethicone 聚二甲基硅氧烷	Improved wet & dry combing 改善干湿梳理性	🌱 ClariSilk™	polyester-37 (ISO:0.60) 聚酯-37 (ISO:0.60)	Readily 易于生物降解
		● Kerazyme™ MB	polyester-11 聚酯-11	Readily 易于生物降解
		🌱 LexFeel™ N Series	diheptyl succinate (and) capryloyl glycerin/sebacic acid copolymer (ISO:1) 琥珀酸二庚酯 & 甘油辛酸酯/癸二酸聚合物 (ISO:1)	Readily* 易于生物降解*
	Luster & sheen 提高光泽	● 🌱 LexFeel™ Shine	propylene glycol dibenzoate 丙二醇二苯甲酸酯	Readily 易于生物降解
		🌱 ClariSilk™	polyester-37 (ISO:0.60) 聚酯-37 (ISO:0.60)	Readily 易于生物降解
		● Kerazyme™ MB	polyester-11 聚酯-11	Readily 易于生物降解

When Formulating for Hair Care 头发护理

SILICONE 硅油	ATTRIBUTES 特性	INOLEX ALTERNATIVES 英狄士硅油替代产品	INCI	BIODEGRADABILITY 生物降解性
Dimethicone 聚二甲基硅氧烷	Enhanced sensory 改善肤感	🌱 LexFeel™ N Series	diheptyl succinate (and) capryloyl glycerin/ sebacic acid copolymer (ISO:1) 琥珀酸二庚酯&甘油辛酸酯/癸二酸聚合物 (ISO:1)	Readily* 易于生物降解*
		🌱 ClariSilk™	polyester-37 (ISO:0.60) 聚酯-37 (ISO:0.60)	Readily 易于生物降解
	Manageability (reduced flyaway, softness, humidity resistance) 可打理性 (减少头 发飞扬, 使发丝柔 软, 提高疏水性)	🌱 LexFeel™ N200 MB & LexFeel™ N350 MB	diheptyl succinate (and) capryloyl glycerin/ sebacic acid copolymer (ISO:1) 琥珀酸二庚酯&甘油辛酸酯/癸二酸聚合物 (ISO:1)	Readily* 易于生物降解*
		🌱 ClariSilk™	polyester-37 (ISO:0.60) 聚酯-37 (ISO:0.60)	Readily 易于生物降解
Amodimethicone 氨基硅油	Moisture retention Lubricity Improved wet & dry combing 保湿 润滑 改善干湿梳理性	● Kerazyme™ MB	polyester-11 聚酯-11	Readily 易于生物降解
		🌱 ClariSilk™	polyester-37 (ISO:0.60) 聚酯-37 (ISO:0.60)	Readily 易于生物降解
	Color protection 护色	● Kerazyme™ MB	polyester-11 聚酯-11	Readily 易于生物降解
Phenyl Trimethicone 苯基聚三甲硅氧烷	Luster & sheen 提高光泽	🌱 ClariSilk™	polyester-37 (ISO:0.60) 聚酯-37 (ISO:0.60)	Readily 易于生物降解
	Slip 顺滑	🌱 LexFeel™ N Series	diheptyl succinate (and) capryloyl glycerin/ sebacic acid copolymer (ISO:1) 琥珀酸二庚酯&甘油辛酸酯/癸二酸聚合物 (ISO:1)	Readily* 易于生物降解*
		● LexFeel™ Shine	propylene glycol dibenzoate 丙二醇二苯甲酸酯	Readily 易于生物降解
	Heat protection 热保护	🌱 LexFeel™ N350 MB	diheptyl succinate (and) capryloyl glycerin/ sebacic acid copolymer (ISO:1) 琥珀酸二庚酯&甘油辛酸酯/癸二酸聚合物 (ISO:1)	Readily* 易于生物降解*

When Formulating for Skin & Body Care 皮肤及身体护理

SILICONE 硅油	ATTRIBUTES 特性	INOXEL ALTERNATIVES 英狄士硅油替代产品	INCI	BIODEGRADABILITY 生物降解性
Cyclomethicone 环状硅油	Volatility & low viscosity Fast spreading Decreased dry time Active carrier 具有挥发性& 粘度低 易铺展 快干 可作活性物载体	● 🌱 LexFeel™ D5 CN	triheptanoin (and) C13-15 alkane (ISO:1) 三庚精& C13-15烷 (ISO:1)	Readily 易于生物降解
		● 🌱 LexFeel™ WOW-A DT	C13-15 alkane (and)heptyl undecylenate(ISO:1) C13-15烷 & 十一烯酸庚酯(ISO:1)	Inherently* 固有生物降解*
		● LexFeel™ D4	neopentyl glycol diheptanoate (and) isododecane 新戊二醇二庚酸酯&异十二烷	Inherently* 固有生物降解*
		● LexFeel™ D5	neopentyl glycol diheptanoate (and) isododecane 新戊二醇二庚酸酯&异十二烷	Inherently* 固有生物降解*
	Anti-perspirant application(reduced whitening effect) 减少含止汗产品的发白现象	● 🌱 LexFeel™ D5 CN	triheptanoin (and) C13-15 alkane (ISO:1) 三庚精& C13-15烷 (ISO:1)	Readily 易于生物降解
		● 🌱 LexFeel™ WOW-A DT	C13-15 alkane (and)heptyl undecylenate(ISO:1) C13-15烷 & 十一烯酸庚酯(ISO:1)	Inherently* 固有生物降解*
Dimethicone 聚二甲基硅氧烷	Enhanced sensory Smooth texture & slip 改善肤感 赋予柔滑触感和质地	🌱 LexFeel™ N Series	diheptyl succinate (and) capryloyl glycerin/ sebacic acid copolymer (ISO:1) 琥珀酸二庚酯&甘油辛酸酯/癸二酸聚合物(ISO:1)	Readily* 易于生物降解*
		● 🌱 LexFeel™ Natural	heptyl undecylenate (ISO:1) 十一烯酸庚酯 (ISO:1)	Readily* 易于生物降解*
		🌱 SustOleo™ DCS	diisooctyl succinate(ISO:1) 琥珀酸二异辛酯(ISO:1)	Readily 易于生物降解
		● 🌱 SustOleo™ MCT	triheptanoin(ISO:1) 三庚精 (ISO:1)	Readily 易于生物降解
		● 🌱 LexFeel™ 7	neopentyl glycol diheptanoate (ISO:0.74) 新戊二醇二庚酸酯 (ISO:0.74)	Readily 易于生物降解
		● 🌱 LexFeel™ 21 MB	trimethylolpropane tricaprylate/tricaprate (ISO:0.82) 三羟甲基丙烷三辛酸酯/三癸酸酯 (ISO:0.82)	Readily 易于生物降解
	Skin protectant 保护皮肤	🌱 LexFeel™ N350 MB	diheptyl succinate (and) capryloyl glycerin/ sebacic acid copolymer (ISO:1) 琥珀酸二庚酯&甘油辛酸酯/癸二酸聚合物(ISO:1)	Readily* 易于生物降解*
		🌱 Vellaplex™ MB	capryloyl glycerin/sebacic acid copolymer (ISO:1) 甘油辛酸酯/癸二酸聚合物(ISO:1)	Readily 易于生物降解
		🌱 LexFilm™ Sun Natural MB	capryloyl glycerin/sebacic acid copolymer (ISO:1) 甘油辛酸酯/癸二酸聚合物(ISO:1)	Readily 易于生物降解
		🌱 Vellaplex™ MB	capryloyl glycerin/sebacic acid copolymer (ISO:1) 甘油辛酸酯/癸二酸聚合物 ISO:1)	Readily 易于生物降解
Silicone Resins 硅树脂	Long wear Transfer resistance 长效 抗迁移	● Lexorez™ 100 MB	adipic acid/diglycol crosspolymer 己二酸/二甘醇/甘油交联聚合物	Readily 易于生物降解
		● WetFilm™ MB	trimethylpentanediol/adipic acid/ glycerin crosspolymer 三甲基戊二醇/己二酸/甘油交联聚合物	Readily 易于生物降解
		🌱 LexFeel™ Vibrant MB	palm acid/adipic acid/pentaerythritol crosspolymer (ISO:0.79) 棕榈酸/己二酸/季戊四醇交联聚合物 (ISO:0.79)	
Phenyl Trimethicone 苯基聚三甲基硅氧烷	Luster & sheen Slip	🌱 LexFeel™ N Series	capryloyl glycerin/sebacic acid copolymer (ISO:1) 甘油辛酸酯/癸二酸聚合物(ISO:1)	Readily* 易于生物降解*
	提高光泽 顺滑	● LexFeel™ Shine	propylene glycol dibenzoate 丙二醇二苯甲酸酯	Readily 易于生物降解

When Formulating for Color Cosmetics 彩妆

SILICONE 硅油	ATTRIBUTES 特性	INOLEX ALTERNATIVES 英狄士硅油替代产品	INCI	BIODEGRADABILITY 生物降解性
Cyclomethicone 环状硅油	Volatility & low viscosity Fast spreading & absorbing Active carrier Enhanced sensory Reduced tack 具有挥发性& 粘度低 易铺展&吸收快 可作活性物载体 改善肤感 降低粘腻感	● 🌱 LexFeel™ D5 CN	triheptanoin (and) C13-15 alkane (ISO:1) 三庚精& C13-15烷 (ISO:1)	Readily 易于生物降解
		● 🌱 LexFeel™ WOW-A DT	C13-15 alkane (and)heptyl undecylenate(ISO:1) C13-15烷 & 十一烯酸庚酯(ISO:1)	Inherently* 固有生物降解*
		● LexFeel™ D4	neopentyl glycol diheptanoate (and) isododecane 新戊二醇二庚酸酯&异十二烷	Inherently* 固有生物降解*
		● LexFeel™ D5	neopentyl glycol diheptanoate (and) isododecane 新戊二醇二庚酸酯&异十二烷	Inherently* 固有生物降解*
		🌱 LexFeel™ N Series	diheptyl succinate (and) capryloyl glycerin/ sebacic acid copolymer (ISO:1) 琥珀酸二庚酯&甘油辛酸酯/癸二酸聚合物(ISO:1)	Readily* 易于生物降解*
Dimethicone 聚二甲基硅氧烷	Enhanced sensory Reduced tack Spreadability & slip 改善肤感 降低粘腻感 提高铺展性&顺滑感	● 🌱 LexFeel™ Natural	heptyl undecylenate (ISO:1) 十一烯酸庚酯 (ISO:1)	Readily* 易于生物降解*
		🌱 SustOleo™ DCS	diisooctyl succinate(USDA:100% ISO:1) 琥珀酸二异辛酯(USDA:100% ISO:1)	Readily 易于生物降解
		● 🌱 SustOleo™ MCT	triheptanoin(ISO:1) 三庚精 (ISO:1)	Readily 易于生物降解
		● 🌱 LexFeel™ 7	neopentyl glycol diheptanoate (ISO:0.74) 新戊二醇二庚酸酯 (ISO:0.74)	Readily 易于生物降解
		● 🌱 LexFeel™ 21 MB	trimethylolpropane tricaprylate/tricaprate (ISO:0.82) 三羟甲基丙烷三辛酸酯/三癸酸酯 (ISO:0.82)	Readily 易于生物降解
		🌱 LexFeel™ N Series	diheptyl succinate (and) capryloyl glycerin/ sebacic acid copolymer (ISO:1) 琥珀酸二庚酯&甘油辛酸酯/癸二酸聚合物(ISO:1)	Readily* 易于生物降解*
	Smooth texture Skin protectant 柔滑触感 保护皮肤	🌱 Vellaplex™ MB	capryloyl glycerin/sebacic acid copolymer (ISO:1) 甘油辛酸酯/癸二酸聚合物(ISO:1)	Readily 易于生物降解
Silicone Resins 硅树脂		🌱 LipFeel™ Natural MB	capryloyl glycerin/sebacic acid copolymer (ISO:1) 甘油辛酸酯/癸二酸聚合物(ISO:1)	Readily 易于生物降解
	Long wear Transfer resistance 长效 抗迁移	● Lexorez™ 100 MB	adipic acid/diglycol crosspolymer 己二酸/二甘醇/甘油交联聚合物	Readily 易于生物降解
		● WetFilm™ MB	trimethylpentanediol/adipic acid/glycerin crosspolymer 三甲基戊二醇/己二酸/甘油交联聚合物	Readily 易于生物降解
Phenyl Trimethicone 苯基聚三甲基硅氧烷		🌱 LexFeel™ Vibrant MB	palm acid/adipic acid/pentaerythritol crosspolymer (ISO:0.79) 棕榈酸/己二酸/季戊四醇交联聚合物 (ISO:0.79)	
		🌱 LexFeel™ N Series	diheptyl succinate (and) capryloyl glycerin/ sebacic acid copolymer (ISO:1) 琥珀酸二庚酯&甘油辛酸酯/癸二酸聚合物(ISO:1)	Readily* 易于生物降解*
	Luster & sheen 提高光泽	● LexFeel™ Shine	propylene glycol dibenzoate 丙二醇二苯甲酸酯	Readily 易于生物降解
		🌱 LexFeel™ Vibrant MB	palm acid/adipic acid/pentaerythritol crosspolymer (ISO:0.79) 棕榈酸/己二酸/季戊四醇交联聚合物 (ISO:0.79)	

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