

Product Application Reference:



Optics

Application of adhesives and sealants for sensing elements

Electronics

Adhesive application with waterproof sealing for connection of cable assemblies



Lighting

Adhesive application for plastics and metals



Industry

Adhesive application for passivated metals and plastics

Automobiles and motorcycles

Adhesive application with waterproof sealing for lamps



Buildings

Application of waterproof sealing for metal structures

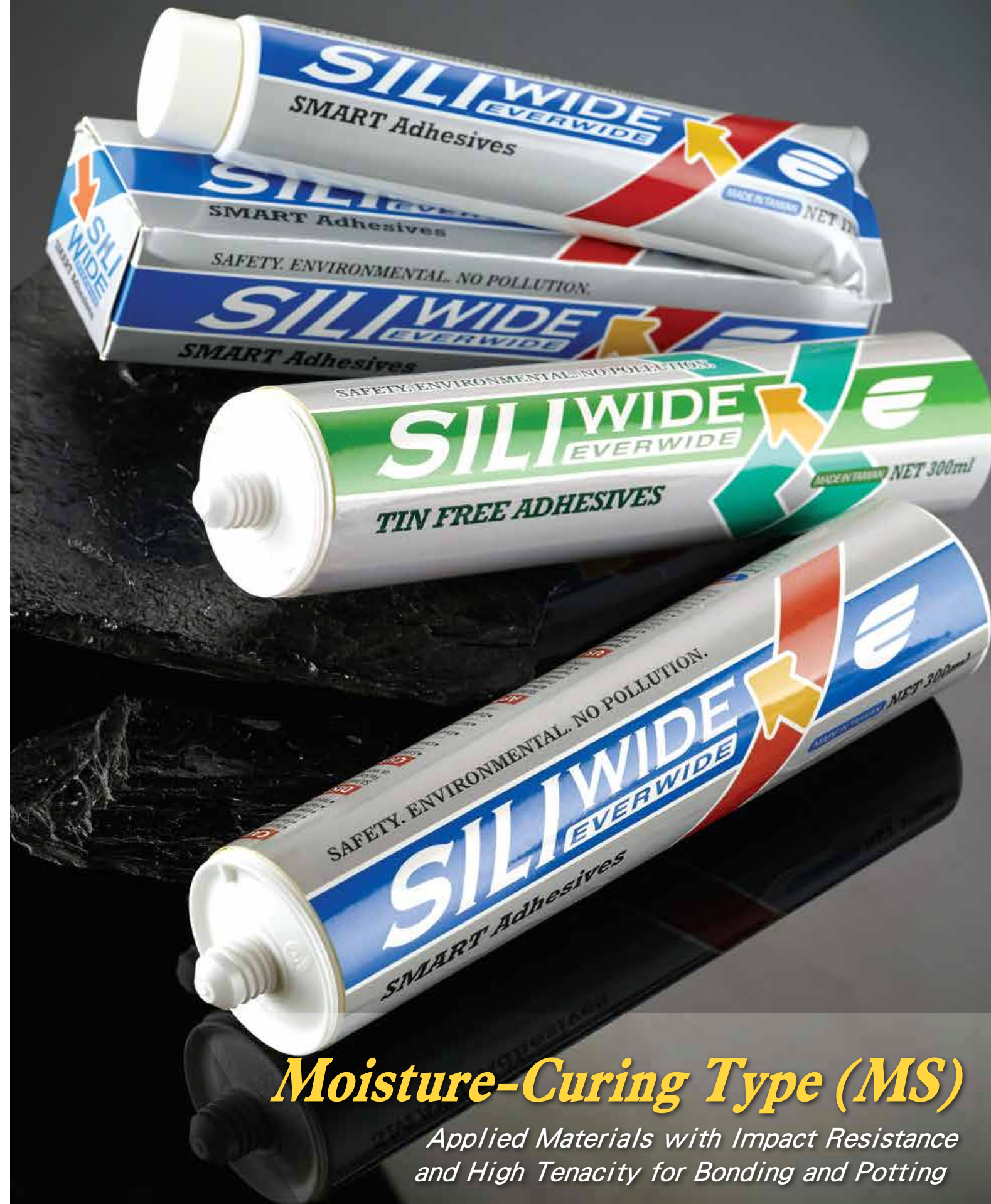


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MS resins are polyether resins with the characteristics of elasticity, transparency, and resistance to oil and abrasion. Technically, they are thermoplastic elastomers consisting of linear polymeric chains containing rather long, low polarity soft segments, which alternate with shorter, high polarity hard segments. Both types of segments are linked together by covalent links, so that they actually form block-copolymers.

The characteristics of MS resins are listed below:

- Excellent abrasion resistance
- Excellent mechanical properties with rubber-like elasticity
- Good oil resistance
- Excellent low-temperature performance
- High shear strength
- High transparency
- High elasticity

Description of Product Features:

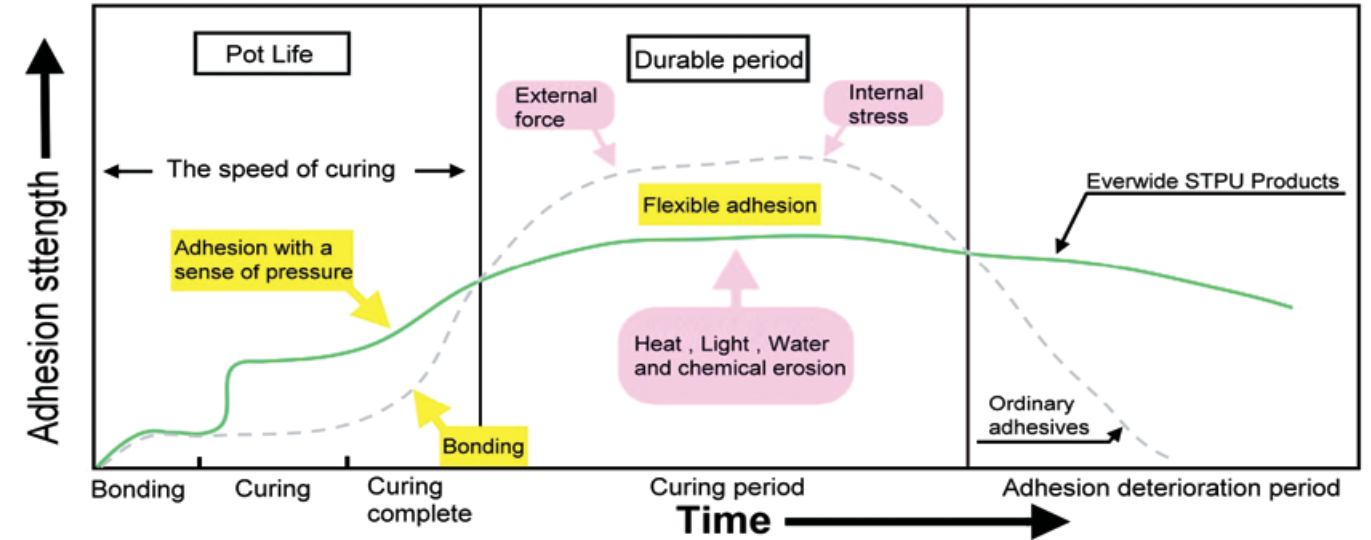
The moisture-curing type polyether resin is a new type of adhesive, and it's also one of the ideal adhesives with a high price-per-
formance ratio among fast curing adhesives. It has three features: pressure-sensitive during adhering, flexible after curing, and
solvent-free formula. Everwide Chemical develops FS series moisture-curing type polyether resins
(Silane Terminated Polyurethane) primarily for adhesion of plastics, metals, and glasses.
Unlike toxic traditional PU due to usage of isocyanate (NCO), the reaction mechanism
that we utilize is the same as that of non-alcohol-type silicones without the stench of
de-acidification types. Also, they provide the effects of fast surface drying and are
far superior to silicones on adhesion to plastics.

The biggest shortcoming of silicones, considered by users generally, is pollution,
because its internal components will gradually spread to the outside, defacing the buildings in civil
applications and resulting in defective contact in electronic applications. Compared with silicones, the
polyether type resins do not have the above disadvantage. In recent years, polyether type resins have been
rapidly promoted in the applications of adhesion, potting, sealing, reinforcement, etc. for the product design
of the 6C industry.

Everwide Chemical considers the development of its polyether resins product series a key R&D point, invests a lot of human
and material resources on the formulation technologies, product packaging, application range, etc. to develop the promising
and multiple application market from all angles, and has full confidence in the future prospects, too.

Moisture-Curing Type (MS)		
Applied Materials with Impact Resistance and High Tenacity for Adhesion and Potting		
Product Features	Solvent-free formula	The products are made from solvent-free formula, enabling fast surface drying in room temperature and featuring safe, clean, and easy for use.
	Pressure-sensitive during adhering	The curing action is conducted after water absorption from the air. Before the surface is dried, the PU material has higher viscosity after about a 10-minute coating, providing pre-cured characteristics with pressure-sensitive effects.
	Fast curing	With the surface drying rate 5 ~ 10 min. and complete curing time 6 ~ 12 hr, the products have a double curing rate relative to silicones.
	Flexible after curing	The products are cured to form thermoplastic elastomers consisting of block-copolymers linked by covalent links so as to contain both the softness of silicones and tenacity of polyurethanes.
	Extensive application range	The application of products covers a variety of extensive materials. They can apply to various plastics, rubbers, glass-ceramics, metals of different types, etc.
	Durability	The products are not prone to being stripped because of strong adhesive force. They can endure high-low temperature alternating without cracking or delamination and have excellent weatherability in outdoor environments.

Concept Diagram for Moisture-Curing Type Adhesives



Product tables for moisture-curing type adhesives

High Performance/Clear

Product No.	Features	Color	Viscosity(cps) / Ti	Pot Life	Surface Dry Time	Curing depth (30°C/50%RH)(mm)				Hardness SHORE	Shear Strength (kgf/cm ²)										Surface Resistivity(ohm) / Volume Resistivity, (ohm-cm)		Temperature Range(°C)	Storage / Shelf Life
				(26±1°C,57±5%RH)(min)	1day	2day	3day	7day	PC		ABS	PMMA	PET	PA6	PVC	Cu	SUS	Glass	Al					
FS0665	Low Viscosity	Opaque	6,000~9,000	<3	5	2.2	2.8	3.7	6.4	A30	20	15	20	12	18	20	40	18	29	25	2.1*10 ¹² / 2.2*10 ¹¹	-40~+100	14~34°C/6Months	
FS0354	Medium Viscosity	LightYellow	18,000~40,000	3	5	2.4	3.3	4.1	6	A42	20	18	16	15	8	20	10	13	12	14	1.7*10 ¹² / 2.0*10 ¹¹	-40~+100	14~34°C/6Months	
FS1442	High Clear	Colorless	17,600~26,400	3	7	2.7	3.6	4.3	6.6	A40	15	15	37	19	10	35	40	37	9	39	2.0*10 ¹² / 2.2*10 ¹¹	-40~+100	14~34°C/6Months	
FS115	Medium Viscosity,High Shear Strength	Opaque	30,000~65,000	15	29	2.3	3.2	3.8	5.5	A43	13	7	19	30	9	30	39	30	7	26	6.4*10 ¹³ / 5.0*10 ¹¹	-40~+100	14~34°C/6Months	
FS1371	Medium Viscosity,High Shear Strength	Opaque	35,000~70,000	3	10	2.4	3.1	3.8	5.9	A38	25	6	20	26	9	28	36	25	/	39	2.2*10 ¹³ / 4.2*10 ¹²	-40~+100	14~34°C/6Months	
FS180-2	High Viscosity,High Shear Strength	Colorless	80,000~140,000	6	12	/	/	/	/	A36	27	17	17	/	20	/	/	/	/	37	1.0*10 ¹³ / 1.8*10 ¹¹	-40~+100	14~34°C/6Months	

High Performance/Black

Product No.	Features	Color	Viscosity(cps) / Ti	Pot Life	Surface Dry Time	Curing depth (30°C*50%RH)(mm)				Hardness SHORE	Shear Strength (kgf/cm²)										Surface Resistivity(ohm) / Volume Resistivity, (ohm-cm)		Temperature Range(°C)	Storage / Shelf Life
				(26±1°C,57±5%RH)(min)	1day	2day	3day	7day	PC		ABS	PMMA	PET	PA6	PVC	Cu	SUS	Glass	Al					
FS0664BL	Low Viscosity	Black	6,000~9,000	<3	5	2.2	2.8	3.7	6.4	A30	20	15	20	12	18	20	40	18	29	25	2.1*10 ¹² \ 2.2*10 ¹¹	-40~+100	14~34°C/6Months	
FS100BL2	Medium Viscosity	Black	30,000~60,000	<3	5	2.5	3.3	4	6	A31	26	19	14	30	22	31	41	27	30	33	3.8*10 ¹² \ 5.0*10 ¹¹	-40~+100	14~34°C/6Months	
FS115BL3	Medium Viscosity,High Shear Strength	Black	50,000~90,000>1.5	3	7	2.7	3.4	4.1	5.4	A40	30	9	25	14	9	28	40	34	25	36	3.5*10 ¹² \ 1.0*10 ¹¹	-40~+100	14~34°C/9Months	
FS100BL1	Medium High Viscosity,High Shear Strength	Black	80,000~120,000	3	7	2.6	3.2	4	5.8	A41	25	20	21	30	/	32	36	35	38	38	1.8*10 ¹² \ 2.0*10 ¹¹	-40~+100	14~34°C/9Months	
FS035BL	High Viscosity,High Ti	Black	100,000~200,000>3	<3	5	2.1	2.7	3.7	4.4	A49	25	20	36	22	12	36	35	41	35	34	2.0*10 ¹² \ 2.2*10 ¹¹	-40~+100	14~34°C/9Months	
FS115BL6	High Viscosity,High Ti	Black	400,000~750,000>3	3	5	2.6	3.2	3.8	5.7	A50	13	9	27	14	22	30	40	26	25	27	1.9*10 ¹² \ 2.0*10 ¹¹	-40~+100	14~34°C/6Months	

High Performance/White

Product No.	Features	Color	Viscosity(cps) / Ti	Pot Life	Surface Dry Time	Curing depth (30°C/50%RH)(mm)				Hardness SHORE	Shear Strength (kgf/cm²)										Surface Resistivity(ohm) / Volume Resistivity, (ohm-cm)		Temperature Range(°C)	Storage / Shelf Life
				(26±1°C,57±5%RH)(min)	1day	2day	3day	7day	PC		ABS	PMMA	PET	PA6	PVC	Cu	SUS	Glass	Al					
FS115W1	Low Viscosity,High Shear Strength	White	35,000~65,000	3	5	2.2	3.4	3.8	5.6	A33	12	8	22	18	/	36	47	27	26	33	1.8*10 ¹² \ 2.0*10 ¹¹	-40~+100	14~34°C/6Months	
FS100W	MediumHighViscosity,HighShear Strength	White	80,000~160,000	3	7	2.6	3.2	3.8	5.7	A41	24	21	25	38	9	28	34	30	18	35	1.8*10 ¹² \ 2.0*10 ¹¹	-40~+100	14~34°C/6Months	
FS115W2	MediumHighViscosity,HighShear Strength	White	90,000~160,000>1.3	3	7	2.6	3.7	4.4	6.6	A41	16	11	27	18	8	35	43	29	31	30	1.8*10 ¹² \ 2.0*10 ¹¹	-40~+100	14~34°C/9Months	
FS115W9	MediumHighViscosity,HighShear Strength	White	50,000~80,000	3	7	2.6	3.5	4.1	6.3	A37	16	11	27	18	/	35	43	29	31	30	1.8*10 ¹² \ 2.0*10 ¹¹	-40~+100	14~34°C/6Months	
FS115W11	HighViscosity,High Ti	White	400,000~750,000>3	3	5	2.8	3.3	3.9	5.8	A50	14	11	28	15	20	31	39	25	24	27	1.9*10 ¹² \ 2.0*10 ¹¹	-40~+100	14~34°C/6Months	
FS035W1	HighViscosity,High Ti	White	90,000~150,000>3	<3	5	2.4	2.9	3.7	4.8	A55	23	21	18	17	16	30	37	40	30	39	1.7*10 ¹² \ 2.0*10 ¹¹	-40~+100	14~34°C/9Months	

High Performance/Gray

Product No.	Features	Color	Viscosity(cps) / Ti	Pot Life	Surface Dry Time	Curing depth (30°C*50%RH)(mm)				Hardness SHORE	Shear Strength (kgf/cm²)										Surface Resistivity(ohm) \ Volume Resistivity, (ohm-cm)		Temperature Range(°C)	Storage / Shelf Life
				(26±1°C,57±5%RH)(min)	1day	2day	3day	7day	PC		ABS	PMMA	PET	PA6	PVC	Cu	SUS	Glass	Al					
FS100G2	Low Viscosity	Gray	10,000~35,000	3	7	2.7	3.1	3.9	5.4	A30	9	6	10	9	/	11	8	15	8	8	1.2*10 ¹³ \ 1.0*10 ¹¹	-40~+100	14~34°C/6Months	
FS100G	MediumHighViscosity,HighShear Strength	Gray	60,000~100,000	3	7	2.9	3.5	4.1	5.7	A42	25	14	22	38	18	38	34	33	30	44	1.9*10 ¹² \ 2.0*10 ¹¹	-40~+100	14~34°C/6Months	

UL Fireproof Grade

Product No.	Features	Color	Viscosity(cps) / Ti	Pot Life	Surface Dry Time	Curing depth (30°C 50%RH)(mm)				Hardness SHORE	Shear Strength (kgf/cm²)										Surface Resistivity(ohm) / Volume Resistivity, (ohm-cm)		Temperature Range(°C)	Storage / Shelf Life
				(26±1°C.57 ±5%RH)(min)	1day	2day	3day	7day	PC		ABS	PMMA	PET	PA6	PVC	Cu	SUS	Glass	Al					
FS168W07	HighViscosity.High Ti	White	100,000-250,000>1.5	<3	5	2.9	3.4	4.2	5.5	A70	14	13	18	32	7	17	39	42	34	36	2.1*10 ¹² \ 2.2*10 ¹¹	-40~+120	14-34°C/6Months	
FS168B09	MediumViscosity	Black	40,000-80,000>1.3	<3	5	3	3.5	4.1	5.6	A67	14	14	16	31	5	15	32	34	30	36	1.9*10 ¹² \ 2.2*10 ¹¹	-40~+120	14-34°C/6Months	

Tin-free Compound Grade

Product No.	Features	Color	Viscosity(cps) / Ti	Pot Life	Surface Dry Time	Curing depth (30°C 50%RH)(mm)				Hardness SHORE	Shear Strength (kgf/cm ²)										Surface Resistivity(ohm) \ Volume Resistivity, (ohm-cm)		Temperature Range(°C)	Storage / Shelf Life
				(26±1°C, 57±5%RH)(min)		1day	2day	3day	7day		PC	ABS	PMMA	PET	PA6	PVC	Cu	SUS	Glass	Al				
FS132-14	MediumViscosity,Fluorescent	Opaque	16,000-28,000	8	12	2.8	3.8	4.4	6	A24	35	12	18	/	21	35	28	30	21	18	3.1*10 ¹² \ 1.7*10 ¹¹	-40~+100	14-34°C/6Months	
FS1328BL	MediumViscosity	Black	12,000-18,000	5	9	2.4	2.9	3.6	5	A40	36	19	22	34	/	36	27	29	20	20	3.1*10 ¹² \ 1.6*10 ¹¹	-40~+100	14-34°C/6Months	
FS132BL33-2	LowViscosity,Fluorescent/Matte	Black	10,000-20,000	5	10	2.5	3.5	4.2	5.6	A30	15	12	23	27	8	17	15	16	13	23	3.0*10 ¹² \ 1.9*10 ¹¹	-40~+100	14-34°C/6Months	
FS132BL4	MediumHighViscosity,High Bonding Strength	Black	40,000-80,000>2	3	7	2.6	3.4	4.2	6.5	A42	21	9	25	18	16	28	24	26	21	29	1.3*10 ¹² \ 5.0*10 ¹¹	-40~+100	14-34°C/6Months	
FS132BL13	MediumHighViscosity,High Bonding Strength	Black	88,000-132,000>1.3	5	5	2.8	4.1	4.7	6.2	A44	35	10	27	17	25	44	29	27	14	21	1.0*10 ¹² \ 1.1*10 ¹¹	-40~+100	14-34°C/6Months	
FS132W9	LowViscosity,Fluorescent/Matte	White	10,000-20,000	3	10	2.6	3.4	4.5	5.8	A29	16	12	22	26	8	17	14	16	13	21	3.0*10 ¹² \ 1.9*10 ¹¹	-40~+100	14-34°C/6Months	
FS132G31	LowViscosity,Fluorescent	Gray	12,000-22,000	3	5	2.6	3.7	4.2	7	A28	12	16	18	21	18	34	30	36	21	33	2.2*10 ¹² \ 2.0*10 ¹¹	-40~+100	14-34°C/6Months	