

SEONGWON P&S

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안녕하십니까?

고객의 비즈니스에 더 큰 가치와 효율성을 제공하는 (주)성원피앤에스입니다.

Global Leader

미래창조! (주)성원피앤에스가 함께하겠습니다.

지난 40여년을 한결같이 지켜봐주시고 격려해주신 고객 여러분의 높은 관심과 사랑에 진심으로 감사드립니다. (주)성원피앤에스는 1976년 회사 창립 이래 고객들의 변함없는 성원과 저희 성원 가족들의 부단한 노력의 결과 실리콘 실란트, 실리콘 러버, 타포린 산업에 적용되는 안료분산 및 컬러매칭 분야에서 축적된 기술력을 널리 인정받고 있습니다.

(주)성원피앤에스는 글로벌 시대를 맞아 그동안 축적된 기술과 노하우를 바탕으로 2004년 중국 공장을 설립하여 중국시장에 진출하였습니다. 이를 계기로 삼아, 세계 시장을 목표로 높은 수준의 품질과 신뢰도로서 세계적 기업들과 당당히 경쟁해 나가고 있습니다. 또한 다우코닝의 온라인 브랜드인 XIAMETER®의 실리콘 오일/에멀전/실란 분야의 한국 총판대리점으로서 국내 실리콘 시장을 개척해 나가고 있습니다.

앞으로도 고객 여러분의 부단한 요구에 신속히 대응하고, 새로운 기술의 연구, 개발 및 품질향상을 이루기 위하여 최선의 노력을 다하겠습니다.

언제나 고객의 만족을 최우선 과제로 삼고 고객의 목소리에 귀를 기울일 것을 약속드립니다.

감사합니다.

(주)성원피앤에스 대표이사 이영환

회사 연혁 Company History

1976. 04	성원상사 설립	서울시 중구 태평로2가 200-1
1988. 12	성원상사 이전	서울시 영등포구 당산1가 53
1998. 03	법인전환 (주)성원피앤에스	서울시 영등포구 당산동2가 6
1999. 06	공장설립	경기도 광주시 실촌읍 열미리
2000. 07	공장신축이전	경기도 광주시 실촌읍 수양리
2004. 12	중국공장설립	중국 강소성 장가항시
2007. 11	공장증축 (제2동증축)	
2009. 05	법인명 변경 (주)성원피앤에스	서울시 영등포구 당산2가 37
2009. 07	XIAMETER® MASTER DISTRIBUTOR 선정 (SILICONE FLUID/EMULSION/SILANE/ANTIFOAM분야)	
2014. 02	중국공장 증축이전	중국 강소성 장가항시

실리콘 비즈니스 SILICONE BUSINESS

(주)성원피앤에스는 다우코닝의 온라인 브랜드인 XIAMETER®의 총판대리점으로 실리콘 오일, 에멀전, 실란, 소포제에 제품을 합리적인 서비스와 가격으로 공급하고 있습니다.

PDMS(POLYDIMETHYLSILOXANE)

다양한 점도, 낮은 표면장력, 산화안정성, 오존 및 UV 안정성, 발수성, 열안정성, 환경친화적이며, 소포제, 이형제, 광택제, 발수제 등의 원료로 사용되고 윤활유, 플라스틱 첨가제 등으로도 사용 가능합니다.

이형제

실리콘은 플라스틱, 고무, 우레탄, 알루미늄, 예폭시, 접착제, 아스팔트, 각종 유기 및 무기물 가공시 압축기, 금형 등의 신속한 작업성과 청결성을 유지시켜 줌으로써 전체적인 생산성을 증대시킵니다. 또한 최종 사용목적에 쉽게 적용할 수 있고 편리하게 사용할 수 있도록 오일형 수용성 에멀전, 용매에 녹인 용액형 등 다양한 형태로 공급되고 있습니다.

광택제

실리콘은 굴절률이 높아 광택성이 우수하고 내구성 및 사용이 용이하여 자동차 및 가정용 광택제의 주원료로 사용되고 있습니다. 아미노기를 함유한 실리콘의 장점은 뛰어난 침투력과 표면친화성을 가진 아민 그룹으로 인해 효과적으로 제품에 단단히 달라붙게 합니다. 실리콘 수지는 실리콘 오일과 함께 사용되어질때 물에 대한 반발력과 광택, 사용용이를 유지하면서 내구성을 향상시킵니다.

발수제

일반적인 건축자재는 빗물침투시에 부식, 수축, 동결, 크랙, 백화현상, 오염 등이 발생합니다. 이러한 건축자재에 실리콘 발수제를 사용하면 실리콘의 우수한 소수성과 통기성 및 산화안정성으로 인하여 건축자재를 보호하며, 건축물의 수명을 연장시킬 수 있습니다. 따라서 건축자재의 종류에 따라 적절한 실리콘 발수제의 사용으로 건축물의 외관유지 및 수명연장을 필요로 합니다.

변성실리콘오일

변성실리콘오일은 실록산 주쇄에 다양한 형태의 유기 그룹을 갖는 형태로 플라스틱 표면개질제 및 계면활성제, 분산제 등 일반 화학공정 및 제품의 첨가제로 사용가능합니다. 주로 열매체유, 섬유처리, 이형제, 습윤제, 광택제, 소포제, 유기물과의 합성, 발수제 등으로 사용됩니다.

소포제

실리콘 소포제는 식품 또는 공업제품 등의 제조공정에서 문제가 되는 기포발생 현상을 공정자체의 물성에 전혀 영향을 주지 않고 제거함으로써 생산성을 향상시켜줍니다. 실리콘 소포제는 소포력 및 지속성이 유기소포제보다 우수하여 소량으로도 소포 효과가 우수하여 경제적입니다. 실리콘 소포제는 오일형, 컴파운드형, 자기유화형 및 에멀전으로 분류할 수 있으며 석유화학, 일반 화학 공업분야에서 공정을 용이하게 하여 수율을 높이며, 각종 폐수처리장에서 사용됩니다. 실리콘 소포제는 고온 및 저온, 수용액 및 비수용액, 염기성이나 산성용액 등 넓고 다양한 분야에서 기포를 파괴/억제하는데 뛰어난 효과를 나타냅니다.

실란

실란은 단량체로서 Si-O에 결합되어 있는 유기기에 따라 여러가지 형태의 제품이 있으며, 유기물과 무기물을 연결시켜주는 COUPLING AGENT의 역할을 하며 다양한 파우더 처리, 수지의 접착성 증진, 유기물 합성시 원재료로서도 사용하고 있습니다. 특히 파우더를 실란으로 처리해줌으로써 분쇄효과, 발수성, 흐름성 등을 증진시키고 서로 뭉쳐지는 것을 방지합니다. 실란을 사용함으로써 접착성, 흐름성, 레벨링 효과, 필러 및 안료 분산효과, 발수성 증대 등의 이점을 얻을 수 있습니다.

실리콘 오일 SILICONE FLUID



실리콘은 지극히 안정된 화학구조를 가지고 있으며 부식성이 없고 산화되지 않는 화합물로서 경제성, 화재위험성, 독성, 환경공해 등이 문제가 되는 경우의 일반 유기화합물을 대체할 수 있는 가장 적합한 제품으로 인정받는 금세기 최대의 발명품이라 일컬어지고 있습니다.

실리콘오일의 특성은 낮은 표면장력, 산화안정성, 오존 및 UV 안정성, 발수성, 열안정성, 환경친화적이며 소포제, 이형제, 광택제, 발수제 등의 원료로 사용되고 윤활유, 댐퍼유, 플라스틱 첨가제 등으로도 사용 가능합니다.

특성

- 무색, 무미, 무취 · 낮은 표면 장력
- 넓은 온도 범위에서 사용가능
- 비 반응성 · 산화 안정성 우수
- 절연성 우수 · 전단력 우수
- 발수성 · 광택성
- 매끄러운 촉감 · 우수한 열 안정성

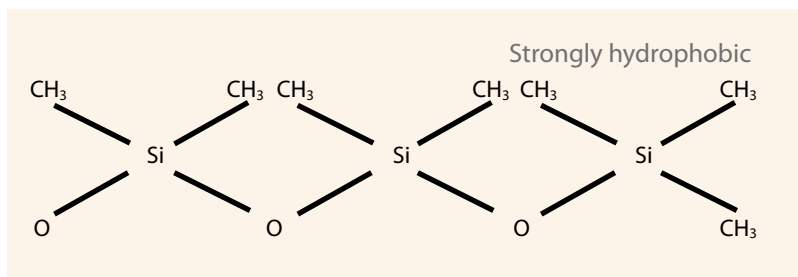
PDMS(Polydimethyl Siloxane)

Silicone molecules are like spaghetti:

- They are long and strong
- They are free to move
- They do not get tangled up
- They are not "sticky"

Surface tension S.T.(mN/m)

Water	72
Water+Surfactant	30
Ethanol	50
PDMS	20



Rotation About the Bonds	
C-C	3.3kcal/mol
Si-O	0.2kcal/mol

Si-O bond is very free to move

Bonds	Strength
C-C	85kcal/mol
C-C	81kcal/mol
Si-O	117kcal/mol

Si-O bond is more stable

Bonds	Angle	Length
C-C	112Degree	0.154nm
C-C	111Degree	0.142nm
Si-O	130Degree	0.163nm

Si-O bond is flattest and longest*

실리콘 오일 SILICONE FLUID

Silicon	Silicon	실리콘의 성질
Si 원소, Gray metal 원자량28	Conventional name of Polyorgano-Siloxane Macromolecule (polymer, 고분자) $\text{CH}_3 - \text{Si}(\text{CH}_3)_2 - \text{O} - \text{Si}(\text{CH}_3)_2 - \text{CH}_3$ PDMS(PolydimethylSiloxane)	발수성, 이형성, 절연성, 내열성, 내후성, 소포성, 윤활성, 무독성, 비반응성, 광택성, 매끄러운 촉감

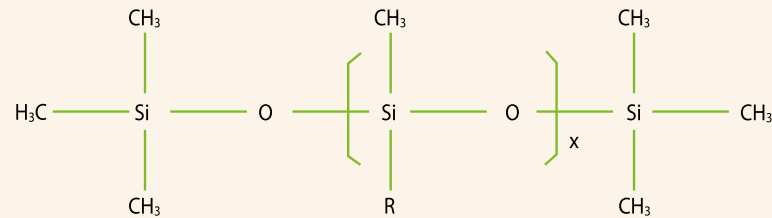
PDMS(PolydimethylSiloxane) Fluid							
제품명	외관	점도, cst @ 25°C	인화점, °C Closed Cup	굴절율, @ 25°C	표면장력 mN/m, @ 25°C	점도-온도계수	용도 및 특성
PMX-200 / 0.65cs	투명	0.65	-3.3(Closed)	1.375	15.9	0.31	고무/ 플라스틱 이형제, 광택제, 섬유처리제, 소포제, 절연유, 댐퍼유, 윤활유, 열매체유, 플라스틱 첨가제
PMX-200 / 1.0cs	투명	1.0	3.4(Closed)	1.382	17.4	0.41	
PMX-200 / 1.5cs	투명	1.5	-	1.388	-	-	
PMX-200 / 2.0cs	투명	2.0	-	1.390	-	-	
PMX-200 / 5.0cs	투명	5.0	135	1.399	19.7	0.55	
PMX-200 / 10cs	투명	10	163	1.400	20.1	0.56	
PMX-200 / 20cs	투명	20	204	1.401	20.6	0.59	
PMX-200 / 50cs	투명	50	285	1.402	20.8	0.60	
PMX-200 / 100cs	투명	100	315	1.403	20.9	0.60	
PMX-200 / 200cs	투명	200	315	1.403	21.0	0.60	
PMX-200 / 350cs	투명	350	315	1.403	21.1	0.60	
PMX-200 / 500cs	투명	500	315	1.403	21.1	0.60	
PMX-200 / 1000cs	투명	1,000	321	1.403	21.2	0.61	
PMX-200 / 5000cs	투명	5,000	321	1.403	21.4	0.61	
PMX-200 / 10,000cs	투명	10,000	321	1.403	21.5	0.61	
PMX-200 / 12,500cs	투명	12,500	321	1.403	21.5	0.61	
PMX-200 / 30,000cs	투명	30,000	321	1.403	21.5	0.61	
PMX-200 / 60,000cs	투명	60,000	321	1.403	21.5	0.61	
PMX-200 / 100,000cs	투명	100,000	321	1.403	21.5	0.61	

변성실리콘오일

FUNCTIONAL SILICONE FLUID



변성실리콘 오일은 실록산 주쇄에 다양한 형태의 유기그룹을 갖는 형태로 플라스틱 표면개질제 및 계면활성제, 분산제 등 일반 화학공정 및 제품의 첨가제로 사용되고 있습니다.



R / 특성 / 제품

Phenyl : 내열 / 내한성 DC550

Polyether : 수용성 OFX-0193

Hydrogen : 발수성, 반응성 MHX-1107

Alkyl Alkylaryl : 유기물 상용성, 내열성, 도장성 OFX-0203

Amino, Carbinol, Epoxy : 유기물 반응성 SF-8417, OFX-3667, SF-8419, BY16-201

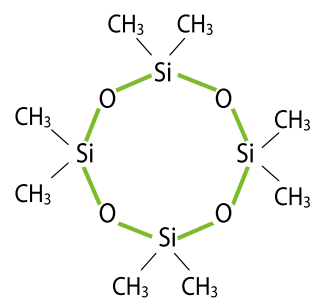
용도

열매체유, 섬유처리, 이형제, 습윤제, 광택제, 소포제, 유기물과의 합성, 발수제 등

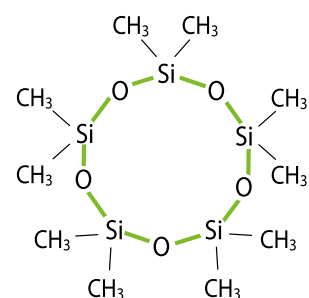
휘발성 실리콘 오일(D4, D5)

분류	제품명	외관	점도.cst @25℃	인화점.℃ Closed Cup	굴절율 @25℃	표면장력 mN/m/@25℃	끓는점 Deg.℃	용도 및 특성
Cyclic Fluid	PMX-0244	투명	2.4	55	1.394	17.8	172	휘발성 오일 (화장품)
	PMX-0245	투명	4	72	1.397	18	205	
	PMX-0344	투명	2.7	56	1.394	19	178	
	PMX-0345	투명	4.5	75	1.398	20.8	217	

PMX-0244



PMX-0245



제품군	제품명	물성치	특성 및 용도
Polyether	OFX-0190	HLB 6.6(EO/PO)	PEG/PPG-18/18Dimethicone, 화장품용, Acetoxy 말단
	OFX-0193	HLB 12.3(EO)	PEG-12dimethicone, 수용성 실리콘 계면활성제, PU정포제, 화장품용, Carbinol 말단
	OFX-0400	HLB 6.6(EO)	fiber finish, lubricant (water, alcohol분산가능)
	OFX-3667	HLB 9.2(EO)	PU, 에폭시, 페놀, SBR라텍스, 아크릴, 아크릴라텍스의 흐름성 및 내마모 증진
	OFX-5211	HLB 11.5(EO)	PU레벨링제, 실리콘계면활성제, 분산제, 김서림 방지, 농약 지속성 향상
Hydrogen	MHX-1107	20cst	1.4 ~ 1.75% SiH, 실리콘 발수제, Caking 방지
Hydroxy	PMX-0156	50~120cst	Silanol fluid (OH 함량 : 2.5%)
	PMX-0930	38~45cst	Silanol fluid (OH 함량 : 3.8~4.2%)
Alkyl aryl	OFX-0203	1200cst	Al diecasting, 재도장성(paintable), 내열성
Amino/ Amide	OFX-0536	40cst, 100% Solid	amino methoxy functional polydimethyl siloxane 광택성, 발수성, 내세탁성, 내구성, 차량광택제용
	OFX-8040	Nitrogen 0.4%	diamine type, 반응성, 저항변, 반발탄성
	OFX-8209	Nitrogen 0.6%	diamine type, 반응성, 유연성, 반발탄성
	OFX-8417	Nitrogen 0.9%	diamine type, 반응성, 유연성, 터치감 우수
	OFX-8505	Nitrogen 0.86%	흡습성 유연제
	OFX-8600	Nitrogen 0.65%	친수성 유연제, 저항변 및 세탁내구성 우수, 속내의, 타월적용
	OFX-8630	Nitrogen 0.37%	monoamine type, 반응성, 유연성, 반발탄성 우수
	OFX-8800	Nitrogen 0.25%	amide type, 알카리, 염, 음이온 등에 대한 안정성 우수
	OFX-8803	Nitrogen 0.12%	diamide type, 저항변, 유연성 및 미끄럼성 우수
Epoxy	OFX-8421	11000 (Epoxy)	반발탄성 우수
Phenyl	DC 510 DC 550 DC 710		열매체유, 고온안정성, 산화안정성, -40~315℃ 사용

실리콘소포제

ANTI-FOAMING AGENT

1)에멀전형

실리콘 오일 컴파운드를 유화한 제품으로 비이온 유화제를 사용하여 화학적으로 안정한 제품으로 소량의 첨가로 우수한 효과를 발휘하며 섬유, 합성 세제, 제지, 석유 화학의 공정용 및 각종 폐수처리용으로 다양한 수계 발포억에 응용.

2)컴파운드형

실리콘 오일 컴파운드로서 silicone oil에 silica가 배합된 제품으로100% 오일형으로 비수계에 적합하며 에멀전형 소포제를 만드는 원료로 이용.

3)오일형

Poly dimethyl siloxane으로 저점도에서 고점도에 이르는 넓은 범위의 제품이 구성되어 있으며 소포제로서는 일반적으로 100~1,000 mPa.s 사이의 점도가 주로 적용됨.

Product Applications

Product	Type	Application												
		Agro	Food Contact	Bio-ethanol Production	Chemical	Construction	Cosmetic	House hold	Oil and Gas	Paint/Coating/ink	Paper tissue	Pulp and Paper	Textile	Waste treatment plant
ACP-0100	Compound	●			●	●		●			●		●	
ACP-1400	Compound	●			●			●					●	
ACP-1500	Compound	●	●											
AFE-1510	Emulsion	●	●		●		●							●
AFE-1520	Emulsion	●	●	●	●		●							●
AFE-0700	Emulsion				●								●	
ACP-1266	Compound					●							●	
AFE-2210	Emulsion					●				●				●
AFE-0400	Emulsion					●							●	
AFE-7600	Emulsion					●								
AFE-1247	Emulsion					●								
AFE-0110	Emulsion							●	●			●	●	●
AFE-0310	Emulsion				●			●						
AFE-1410	Emulsion							●	●					
AFE-1430	Emulsion				●			●					●	
ACP-0544	Compound				●			●					●	
ACP-3425	Compound							●						
APW-4248	Powder							●						
FBL-1165	Dispersion								●					
ACP-3528	Compound											●		
ACP-3056	Compound											●		
AFE-3101	Emulsion											●	●	
AFE-7500	Emulsion											●		
AFE-0050	Emulsion												●	
ACP-3183	Compound												●	
AFE-0310	Emulsion												●	●
AFE-0800	Emulsion												●	

Product Properties

Product Name		Active Ingredients,%	Suitable Diluents	Application	Features / Benefits
A n t i f o a m E m u l s i o n	AFE-0010	10	Water	Distillation, boiler system	Easily dispersed
	AFE-0013	50	Water	Paint	No fish eyes, Improvement of the abrasion resistance film, improvement of flow in the paint
	AFE-0050	50	Water	jet dyeing, beck dyeing	Stable at high shear, stable across a wide Ph
	AFE-1110	10	Water	General-purpose antifoam	Quick knockdown, stable over a wide pH
	AFE-0120	20	Water	General-purpose antifoam	Quick knockdown
	AFE-0200	10	Cool Water	Cooling water process, fermentation, detergent, insecticide	Easily dispersed
	AFE-0300	30	Cool Water	Fermentation process, anifreeze system, ceramic manufacturing Beverage, jelly products, emulsion polymerization, water treatment	Easy to use FDA/Kosher/USDA compliance
	AFE-0310	30	Water	General-purpose antifoam	Quick knockdown
	AFE-0700	10	Water	Agrochemical, industrial cleaning, waste water treatment	Good dilution stability, good persistency, stable across a wide pH
	AFE-1010	10	Water	Distillation, boiler system, agrochemical	Easily dispersed, low viscosity
	AFE-1226	30	Water	Metal working fluid	Shear stability, heat stability, stable across a wide pH
	AFE-1247	30	Water	Metal working fluid	Small particle size, good dilution stability, long persistency
	AFE-1410	10	Water	General-purpose antifoam	Quick knockdown
	AFE-1430	30	Water	General-purpose antifoam	Quick knockdown
	AFE-1510	10	Water	Fermentation, beverage, agrochemical, waste treatment	Food-grade, effective in hot and cold system, and easy to use
A n t i f o a m C o m p o u n d	AFE-1520	20	Water	Fermentation, beverage, agrochemical, waste treatment	Food-grade, effective in hot and cold system, easy to use
	AFE-2210	10	Water	Waste water treatment, adhesive & glues, latexes	Good organic compatibility, foam control under high temperature and extreme pH
	AFE-3101	20	Water	Agrochemical, bottle filling	FDA/EPA compliance
	AFE-3150	50	Water	Waste water treatment, scouring & sizing for textile	Quick knockdown, usable over a wide pH
	AFE-3168	30	Water	Waste water treatment, scouring & dyeing for textile	Quick knockdown, usable over a wide pH
	ACP-0001	100	Aliphatic, aromatic, or chlorinated solvents	Distillation, asphalt manufacturing	Easy to use, economical
	ACP-0001 FG	100	Food-grade glycols	Agrochemical, rendering	Food-grade, FDA/Kosher/USDA compliance
	ACP-0080	100	Water	jet dyeing, metal working fluid	Stable across a wide PH, head stability, self-emulsification
	ACP-0544	100	Water	jet dyeing, detergent	self-emulsification, good shear and high temperature stability
	ACP-0100	100	Toluene, naphtha, kerosene	General-purpose antifoam	Quick knockdown, stable over a wide pH
	ACP-1400	100	Aliphatic, aromatic, or chlorinated solvents	General-purpose antifoam	Quick knockdown
	ACP-1500	100	Food-grade glycols, water	Food contact area, agrochemical	Food-grade, effective in hot and cold system, easy to use
	ACP-3183	100	Water	Metal working fluid, solvent wash, glycol processing	self-emulsification, dispersible in water & organic solvent
	ACP-0800	100	Water	Area where high temperature/pressure/shear is applied	Stable across a wide pH, heat stability
	ACP-1266	100	Water	Metal working fluid, scouring, desizing/sizing	Good persistency, easy to dilute

Product Name	Active Content, %	50 ppm Active, kg/1000 kg	Usable Life, months	Current Geographic Availability	Food Grade ¹	Effective at High Temperature (>95°C)	Performance After High-Temperature Aging (10 days @ 80°C)	Performance at High Shear (10 min @ 4500 rpm)	Performance at Low pH (pH < 3)	Performance After Low pH Aging (10 days @ pH < 3)	Performance at High pH (pH > 13)	Performance After High pH Aging (10 days @ pH > 13)	Persistency	Performance After 1% Active Predilution Aging (10 days @ pH7)	Knockdown	Suitable Diluent	1/10 Emulsion Predilution Stability (12 hr)	Dilution Stability After High Shear (10 min @ 4500 rpm)	Dilution Stability After High - Temperature Aging (10 days @ 80°C)	Dilution Stability After Low pH Aging (10 days @ pH < 3)	Dilution Stability After High pH Aging (10 days @ pH > 13)	Dilution Stability After 1% Active Predilution Aging (10 days @ pH7)	Deposition Risk (1 hr @ 80°C)
Emulsions																							
AFE-0010 Antifoam Emulsion FG	10	0.5	36	All regions outside Europe	Y	Y	NE	NE	Y	NE	N	NE	L	NE	H	Demineralized water	L	NE	NE	NE	NE	NE	NE
AFE-0110 Antifoam Emulsion	10	0.5	12	Europe	N	Y	NE	NE	Y	NE	Y	NE	L	NE	M	Demineralized water	M	NE	NE	NE	NE	NE	NE
AFE-0200 Antifoam Emulsion	10	0.5	24	Global	N	Y	NE	NE	Y	NE	N	NE	L	NE	H	Demineralized water	M	NE	NE	NE	NE	NE	NE
AFE-0400 Antifoam Emulsion	10	0.5	18	All regions outside Americas	N	Y	T	N	Y	Y	Y	Y	L	Y	H	Demineralized water	H	L	M	M	L	L	L
AFE-0700 Antifoam Emulsion	10	0.5	15	Global	N	Y	Y	Y	Y	Y	Y	T	H	Y	M	Demineralized water	H	L	M	L	M	H	M
AFE-1010 Antifoam Emulsion	10	0.5	36	All regions outside Europe	N	Y	Y	N	Y	Y	N	N	L	Y	H	Demineralized water	L	L	L	L	L	L	L
AFE-1410 Antifoam Emulsion	10	0.5	12	All regions outside Europe	N	Y	NE	NE	Y	NE	Y	NE	L	NE	M	Demineralized water	L	NE	NE	NE	NE	NE	NE
AFE-1510 Antifoam Emulsion	10	0.5	24	Global	Y	Y	NE	N	Y	NE	Y	NE	L	NE	H	Demineralized water	L	NE	NE	NE	NE	NE	NE
AFE-2010 Antifoam Emulsion	10	0.5	12	All regions outside Americas	N	Y	Y	N	Y	N	Y	T	L	Y	H	Demineralized water	M	L	M	M	M	M	L
AFE-0020 Antifoam Emulsion	20	0.25	12	All regions outside Americas	N	Y	N	T	Y	Y	Y	Y	H	Y	H	Demineralized water	NE	M	M	M	L	M	H
AFE-1226 Antifoam Emulsion	20	0.05	8	Global	N	Y	NE	NE	Y	NE	Y	NE	L	NE	H	Demineralized water	H	NE	NE	NE	NE	NE	NE
AFE-1520 Antifoam Emulsion	20	0.25	24	Global	Y	Y	T	N	Y	Y	Y	N	L	Y	H	Demineralized water	M	M	L	L	L	L	L
AFE-3101 Antifoam Emulsion	20	0.25	12	Global	N	Y	N	T	Y	Y	Y	Y	H	Y	H	Demineralized water	NE	M	M	M	L	M	H
AFE-0600 Antifoam Emulsion	28	0.18	12	Asia	N	Y	Y	T	Y	Y	Y	T	L	Y	H	Demineralized water	M	H	M	M	M	M	L
AFE-0030 Antifoam Emulsion	30	0.17	12	Global	N	Y	NE	NE	Y	NE	N	NE	L	NE	M	Demineralized water	L	NE	NE	NE	NE	NE	NE
AFE-0100 AF Emulsion FG	30	0.17	18	Global	Y	Y	NE	NE	Y	NE	N	NE	L	NE	H	Demineralized water	L	NE	NE	NE	NE	NE	NE

Key: NE – Not evaluated; T – Top (improved performance); Y – Yes (limited or no loss of performance); N – No (loss of performance); H – High; M – Medium; L – Low.
*Please refer to "XIAMETER® brand Silicones for Foam Control in the Food Processing Industry," Form No. 95-1082.

Product Name	Active Content, %	50 ppm Active, kg/1000 kg	Usable Life, months	Current Geographic Availability	Food Grade ¹	Effective at High Temperature (>95°C)	Performance After High-Temperature Aging (10 days @ 80°C)	Performance at High Shear (10 min @ 4500 rpm)	Performance at Low pH (pH < 3)	Performance After Low pH Aging (10 days @ pH < 3)	Performance at High pH (pH > 13)	Performance After High pH Aging (10 days @ pH > 13)	Persistency	Performance After 1% Active Predilution Aging (10 days @ pH7)	Knockdown	Suitable Diluent	1/10 Emulsion Predilution Stability (12 hr)	Dilution Stability After High Shear (10 min @ 4500 rpm)	Dilution Stability After High - Temperature Aging (10 days @ 80°C)	Dilution Stability After Low pH Aging (10 days @ pH < 3)	Dilution Stability After High pH Aging (10 days @ pH > 13)	Dilution Stability After 1% Active Predilution Aging (10 days @ pH7)	Deposition Risk (1 hr @ 80°C)
AFE-0310 Antifoam Emulsion	30	0.17	12	Europe	N	Y	T	N	Y	Y	Y	Y	L	Y	M	Demineralized water	M	M	L	M	L	M	M
AFE-1247 Antifoam Emulsion	30	0.17	6	All regions outside U.S.	N	Y	NE	NE	Y	NE	Y	NE	L	NE	L	Demineralized water	H	NE	NE	NE	NE	NE	NE
AFE-1430 Antifoam Emulsion	30	0.17	12	All areas outside Europe	N	Y	NE	NE	Y	NE	Y	NE	L	NE	M	Demineralized water	M	NE	NE	NE	NE	NE	NE
AFE-3168	30	0.17	12	Global	N	Y	NE	NE	Y	NE	Y	NE	NE	NE	NE	Demineralized water	M	NE	NE	NE	NE	NE	NE
AFE-0013	50	0.1	12	Asia	N	Y	NE	NE	Y	NE	Y	NE	L	NE	L	Demineralized water	M	NE	NE	NE	NE	NE	NE
AFE-0050 Antifoam Emulsion	50	0.1	18	Global	N	Y	Y	Y	Y	Y	Y	Y	H	Y	H	Demineralized water	L	H	L	L	L	L	H
AFE-7500 Antifoam Emulsion	50	0.1	12	Global	N	Y	Y	N	Y	Y	Y	T	H	Y	H	Demineralized water	NE	L	M	M	M	M	H
AFE-7600 Antifoam Emulsion	50	0.1	12	All regions outside Americas	N	Y	Y	Y	Y	Y	Y	T	H	Y	H	Demineralized water	NE	M	M	M	M	M	H
AFE-3034 Antifoam Emulsion	50	0.1	18	All regions outside Americas	N	Y	T	NE	Y	N	Y	N	L	N	L	Demineralized water	L	H	L	M	M	M	L
Compounds																							
ACP-0080 Antifoam Compound	100	0.05	8	Global	N	Y	N	T	Y	N	Y	T	L	N	M	Demineralized water	H	H	L	L	L	H	L
ACP-0100 Antifoam Compound	100	0.05	12	Europe	N	Y	NE	NE	Y	NE	Y	NE	L	NE	M	Aliphatic or Aromatic solvents	H	NE	NE	NE	NE	NE	NE
ACP-0544 Antifoam Compound	100	0.05	12	Global	N	Y	NE	NE	Y	NE	Y	NE	L	NE	L	Demineralized water	L	NE	NE	NE	NE	NE	NE
ACP-1000 Antifoam Compound	100	0.05	24	Global	N	Y	NE	NE	Y	NE	Y	NE	L	NE	H	Aliphatic solvents	H	NE	NE	NE	NE	NE	NE
ACP-1266 Antifoam Compound	100	0.25	8	Global	N	Y	Y	T	Y	Y	Y	Y	H	Y	M	Demineralized water	NE	H	L	M	L	L	L
ACP-1400 Antifoam Compound	100	0.05	36	All regions outside Europe	N	Y	NE	NE	Y	NE	Y	NE	L	NE	M	Aliphatic or Aromatic solvents	H	NE	NE	NE	NE	NE	NE
ACP-1500 Antifoam Compound	100	0.05	36	Global	Y	Y	NE	NE	Y	NE	Y	NE	L	NE	H	Food grade glycols	L	NE	NE	NE	NE	NE	NE
ACP-3183 Antifoam Compound	100	0.05	12	Global	N	Y	NE	NE	Y	NE	N	NE	L	NE	H	Demineralized water	L	NE	NE	NE	NE	NE	NE
Powders																							
ACP-1920 Powdered Antifoam	20	0.25	36	Global	Y	Y	NE	NE	Y	NE	Y	NE	L	NE	H	Aliphatic solvents, Demineralized water, food grade glycols	L	NE	NE	NE	NE	NE	NE

실리콘 이형제
SILICONE RELEASE AGENT



실리콘은 플라스틱, 고무, 우레탄, 알루미늄, 에폭시, 접착제, 아스팔트 각종 유기 및 무기물 가공 시 압축기, 금형 등의 신속한 작업성과 청결성을 유지시켜 줌으로써 전체적인 생산성을 증가시킵니다. 또한 최종사용 목적에 쉽게 적용할 수 있고 편리하게 사용할 수 있도록 오일형, 수용성에 멀전, 용매에 녹인 용액형 등 다양한 형태로 공급되고 있습니다.

Product Applications

Product	Plastics	Shell Core	Rubber	Yarn/Thread Lubrication	Fiberglass	Asphalt	Metals	Spray Starch	Adhesives	Concrete	Glass	Wood	Web Release
Aqueous Products													
MEM-0039 Emulsion	●●		●●	●●									
MEM-0036 Emulsion	●●		●●	●●									
MEM-0049 Emulsion	●●		●●	●●									
MEM-0046 Emulsion	●●		●●	●●									
MEM-0347G Emulsion	●	●●				●	●						
MEM-0008 Emulsion	●	●●	●										
MEM-0037 Emulsion	●	●●	●				●						
MEM-1716 Emulsion						●●		●●					
MEM-1101 Emulsion	●		●	●●	●●		●	●●		●			
MEM-5009 Emulsion	●		●				●			●●		●●	
MEM-0062 Emulsion PS													●●
MEM-1450 Emulsion	●●		●●				●			●●		●●	
MEM-3422 Emulsion	●●												
Non-Aqueous Products													
PMX-200 Silicone Fluid	●●	●	●●	●●	●								
OFX-0203 Fluid	●		●			●●							
OFX-0204 Fluid	●		●			●							
OFX-0230 Fluid	●●		●										

이형제의 요구 조건

- 이형시키고자 하는 물질과 비반응성
- 낮은 표면 장력
- 고온 안정성

이형제 제품의 형태

- 실리콘 오일형(유성형)
- 실리콘 에멀전(수성형)
물과 오일이 안정하게 분산되어 있는 혼합물

실리콘 이형제의 장점

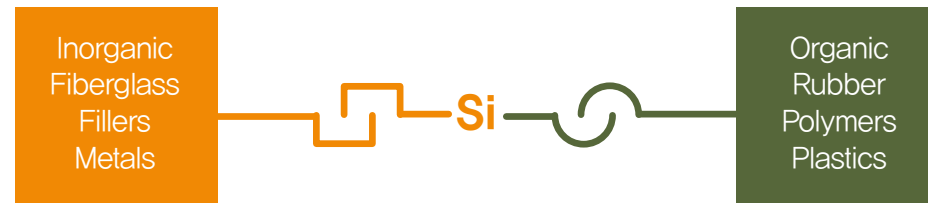
- 낮은 표면 장력(wetting 우수)
- 비독성, 환경 친화적(인체에 무해)
- 고온 안정성
- 적은 양으로도 이형성 우수
- 산화 안정성

Product Properties

Product	%Active	Emulsifier Type	Active ingredient	Suitable Diluent
Aqueous Products				
MEM-0039 Emulsion	35	Non-ionic	PDMS, Medium Viscosity	Water
MEM-0349 Emulsion	60	Non-ionic	PDMS, Medium Viscosity	Water
MEM-0347G Emulsion	60	Non-ionic	Silanol Functional PDMS	Water
MEM-0008 Emulsion	35	Non-ionic	PDMS, MEDIUM Viscosity	Water
MEM-0037 Emulsion	35	Non-ionic	PDMS, High Viscosity	Water
MEM-1716 Emulsion	30	Cationic	PDMS, High Viscosity	Water
MEM-1101 Emulsion	54	Anionic	Silanol-PDMS, High Viscosity	Water
MEM-5009 Emulsion	49	Non-ionic	Alkylarylpolysiloxane	Water
MEM-0062 Emulsion PS	55	Non-ionic	PDMS, MEDIUM Viscosity	Water
MEM-1450 Emulsion	50	Non-ionic	Alkylarylpolysiloxane	Water
MEM-1455 Emulsion	55	Non-ionic	Alkylarylpolysiloxane	Water
MEM-3422 Emulsion	50	Non-ionic	Resin, Silicone Fluid	Water
MEM-3346 Emulsion	60	Non-ionic	PDMS, Medium Viscosity	Water
Non-Aqueous Products				
PMX-200 Silicone Fluid	100	N/A	PDMS	Solvents, PDMS, VMS
OFX-0203 Fluid	100	N/A	Alkylarylpolysiloxane	Solvents
OFX-0204 Fluid	100	N/A	Alkylarylpolysiloxane	Solvents
OFX-0230 Fluid	100	N/A	Alkylarylpolysiloxane	Solvents

실란 SILANE

The silane coupling mechanism.



기본화학구조



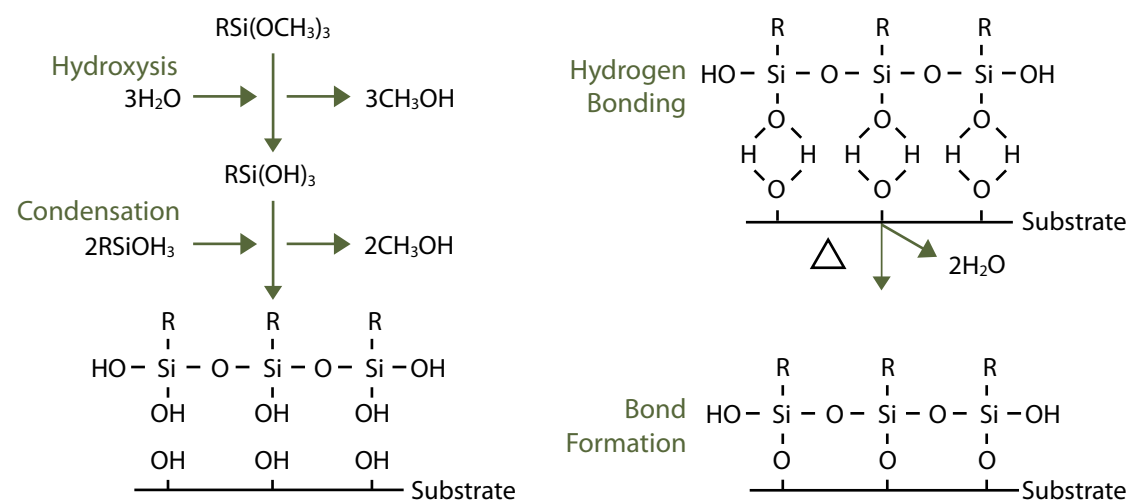
X : 가수분해기(Hydrolysis group)
 CH_3-O- 메톡시(Methoxy)
 C_2H_5-O- 에톡시(Ethoxy)
 $CH_3O-C_2H_4-O-2-$ 메톡시에톡시

Me : 메틸기(Methyl group)

R : 에틸렌, 프로필렌기

Y : 유기관능기(Organofunctional group)
 $-NH_2$ 아미노(Amino)
 $-CH=CH_2$ 비닐(Vinyl)
 $-OOC(CH_3)C=CH_2$ 메타아크릴(Methacryl)
 $-N=C=O$ 이소시아네이트(Isocyanate)
 $-SH$ 메르kap토(Mercapto)
 $-NHCONH_2$ 우레이드(Ureide)
 $-C_2O$ 에폭시(Epoxy)

Alkoxy silane Reaction



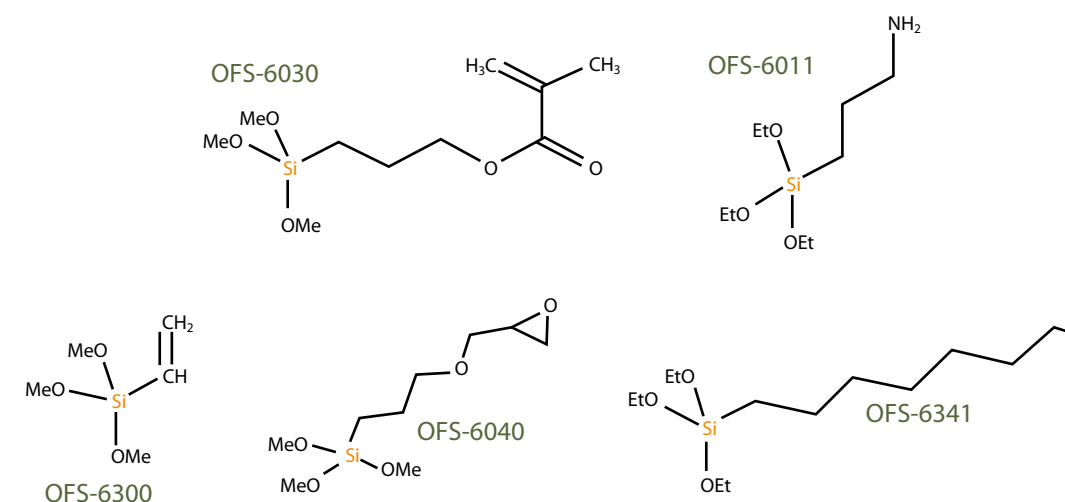
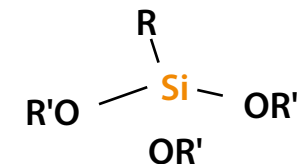
유지수지에 따른 실란 제품 추천표

Recommended XIAMETER® Silanes by Polymer			
Polymer	XIAMETER® Product	Polymer	XIAMETER® Product
Polyester	OFS-6030, OFS-6300, OFS-6518	Polycarbonate(PC)	OFS-6011, OFS-6020
Acrylate	OFS-6030, OFS-6300, OFS-6518	Polyetherketone(PEK)	OFS-6011, OFS-6020
Vinylester	OFS-6030, OFS-6300, OFS-6518	Polyethylene(PE)	OFS-6300, OFS-6518, OFS-6030, OFS-6011, OFS-6020
Diallylphthalate	OFS-6030, OFS-6300, OFS-6518, OFS-6011, OFS-6020	EVA	OFS-6011, OFS-6020, OFS-6300, OFS-6518
Epoxy	OFS-6040, OFS-6011, OFS-6020, OFS-6032	(PPO)	OFS-6011, OFS-6020
Urethane	OFS-6011, OFS-6020, OFS-6040	PPS	OFS-6011, OFS-6020
Phenolic	OFS-6011, OFS-6020, OFS-6040	PP	OFS-6011, OFS-6020, OFS-6300, OFS-6518, OFS-6030
Furane	OFS-6011, OFS-6020	Polysulphone	OFS-6040, OFS-6300, OFS-6518, OFS-6030
Melamine	OFS-6011, OFS-6020, OFS-6040	Polyvinylbutyral(PVB)	OFS-6011, OFS-6020
Imide	OFS-6011, OFS-6020	PS	OFS-6040, OFS-6300, OFS-6518, OFS-6030
ABS	OFS-6040, OFS-6030	PVAC	OFS-6011, OFS-6020, OFS-6040
Polyamide	OFS-6011, OFS-6020	PVC	OFS-6011, OFS-6020, OFS-6076, OFS-6376
PBT	OFS-6040, OFS-6011, OFS-6020	Polysulfide	OFS-6040
		EPDM	OFS-6940, OFS-6300, OFS-6518, OFS-6040
		Butyl rubber	OFS-6030, OFS-6040
		SBR(S-cured rubbers)	OFS-6940, OFS-6945, OFS-6920, OFS-6925
		Neoprene	OFS-6911

Silane coupling agent variations – basic structure.

Basic Structure

R = alkyl, aryl, or organo functional group
OR' = methoxy, ethoxy, or acetoxy



Silanes Selection Guide

Product	Organic Reactivity or Alkyl Type	Inorganic (Alkoxy) Reactivity	Chemical Name	Formula	Uses	Benefits	Market	Resin System Compatibility	Percent Actives	Molecular Weight
OFS-1579	Methyl and Ethyl	Acetoxy	Methyl and ethyl triacetoxysilane	AFS	Crosslinking		Adhesives and sealants			
OFS-2306	i-Butyl	Methoxy	i-Butyltrimethoxysilane	$((CH_3)_3C-Si(OCH_3)_3)$	Hydrophobing:filler dispersion	Hydrophobing surfaces and particles: Improving dispersion of minerals in organic materials	Fiberglass, rubber insulation:mineral fillers		96%	178
OFS-6020	Amino	Methoxy	Aminoethylaminopropyl trimethoxysilane	$H_2NC_2H_4NHC_3H_6-Si(OCH_3)_3$	Coupling:adhesion promotion:crosslinking	Improved adhesion of organic polymer to inorganic substrate or filler:Improved wet and dry physical properties of composite: Improved mixing and compatibility of filled systems	Fiberglass: plastic: resin fillers: coatings: adhesives: sealants: foundry: rubber	Acrylic: nylon: epoxy: phenolic: PVC: urethane:	100%	222
OFS-6030	Methacryl	Methoxy	Methacryloxypropyl trimethoxysilane	$H_2C=CH(CH_3)C(O)OC_3H_6-Si(OCH_3)_3$	Coupling:adhesion promotion	Improved adhesion of organic polymer to inorganic substrate or filler: Improved wet and dry physical properties of composite: Improved mixing and compatibility of filled systems	Fiberglass:glass fabric for printed circuit boards:filler treatment	Unsaturated polyester:acrylic: EVA:polyolefin	98%	249
OFS-6040	Epoxy	Methoxy	Glycidoxypropyltrimethoxy Silane	$CH_2(O)CHCH_2OC_3H_6-Si(OCH_3)_3$ promotion	Couplings:adhesion	Improved adhesion of organic polymer to inorganic substrate or filler: Improved wet and dry physical properties of composite: Improved mixing and compatibility of filled systems	Fiberglass: filler treatment	Epoxy: PBT: urethane:acrylic: polysulphide	98.5%	34
OFS-6070	Methyl	Methoxy	MethyltriMethoxy Silane	$CH_3-Si(OCH_3)_3$	Hydrophobing	Improved hydrophobicity of fillers and fibers: Improved filler/fiber dispersibility in organic polymers	Fiberglass: filler treatment	-	95%	136
OFS-6076	Chloro	Methoxy	Chloropropyltrimethoxy Silane	$ClC_3H_6-Si(OCH_3)_3$	-	-	-	Epoxy: urethane: phenolic: PEEK: polyester	97%	198.5
OFS-6079	Trimethylsilyl	Amino	Hexamethyldisilazane	$(Me_3Si)_2NH$	Silylating agent: hydrophobing	-	-	-	96%	161
OFS-6106	Epoxy	Amino	Mixture of Glycidoxypropyl trimethoxysilane (OFS-6040)		Coupling:adhesion promotion	Improved adhesion of organic polymer to inorganic substrate or filler: Improved wet and dry physical properties of composite: Improved mixing and compatibility of filled systems	Fiberglass filler treatment	Graft to polyethylene for moisture crosslinking: EPBM:SBR:polyolefin	100%	-
OFS-6124	Phenyl	Methoxy	Phenyltrimethoxysilane	$(C_6H_5-Si(OCH_3)_3)$	Improve silane thermal stability	Improve thermal stability of silane mixture	Fiberglass:fillers	-	94%	198
OFS-6300	Vinyl	Methoxy	VinyltriMethOxySilane	$H_2C=CHSi(OCH_3)_3$	Coupling:adhesion promotion: polymer modification: crosslinking: water scavenging	Improved adhesion of organic polymer to inorganic substrate or filler: Improved wet and dry physical properties of composite: Improved mixing and compatibility of filled systems	Fiberglass:filler treatment: rubber: plastics: sealants	Graft to polyethylene for moisture crosslinking: EPNM:SBR:polyolefin	99%	148
OFS-6366	Methyl	Methoxy	Methyltrimethoxysilane		Hydrophobing		-	-	99.5%	136
OFS-6370	Methyl	Ethoxy	Methyltriethoxysilane		Hydrophobing	Improved hydrophobicity of fillers and fibers:	-	-	97%	178
OFS-6518	Vinyl	Ethoxy	VinylTriEthOxySilane	$(H_2C=CH-Si(OC_2H_5)_3)$	Coupling:adhesion promotion: polymer modification:crosslinking: water scavenging	Improved adhesion of organic polymer to inorganic substrate or filler: Improved wet and dry physical properties of glassfiber-filled composite: Improved mixing and compatibility of filled systems	Fiberglass: filler treatment: rubber:plastics:sealants	Graft to polyethylene for moisture crosslinking: EPBM:SBR:polyolefin	95%	190
OFS-6697	None	Ethoxy	TetraEthOxySilane	$Si(OC_2H_5)_4$	Polymerization of silicone resins for use in paints and other surface modification applications:intermediate for sol-gel process	Pure grade:inorganic binder:UV stable: can be used as a crosslinker: used for sol-gel processes in combination with other alkylsilanes	-	-	99%	208
OFS-6920	Sulfido	Ethoxy	Bis-TriEthoxySilylPropyl DisulfidoSilane		Coupling:adhesion promotion	Improved properties of silica-filled tire rubber: Improved processability versus XIAMETER OFS-6940 Silane	Tire:filler treatment	Organic rubber	100%	474
OFS-6925	Sulfido	Ethoxy			Coupling:adhesion promotion	Improved properties of silica-filled tire rubber: Improved processability versus XIAMETER OFS-6940 Silane	Tire:filler treatment	Organic rubber	50%	474
OFS-6940	Sulfido	Ethoxy	Bis-TriEthoxySilylPropyl DisulfidoSilane		Coupling:adhesion promotion	Improved properties of silica-filled tire rubber	Tire:filler treatment	Organic rubber	100%	538
OFS-6945	Sulfido	Ethoxy	Bis-TriEthoxySilylPropyl DisulfidoSilane		Coupling:adhesion promotion	Improved properties of silica-filled tire rubber: dry powder for easier handling	Tire:filler treatment	Organic rubber	50%	538

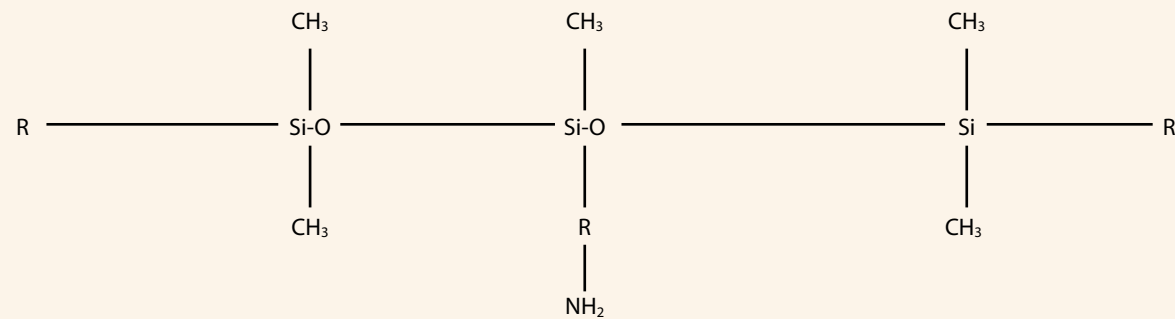
Water Repellent Silicones

Product	General Description	Dilution System	Chemical Name	Formula	chemistry	Uses	Typical Actives Usage Level,%	VOC(g/L)
OFS-6341	Silane	Solvent	n-Octyltriethoxy-silane	$(n\text{OTES}, C_8H_{17}-Si(OC_2H_5)_3)$	Alkyl ethoxysilane	Alkaline substrates such as new concrete(ph 12-14)	40 or 100	329
OFS-0772	Siliconate	Water	Sodium methyl siliwate		Sodium methyl siliconate	Neutral, bricks, ceramics (pH neutral to 10)	0.5 to 3	71
OFS-6778		Water	Potassium methyl siliconate		Potassium methyl siliconate	Neutral, bricks, ceramics (pH neutral to 10)	0.5 to 3	44

섬유용 실리콘

SILICONE POLYMERS FOR FABRIC FINISHING

Silicone Polymers for Fabric Finishing



특성

- 산성 조건에서 NH_3^+ 의 역할로 천에 우수한 유연성 및 내세탁성 부여
- 마이크로 에멀전화 되어 섬유 표면에 고르게 분산됨

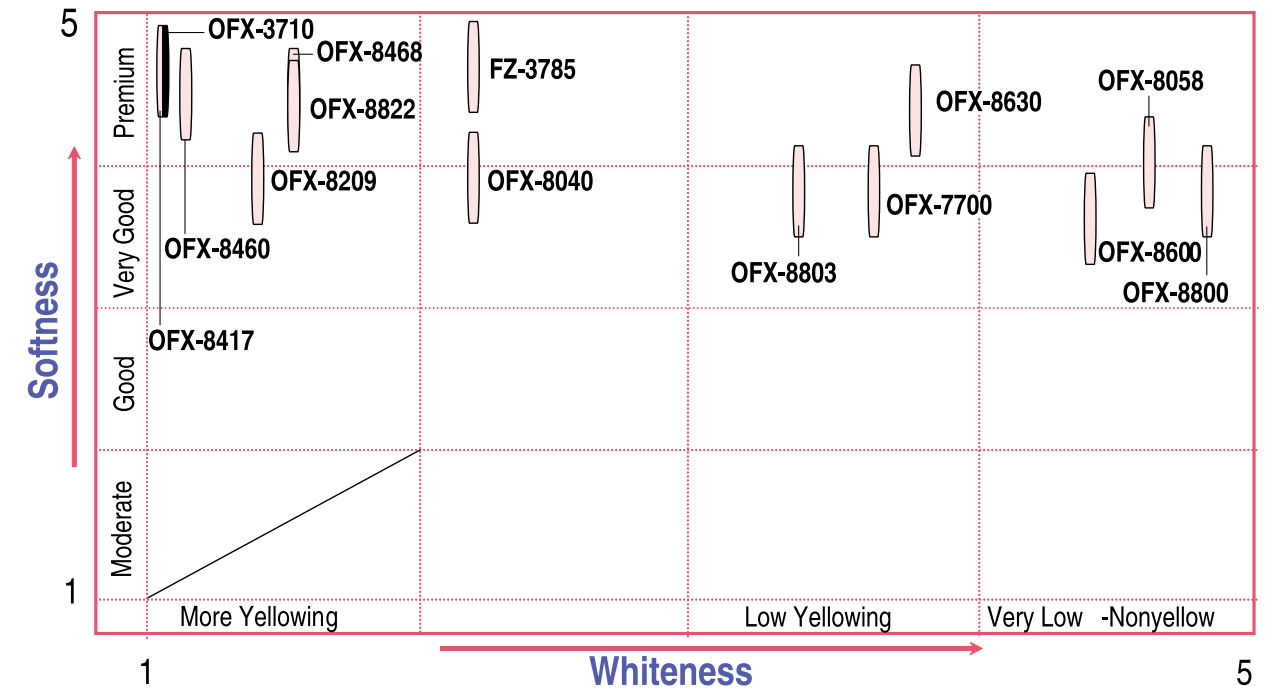
적용분야

- 유연성을 요하는 모든 종류의 섬유용제품
- 주로 Chemical을 많이 처리하여 촉감이 나빠진 Fabric에 유연성을 부여하기 위해 사용
- 황변 정도에 따라 아미노 유연제의 종류를 선택

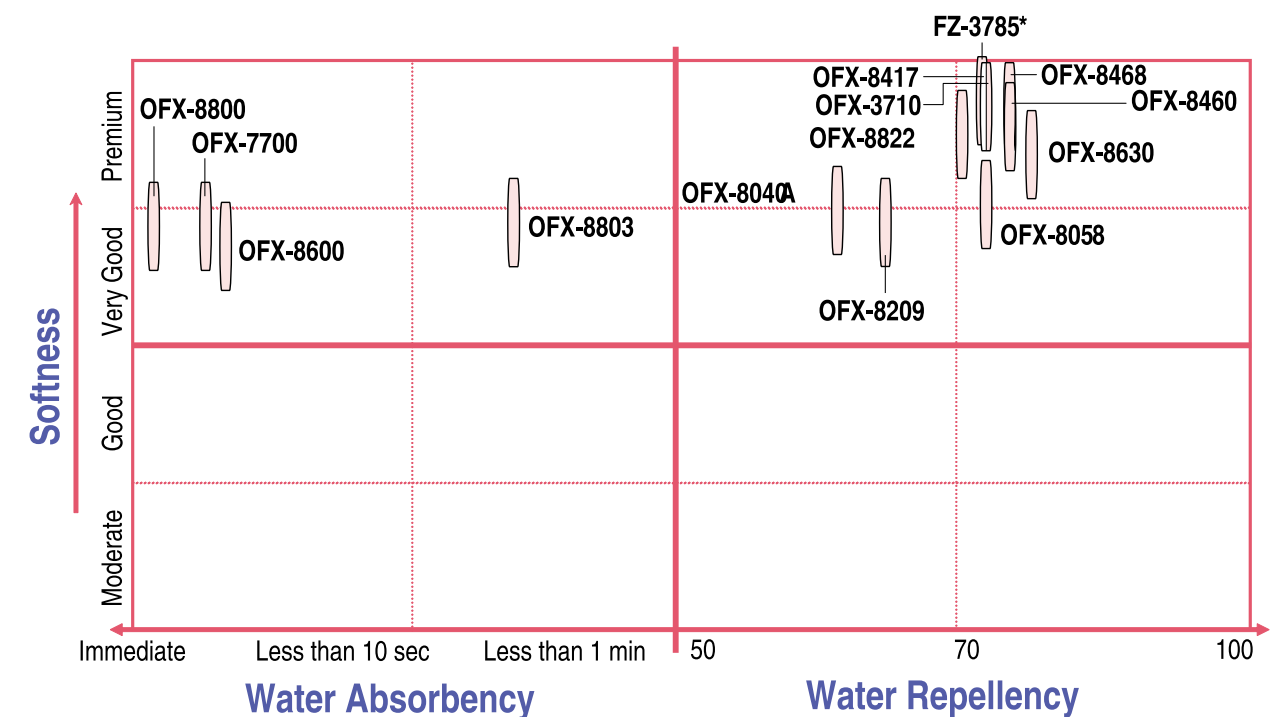
Product Properties and Application

Product	Nitrogen %	Viscosity.cSt	End Capping	Type of Emulsion That Can be Formulated	Typical Application Methods
OFX-8803	0.3	3,000~8,000	RO	Microemulsion	Padding or exhaustion
OFX-8058 Polymer	0.18	3,000~5,000	OR & OH	Micro-or macroemulsion	Padding or exhaustion
OFX-7700 Self Emulsifying Softener	0.27	1,500~4,500	ME	Micro-or macroemulsion	Padding or exhaustion
OFX-8800 Premium Hydrophilic Softener	N/A	1,500	R	Microemulsion	Padding or exhaustion
OFX-8417	0.9	1,200	ME	Micro-or macroemulsion	Padding or exhaustion
OFX-8468Polymer	0.6	5,000~15,000	ME	Micro-or macroemulsion	Padding or exhaustion
OFX-8460Polymer	0.83	1,500	ME	Micro-or macroemulsion	Padding or exhaustion
OFX-8630	0.37	1,500	RO	Micro-or macroemulsion	Padding or exhaustion
OFX-8822	0.65	1,500	RO	Micro-or macroemulsion	Padding or exhaustion
OFX-3785	0.25	4,000	ME	Micro-or macroemulsion	Padding or exhaustion
OFX-3710	0.9	1,000	ME	Micro-or macroemulsion	Padding or exhaustion
OFX-8209	0.6	500	RO	Micro-or macroemulsion	Padding or exhaustion
OFX-8040	0.4	3,500	RO	Micro-or macroemulsion	Padding or exhaustion
OFX-8600 Hydrophilic Softener	0.65	2,500	RO	Microemulsion	Padding or exhaustion

Selection 1. Softness vs. Whiteness



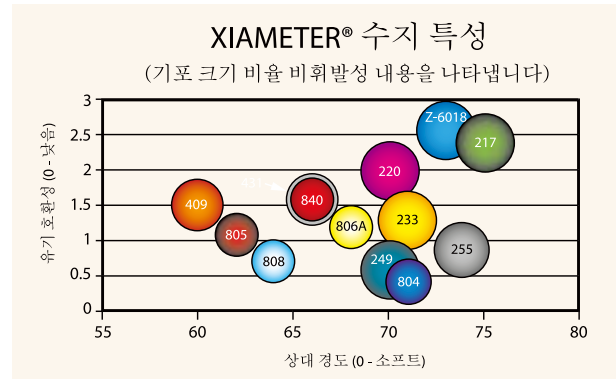
Selection 2. Softness vs. Water Absorbency/Repellency



실리콘 수지

SILICONE RESIN & INTERMEDIATE

XIAMETER® 브랜드 실리콘 수지와 수지 중간체는 극한의 온도, 습기, 부식, 전기 방전 및 내구성에 강합니다. 이 제품들은 많은 종류의 유기수지와 상용성이 있기 때문에, 다양한조합을 통해서 원하시는 특정한 용도와 도막물성에 맞도록 배합 될 수 있습니다.



	액상 수지						
XIAMETER® 브랜드 제품	RSN-0409 HS Resin	RSN-0431 HS Resin	RSN-0804 Resin	RSN-0805 Resin	RSN-0806 Resin	RSN-0808 Resin	RSN-0840 Resin
특성							
제품형태	용제 함유 용액	용제 함유 용액	용제 함유 용액	용제 함유 용액	용제 함유 용액	용제 함유 용액	용제 함유 용액
반응기	Silanol	Silanol	Silanol	Silanol	Silanol	Silanol	Silanol
SiO2함량, wt%	52	52	64	52	52	57	52
Silanol함량, wt%	1	3	3	1	1	1	3
가교도, %	60	66	68	60	66	63	66
페닐/메틸 비율	1.1/1	1.2/1	0.4/1	1.1/1	1.2/1	0.7/1	1.2/1
평균 분자량	2000 - 7000	2000 - 7000	2000 - 7000	200,000 - 300,000	200,000 - 300,000	200,000 - 300,000	2000 - 7000
일반물성							
고형분함량, 1.5g, 3h, 135C							
Wt%	80	80	60	50	50	50	60
Volume%	74	74	51	42	41	42	51
함유 용제	Xylene	Toluene	Toluene	Xylene	Toluene/Xylene	Xylene	Toluene
비중	1.12	1.14	1.07	1.01	1.02	1.01	1.06
VOC함량, g/L	228 (1.9)	228 (1.9)	431 (3.6)	503 (4.2)	515 (4.3)	503 (4.2)	431 (3.6)
점도(cenipoises)	200	800	30	125	150	125	20
인화점(Closed Cup), C	27 (81)	7 (45)	7 (45)	27 (81)	7 (45)	27 (81)	7 (45)

	고상 수지				수지 중간체			
XIAMETER® 브랜드 제품	RSN-0217 Flake Resin	RSN-0220 Flake Resin	RSN-0233 Flake Resin	RSN-0249 Flake Resin	RSN-6018 Intermediate	RSN-3037 Intermediate	RSN-3074 Intermediate	RSN-5314 Intermediate
특성								
제품형태	편상고체	편상고체	편상고체	편상고체	편상고체	액체	액체	액체
반응기	Silanol	Silanol	Silanol	Silanol	Silanol	Methoxy	Methoxy	Methoxy
SiO2함량, wt%	47	52	52	63	51	65	54	46
Silanol함량, wt%	6	1	5	5	6	15-18 ¹	15-18 ¹	35 ¹
가교도, %	75	70	71	71	75	58	67	68
페닐/메틸 비율	-	2.0/1	1.3/1	0.6/1	2.7/17	0.5/1 ²	1.0/1	3.3/1
평균 분자량	1500 - 2500	2000 - 4000	2000 - 4000	2000 - 4000	1500 - 2500	800 - 1300	1000 - 1500	모노머 혼합물
일반물성								
고형분함량(1.5g, 3h, 135C)								
Wt%	100	100	100	100	100	90	90	100(유효성분)
비중	1.34	1.33	1.32	1.30	1.31	1.07	1.16	1.04
점도(cenipoises)	-	-	-	-	-	14	120	1.87
인화점(Closed Cup), C	138	138	138	138	138	138	138	28

¹ Methoxy함량 ² Propyl

첨가제

ADDITIVE SELECTION GUIDE

Benefit ▶	Slip	Mar Resistance	Foam Control	Adhesion Promotion	Pigment Treatment	Water Resistance	Leveling	Gloss	Texturing (mating and/or tactile effects)	Wetting Agents
System/Resin										
Waterborne (general recommendations; resin-specific proven examples listed below)	51, 52, 57	51, 14, 52	62, 65, 6, 68	Z-6121, OFS-6020 ⁺ , OFS-6040 ⁺ , OFS-6011 ⁺	57, OFS-6020 ⁺ , OFS-6040 ⁺ , OFS-6011 ⁺	84, 85, 87, 88	14, 57, 401LS, 402LS, OFX-0193 ^{+,3}	51, 52, 57	33	67, 500W, 501W, 502W
Acrylic	401LS, 402LS, 205SL	51, 52	62, 65, 6, 68	Z-6121, OFS-6011 ⁺ , OFS-6020 ⁺ , OFS-6040 ⁺	57, OFS-6040 ⁺	51, 85, 84, 87, 88	57, 401LS, 402LS	51, 52, 57	33, 205SL	67, 500W, 501W, 502W
Alkyd	57, 14	57, 51	65	OFS-6020 ⁺ , OFS-6040 ⁺			OFX-0193 ^{+,3} , 57			67
Epoxy	51, 57	18, 51	65	Z-6121, OFS-6011 ⁺ , OFS-6020 ⁺ , OFS-6040 ⁺	57		14, 57			
Polyester	51, 54, 205SL	18, 54	65, 163	OFS-6040 ⁺	57		14, 57			67
Polyurethane	14, 51, 52, 401LS, 402LS	51, 52, 14	65, 163, 68	OFS-6020 ⁺ , OFS-6040 ⁺	57		57	57, 52	33, 205SL	67, 500W, 501W, 502W
Vinyl	14, 51	51, 14	65, 163				57			
Solventborne (general recommendations; resin-specific proven examples listed below)	14, 11	57, 11	7, 100F, 163	Z-6121, OFS-6011 ⁺ , OFS-6040 ⁺	3, 57, OFS-6040 ⁺	88	3, 11, 14, 29, 57, 54, 56, OFX-0190 ^{+,2} , 401LS, 205SL	29	23N	57
Acrylic	11, 14	11, 57	7, 100F, 163	Z-6121, OFS-6011 ⁺ , OFS-6040 ⁺ , OFS-6020 ⁺	3, 57, OFS-6040 ⁺	88	3, 57, 54		23N	57
Alkyd	14, 11	11, 56	7, 56, 100F	Z-6121, OFS-6040 ⁺	3, OFS-6040 ⁺		3, 56			
Amide	11	11	7	OFS-6011 ⁺ , OFS-6040 ⁺	3, 57		57			57
Epoxy	11, 14	57, 11	7, 163	Z-6121, OFS-6020 ⁺ , OFS-6040 ⁺	57, 3, OFS-6020 ⁺		11, 57			57
Nitrocellulose	14, 11	11					56, 11	29		
Phenolic	14	14			57		57			
Polyester	14, 11, 205SL	11, 14	7	Z-6121, Z-6137, OFS-6040 ⁺	57, 3		57, 29	29, 57		
Polyurethane	11, 57, 401LS, 205SL	11, 54	7, 163	OFS-6030 ⁺ , OFS-6040 ⁺ , OFS-6020 ⁺	57		11, 28, 29, 57, 401LS, 205SL		23N, 205SL	
Vinyl	14, 11	14, 11	7, 163	OFS-6030 ⁺ , OFS-6040 ⁺ , OFS-6020 ⁺	3, OFS-6030 ⁺		57, 54			
Radiation-Cured (e.g., UV-cured acrylate)	57, 204SL, 205SL, 402LS	11, 57	205SL, 163	OFS-6030 ⁺ , OFS-6040 ⁺			57, 29, 402LS, 204SL		23N, 204SL	67, 500W, 501W, 502W

실리콘 고무(고상)
SILICONE RUBBER (HCR)

— XIAMETER® brand High Consistency Rubber (HCR)
Selection Guide

Product Series	XIAMETER® Product Name	Peroxide Catalyst Type	Cure Profile	Hardness, Shore A	Tensile, MPa	Elongation, %	Tear, kN/m	Plasticity, mm / 100	Compression Set, %	Specific Gravity	Modulus 100%, MPa
General Purpose - PPT Silica (Continued)											
XIAMETER® RBB-6600 Series	XIAMETER® RBB-6630-30 Base	RC-4 50P FD (0.75 pph) (2,5-bis(tert-butylperoxy) -2,5-dimethylhexane - 50% active)	Press cure: 10'/170°C Post cure: 4 hr/200°C	32	7.4	690	18 (angle)	190	NA	1.11	NA
	XIAMETER® RBB-6640-40 Base	RC-4 50P FD (0.65 pph) (2,5-bis(tert-butylperoxy) -2,5-dimethylhexane - 50% active)	Press cure: 10'/170°C Post cure: 4 hr/200°C	41	8.8	540	22 (angle)	200	NA	1.14	NA
	XIAMETER® RBB-6650-50 Base	RC-4 50P FD (0.6 pph) (2,5-bis(tert-butylperoxy) -2,5-dimethylhexane - 50% active)	Press cure: 10'/170°C Post cure: 4 hr/200°C	51	8.9	350	21 (angle)	230	NA	1.15	NA
	XIAMETER® RBB-6660-60 Base	RC-4 50P FD (0.5 pph) (2,5-bis(tert-butylperoxy) -2,5-dimethylhexane - 50% active)	Press cure: 10'/170°C Post cure: 4 hr/200°C	61	7.5	310	19 (angle)	280	NA	1.23	NA
	XIAMETER® RBB-6670-70 Base	RC-4 50P FD (0.4 pph) (2,5-bis(tert-butylperoxy) -2,5-dimethylhexane - 50% active)	Press cure: 10'/170°C Post cure: 4 hr/200°C	69	5.8	300	16 (angle)	285	NA	1.34	NA
	XIAMETER® RBB-6671-70 Base	RC-4 50P FD (0.5 pph) (2,5-bis(tert-butylperoxy) -2,5-dimethylhexane - 50% active)	Press cure: 10'/170°C Post cure: 4 hr/200°C	69	8.1	350	24 (angle)	262	NA	1.19	NA
	XIAMETER® RBB-6680-80 Base	RC-4 50P FD (0.4 pph) (2,5-bis(tert-butylperoxy) -2,5-dimethylhexane - 50% active)	Press cure: 10'/170°C Post cure: 4 hr/200°C	82	8.7	170	19 (angle)	374	NA	1.33	NA
HCR Bases											
General Purpose											
XIAMETER® RBB-2002 Series	XIAMETER® RBB-2002-30 Base	2,5-bis(tert-butylperoxy) -2,5-dimethylhexane - 45% active (1 pph)	Post Cure: 10'/171°C Post Cure 1h/250°C	35	6	585	10	150	NA	1.09	0.6
	XIAMETER® RBB-2002-45 Base	2,4-dichlorobenzoyl peroxide - 50% active (1.2 pph)	Press Cure: 5'/116°C Post Cure: 4 h/200°C	48	8.1	445	11	220	NA	1.13	1.1
	XIAMETER® RBB-2002-50 Base	2,4-dichlorobenzoyl peroxide - 50% active (1.2 pph)	Press Cure: 5'/116°C Post Cure: 4 h/200°C	52	8.8	430	13	260	NA	1.15	1.2
	XIAMETER® RBB-2002-70 Base	2,5-bis(tert-butylperoxy) -2,5-dimethylhexane - 45% active (1 pph)	Post Cure: 10'/171°C Post Cure 1h/250°C	67	7.1	490	27	350	NA	1.23	1.6
Tear Resistant											
XIAMETER® RBB-2220 Series	XIAMETER® RBB-2220-55 Base	2,5-bis(tert-butylperoxy) -2,5-dimethylhexane - 45% active (1 pph)	Press Cure: 10'/171°C	55	10.6	785	51	210	34	1.15	2.1
	XIAMETER® RBB-2220-70 Base	2,5-bis(tert-butylperoxy) -2,5-dimethylhexane - 45% active (1 pph)	Press Cure: 10'/171°C	70	8.7	540	51	250	27	1.2	4

실리콘 고무(액상)
SILICONE RUBBER (LSR)

— XIAMETER® brand Liquid Silicone Rubber (LSR)
Selection Guide

Product Series	XIAMETER® Product Name	Cure Profile	Hardness, Shore A	Tensile, MPa	Elongation, %	Tear, kN/m	Compression Set, %	Specific Gravity
General Purpose								
XIAMETER® RBL-2004 Series	XIAMETER® RBL-2004-20 LSR A&B	5'/150°C; no post cure	20	6.9	871	32	21	1.08
	XIAMETER® RBL-2004-20 LSR A&B	5'/150°C; no post cure	30	8.6	788	18	20	1.12
	XIAMETER® RBL-2004-20 LSR A&B	5'/150°C; no post cure	40	10.3	729	35	17	1.14
	XIAMETER® RBL-2004-20 LSR A&B	5'/150°C; no post cure	50	10.4	649	44	17	1.14
	XIAMETER® RBL-2004-20 LSR A&B	5'/150°C; no post cure	60	10.7	508	49	25	1.14
	XIAMETER® RBL-2004-20 LSR A&B	5'/150°C; no post cure	67	10.1	426	43	NA	1.14
	XIAMETER® RBL-2004-20 LSR A&B	5'/150°C; no post cure	67	10.1	426	43	NA	1.14
XIAMETER® RBL-9200 Series	XIAMETER® RBL-9200-30 LSR A&B	5'/150°C; no post cure	30	6.5	695	11	NA	1.12
	XIAMETER® RBL-9200-40 LSR A&B	5'/150°C; no post cure	40	8.9	512	38	NA	1.12
	XIAMETER® RBL-9200-50 LSR A&B	5'/150°C; no post cure	50	8.6	498	50	NA	1.13
	XIAMETER® RBL-9200-60 LSR A&B	5'/150°C; no post cure	60	10.4	488	57	NA	1.13
	XIAMETER® RBL-9200-65 LSR A&B	5'/150°C; no post cure	65	9.8	414	33	NA	1.14
Keypad LSR								
XIAMETER® RBL-4077 LSR	XIAMETER® RBL-4077-37 LSR A&B	5'/150°C; no post cure	38	5.0	350	16 (Die C)	NA	1.09