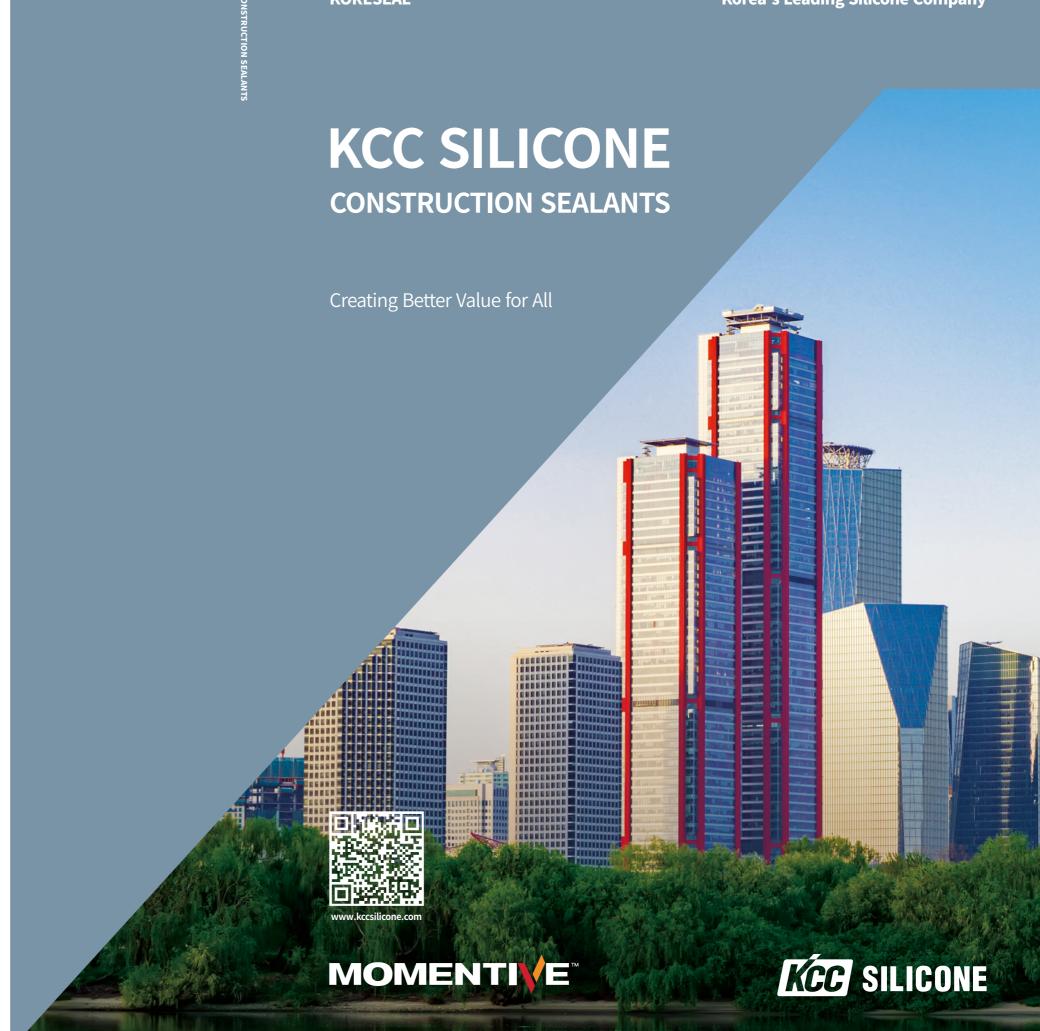
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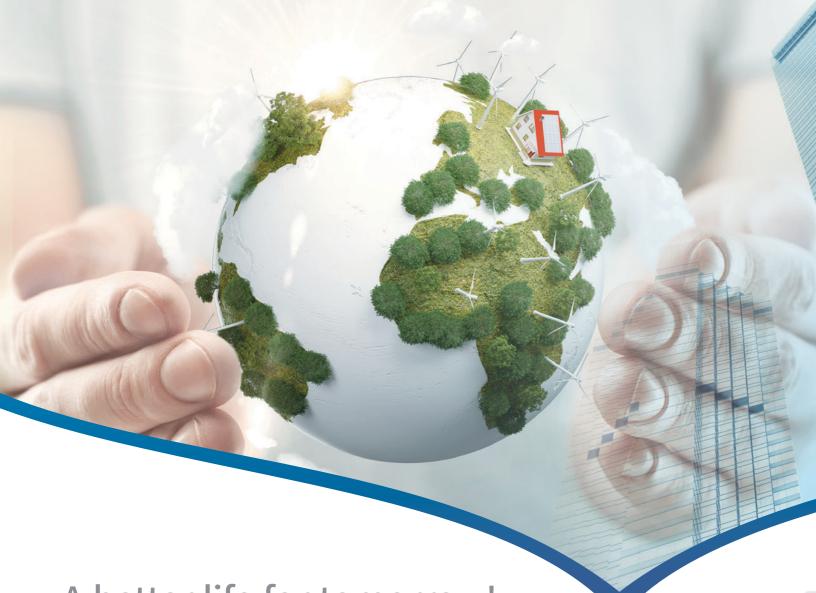
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We are spearheading development in architecture and the industrial sector by supplying a wide variety of architectural and industrial materials such as paint, interior and exterior finishing materials, glass, windows, floor decoration materials, and special materials that exhibit superiority.



A better life for tomorrow!

KCC Silicone Business

Silicone, known as "petroleum extracted from rocks," is an advanced material considered perhaps as the best possible alternative to petroleum in a time marked by record high oil prices. In 2004, we became the first in Korea to succeed in commercially producing organic monomers of silicone, and we are now the one and only company in Korea with a complete production system for manufacturing the ingredients for silicone as well as secondary value-added products. With the commercial production of polysilicone, we are capable of manufacturing the core materials of semiconductor wafers and solar cells, based on which we have been growing into a world-class organic and inorganic silicone manufacturer.

At KCC, we have successfully completed the research and development (R&D) projects in every possible field related to silicone including monomer production, polymer synthesis and manufacture of applied products. We now manufacture and supply a wide array of silicone products including building sealants, industrial RTVs, silanes as well as silicone fluids, emulsions and dispersing agents.



SEALANT Armed with state-of-the-art facilities and frontier technology, we seek perfection when it comes to product quality and customer service. All of our products are the results of creative R&D activities we've pursued to satisfy diverse customer needs. CONSTRUCTION SEALANTS 07 LIST OF KORESEAL PRODUCTS 08 SEALANT TYPES AND USES 09 STRENGTHS & WEAKNESSES BY TYPE 10 SEALING MATERIAL BY AREA

CONSTRUCTION SEALANTS



List of KORESEAL Products

KORESEAL

Turno	Applications	Characteristics		Product	Dooleaging	
Туре	Applications	Composition	Curing Type	Movement Capability	rioduct	Packaging
Silicone	Structural glazing	One-component	Neutral cure	\pm 25 %	SL819	C, S
	Structural glazing	Two-component	Reaction cure	± 25 %	SL820	D, P
	Secondary Sealing of SSG Insulating Glass	Two-component	Reaction cure	\pm 25 %	SL822	D, P
	Bathroom and kitchen	One-component	Neutral cure	± 25 %	SL825(ECO)	С
	Bathroom and kitchen (acrylic bathtub)	One-component	Neutral cure	\pm 25 %	SL825 PREMUIM(ECO)	С
	Road, Runway Joints	One-component	Neutral cure	± 50 %	SL850	Р
	Weathersealing	One-component	Neutral cure	\pm 50 %	SL868	C, S
	(Residential) Secondary Sealing of Insulating Glass	One-component	Neutral cure	± 25 %	SL886, SL886(FC)	S
	(Residential) Secondary Sealing of Insulating Glass	One-component	Neutral cure	\pm 25 %	SL921, SL921(FC)	D
	Stone and porous Substrate	One-component	Neutral cure	± 25 %	SL999	C, S
	Window Surrounds and Crack Repair	One-component	Neutral cure	\pm 25 %	MS1000	С
	General Purpose Glazing	One-component	Neutral cure	\pm 20 %	SL907 PREMIUM	С
	(Residential) Secondary Sealing of Insulating Glass	Two-component	Reaction cure	\pm 20 %	SL922	D, P
	Weathersealing (Non-Staining)	One-component	Neutral cure	± 25 %	SL999	C, S
	Weathersealing (Non-Staining, Alkoxy type)	One-component	Neutral cure	\pm 50 %	SL999(AK)	C, S
	Around windows	One-component	Neutral cure	± 25 %	SL1000	S
	Fire rated sealant	One-component	Neutral cure	\pm 25 %	QS119R	С
	Flame retardant sealant(Oxime curing)	One-component	Neutral cure	± 25 %	QS119E	С
Polysulfide	Airport runways	Two-component	Reaction cure	± 25 %	PS9210(L)	Р
	(Residential) Secondary sealing material for insulated glass	Two-component	Reaction cure	± 20 %	PS9220	D, P
Polyurethane	Automotive repair and industrial use	One-component	Moisture cure	\pm 25 %	PU9323	С
	Architecture and civil engineer	Two-component	Reaction cure	± 25 %	PU9330(N), (L)	Р
Acrylic	Water-based acrylic silicone for fire protection	One-component	Water evaporation cure	\pm 12.5 %	SW9535A	С
	Sealing for internal soundproofing	One-component	Water evaporation cure	± 12.5 %	WL9530	С
Water Repellent	Water-based water repellent	One-component	Water evaporation cure		SI1200Z	Р

※ Packaging - C : Cartridge, S : Sausage, P : Pail can, D : Drum

Primer

Туре	Applications	Characteristics	Product
Primer	Porous basis materials (stone materials, concrete, etc.)	One-component synthetic rubber	KP9930
	Structural glazing	One-component sealant coupling agent	KP9930
	PC, TPC, GRC	One-component synthetic rubber	KP9930
	Airport runways	One-component synthetic rubber	KP9050

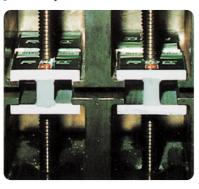
Sealant Types and Uses

Type	Uses	Product
Silicone	Metal and aluminum composite panel joints	SL999 / SL868
	Aluminum assembly joints	SL868
	General glass glazing (non-acetic acid)	SL907, SL907 PREMIUM
	Around the bathtub and sanitary fixtures	SL825, SL825 PREMIUM (Acrylic)
	Concrete paved road joints	SL850
	Al-curtain-wall joints (fluorine)	SL999 / SL868
	Stone panel	SL999
	Manufacture of insulated glass	SL886 / SL921 / SL822(SSG) / SL922
	Structural glazing (SSG)	SL819 / SL820
Polysulfide	Airport runway joints	PS9210(L)
	General insulated glass	PS9220
Polyurethane	Concrete and brick joints	PU9330(N)
	Concrete joints and various expansion joints	PU9330(L)
Water-based acrylic	Partitions between units (compartmentalization for fire protection)	SW9535A
emulsion	Soundproof sealing for sound absorbing partitions and window, door, wall and balcony joints of general buildings	WL9530

Tensile adhesive strength test



Durability test



Compatibility test (ASTM C 1087)



Adhesion test (ASTM C 794)



Staining test (ASTM C 1248)



Analytical equipment



Strengths and Weaknesses by Type

Туре	Strengths	Weaknesses	Remarks	
Silicone sealant	Excellent weatherability	Not Paintable		
	*Excellent heat and cold resistance	• Staining caused by plasticizer		
	*Ease of application			
	• Excellent Adhesion to most substrates			
	• Excellent UV resistance			
	• Ease of gun work at all temperature			
Modified silicone sealant	Excellent durability, weather resistance, and wearability	Poor light resistance (not applicable to glass)		
	*Surface painting possible			
	•Good elasticity and lifespan			
	• Non-staining (applicable to stone and PC)			
Polysulfide sealant	• Excellent watertightness and water resistance	• Requires mixing time as a two-component produced	uct	
(Thiokol)	• Fast curing	• Curing speed is dependent on the temperatu	re	
	• No tackiness	• Requires primer		
Polyurethane	Price Competitiveness	• Requires mixing time as a two-component produced	uct	
sealant	• Excellent paintability (water-based, urethane-based)	Discoloration (yellow/red)		
		• Tackiness on the surface		
	• Excellent elasticity and elongation (LM type)	Requires primer		
Acrylic sealant	Price Competitiveness	 Poor weather resistance when used outdoors (for indoor use only) 	S	
	• Excellent paintability (water-based, urethane-based)	 Significant volume loss 		
	*Excellent workability as a one-component type	• May freeze in winter		



8



Recommended Sealants for Office Buildings (Exterior)

Category	Area	Recommended Sealant	Binder	Recommended Primer
Exterior	Joints on stone surface			
	Where stone surfaces meet	SL999 / SL2000	Silicone	KP9930
	Where stone meets concrete or mortar	SL999 / SL2000	Silicone	KP9930
	Where stone meets metal (Aluminum, Steel or Stainless steel)	SL999 / SL2000	Silicone	KP9930
	Al composite panel joints – Fluororesin coating			
	Where Al meets Al	SL868 / SL999	Silicone	
	Where Al meets steel	SL868 / SL999	Silicone	
	Where Al meets stainless steel	SL868 / SL999	Silicone	
	Enamel-enamel joints	SL868 / SL999	Silicone	
	Stainless steel-stainless steel joints	SL868 / SL999	Silicone	
	PC joints			
	Where PC meets PC	SL868 / SL999	Silicone	KP9930
	Where PC meets metal (Aluminum, Steel or Stainless steel)	SL868 / SL999	Silicone	KP9930
	Where painted (natural dry fluorine) PC meets painted PC	SL868 / SL999	Silicone	KP9930
	Where PC meets PC	SL868 / SL999	Silicone	KP9930
	Where GPC meets GPD	SL868 / SL999	Silicone	KP9930
Window	External window area			
	Use a sealant applied to the external walls on areas where metal or PVC windows meet an external wall made of the aforementioned materials	Sealants for external walls		
	Glass area			
	Where glass surface and metal surface (Aluminum, Steel or Stainless steel) meet	SL868 / SL999	Silicone	
	Where glass meets PVC	GP / SL907 PREMIUM	Silicone	
	Where glass surfaces meet	SL907 PREMIUM / SL868 / GP	Silicone	
	SSG joints	KP9930	Silicone	KP9930
	Weather-sealing joints	SL868/SL999	Silicone	
Light-	Where GRC meets GRC	SL868 / SL999	Silicone	KP9930
weight panel on	Where Dryvit meets Dryvit	SL868 / SL999	Silicone	KP9930
outer	Where ALC meets ALC	SL868 / SL999	Silicone	KP9930
wall	Where PALC meets PALC	SL868 / SL999	Silicone	KP9930
	Where PC(Polycarbonate) meets PC	SL819/SL988	Silicone	
Roof and	Expansion joints			
external wall	Where concrete meets concrete	PU9330(N) / SL1000 / MS1000	Polyurethane / Silicone / Modified	KP9930
wall	Where metal meets metal (Aluminum, Steel, Stainless steel)	SL868/SL999	Silicone	
	New construction joints (roof)			
	Where concrete or mortar meets mortar	PU9330(L)	Polyurethane	KP9930
	Where metal meets concrete	PU9330(L)	Polyurethane	KP9930
	Parapet			
	Where concrete or mortar meets metal (Copper, Al, Stainless)	PU9330(N) / SL1000 / MS1000	Polyurethane / Silicone / Modified	KP9930
	Where concrete meets concrete	PU9330(N) / SL1000 / MS1000	Polyurethane / Silicone / Modified	KP9930
	Roof and drain			

^{**} The adhesive power may vary depending on the material to which the product is applied. For accurate information on sealant performance, please contact the technical department of KCC.

Recommended Sealants for Office Buildings (Interior)

Category	Area	Recommended Sealant	Binder	Recommended Primer		
Interior	Stone joints					
	Where wood meets concrete or mortar	WL9530	Water-based acrylic			
	Where PVC meets concrete	SL907 PREMIUM	Silicone	Concrete: KP9930		
	Where wood meets wallpaper	SL907 PREMIUM	Silicone			
	Where aluminum meets concrete	SL907 PREMIUM	Silicone	Concrete: KP9930		
	Joints inside the cleaning room, computer room, et.	SL907 PREMIUM	Silicone			
	Material separator joints					
	Where stainless steel meets concrete	SL907 PREMIUM	Silicone	Concrete: KP9930		
	Where stainless steel meets VCT (vinyl steel)	SL907 PREMIUM	Silicone	Concrete: KP9930		
	Where stainless steel meets concrete or mortar	SL907 PREMIUM	Silicone	Concrete / Mortar : KP9930		
	Steel and stainless steel window parts					
	Where metal (aluminum, steel, stainless steel) meets	SL907 PREMIUM	Silicone	Concrete / Mortar : KP9930		
	concrete or mortar Concrete/Mortar: KP9930					
	Joints inside the external windows					
	Where metal meets stone	SL999	Silicone	KP9930		
	Where metal meets concrete	PU9330(N) / SL1000	Polyurethane / Silicone	KP9930		
	Sleeves inside fire protection walls and compartment	alization				
	Where metal meets concrete	QS119R	Silicone	KP9930		
	Where PVC meets concrete	QS119R	Silicone	KP9930		
	Pad joints in mechanical room					
	Where metal meets concrete	PU9330(N) / SL1000	Polyurethane / Silicone	KP9930		
	Where concrete meets concrete	PU9330(N) / SL1000	Polyurethane / Silicone	KP9930		
	Internal partition wall joints when using gypsum boar	rd or straw sum board				
	Where metal meets metal	SL907 PREMIUM	Silicone			
	Where metal meets VTC (vinyl, asbestos)	SL907 PREMIUM	Silicone			
Washroom	Where glass meets tile	SL825(ECO)	Silicone			
	Where glass meets concrete or mortar	SL825(ECO)	Silicone	Concrete / Mortar : KP9930		
	Where glass meets stainless steel	SL825(ECO)	Silicone			
	Where metal meets tile	SL825(ECO)	Silicone			
	Sanitary fixtures and tiles					
	Where sanitary fixture (porcelain) meets tile	SL825(ECO)	Silicone			
	Where sanitary fixture (porcelain) meets stainless steel or copper pipe	SL825(ECO)	Silicone			
	Where marble meets tile	SL825(ECO)	Silicone			
	Where marble meets steel	SL825(ECO)	Silicone			
	Where marble meets wood	SL825(ECO)	Silicone			
	Where tile meets PVC	SL825(ECO)	Silicone			
	Where tile meets concrete	SL825(ECO)	Silicone	Concrete / Mortar : KP9930		
	Where tile meets cast iron (Steel)	SL825(ECO)	Silicone			
	Where tile meets stainless steel	SL825(ECO)	Silicone			

^{**} The adhesive power may vary depending on the material to which the product is applied. For accurate information on sealant performance, please contact the technical department of KCC.

^{**} In case the primer recommended in accordance with the standard construction method is not applied, the sealant may not attach to the substrate properly. We advise that you use the recommended primer prior to sealant application.

^{*} In case the primer recommended in accordance with the standard construction method is not applied, the sealant may not attach to the substrate properly. We advise that you use the recommended primer prior to sealant application.

CONSTRUCTION SEALANTS



Recommended Sealants for Residential Buildings

Bathroom Where wooden door frame meets tile SL825(ECO) Silicone KP9930					
Where artificial marble meets tile Where ceramic washbasin meets tile SL825(ECO) Where floor tile and wall tile intersect SL825(ECO) Where wall tile and wall tile intersect SL825(ECO) Where door frame meets window frame SL825(ECO) Joints between kitchen furniture threshold meets tile (base cabinet) SL825(ECO) Windows Balcony (internal window)-PVC, Alrcom's SL1000 Where wooden door frame or window frame meets cement mortar or concrete retaining wall Where Al PVC window frame meets glass SL907 PREMIUM, GP Sealant Interior Gap caused by poor construction between the interior wooden door and wall (vertical part) Where masonny cement mortar meets concrete retaining Where masonny cement mortar meets concrete retaining Where masonny cement mortar meets concrete retaining Where masonny cement mortar wall meets concrete slab filoor (excl. the balcony) Where masonny cement mortar wall meets concrete slab ceiling (excl. the balcony) Where meets PC Where SACO PU9330(N) / SL1000 Polyurethane / Silicone / Modified KP9930 Where PC meets PC Where PC meets PC PU9330(N) / SL1000 / MS1000 Polyurethane / Silicone / Modified KP9930 Where PALC meets ALC PU9330(N) / SL1000 / MS1000 Polyurethane / Modified KP9930 Where PALC meets PALC PU9330(N) / SL1000 / MS1000 Polyurethane / Modified KP9930 Where PALC meets PALC PU9330(N) / SL1000 / MS1000 Polyurethane / Modified KP9930 Where masonry cement mortar wall (waterproof wall)	Category	Area	Recommended Sealant	Binder	Recommended Primer
Where ceramic washbasin meets tile Where artificial marble washbasin meets tile SL825(ECO) Where wall tile and wall tile intersect SL825(ECO) Where wall tile and wall tile intersect SL825(ECO) Where wall tile and wall tile intersect SL825(ECO) Where acrylic bathtub meets tile SL825(ECO) Where door frame meets window frame SL825(ECO) Where kitchen furniture threshold meets tile (base cabinet) Joints between kitchen furniture pieces (base cabinet) Balcony (external window)-PVC, Al+com's SL1000 Sl825(ECO) Windows Balcony (internal window)-PVC, Al+com's Where wooden door frame or window frame meets cement mortar or concrete retaining wall Where Al PVC window frame meets glass Interior Gap caused by poor construction between the interior wooden door and wall (vertical part) Gap between ceiling molding and wall where interior wooden door and wall (vertical part) Where masonny cement mortar meets concrete slab filoor (excl. the balcony) Where masonny cement wall meets concrete slab filoor (excl. the balcony) Where masonny cement wall meets concrete slab ceiling (excl. the balcony) Where PC meets PC Where SALC PU9330(N) / SL1000 / MS1000 Polyurethane / Silicone / Modified (KP9930) Where PC meets PC Where ALC PU9330(N) / SL1000 / MS1000 Polyurethane / Silicone / Modified (KP9930) Where PALC meets ALC PU9330(N) / SL1000 / MS1000 Polyurethane / Silicone / Modified (KP9930) Where PALC meets PALC PU9330(N) / SL1000 / MS1000 Polyurethane / Silicone / Modified (KP9930) Where PALC meets PALC PU9330(N) / SL1000 / MS1000 Polyurethane / Silicone / Modified (KP9930) Where PALC meets PALC PU9330(N) / SL1000 / MS1000 Polyurethane / Silicone / Modified (KP9930) Polyurethane / S	Bathroom	Where wooden door frame meets tile	SL825(ECO)	Silicone	KP9930
Where artificial marble washbasin meets tile Where floor tile and wall tile intersect Where wall tile and wall tile intersect SL825(ECO) Where wall tile and wall tile intersect SL825(ECO) Where acrylic bathtub meets tile SL825(ECO) Where door frame meets window frame SL825(ECO) Where kitchen furniture threshold meets tile (base cabinet) SL825(ECO) Joints between kitchen furniture pieces (base cabinet) SL825(ECO) Windows Balcony (external window)-PVC, Al+com's SL1000 Where wooden door frame or window frame meets cement mortar or concrete retaining wall Where APVC window frame meets glass SL907 PREMIUM, GP Sealant Interior Gap between ceiling molding and wall where interior wooden door and wall (vertical part) Where masonry cement mortar meets concrete retaining Where masonry cement mortar meets concrete retaining Where masonry cement mortar meets concrete slab folor (excl. the balcony) Where masonry cement mortar wall meets concrete slab ceiling (excl. the balcony) Where PC meets PC Where ALC meets ALC PU9330(N) / SL1000 / MS1000 Polyurethane / Slicone / Modified KP9930 Where PC meets PALC Where PALC meets PALC Where PALC meets PALC Where masonry cement mortar wall (waterproof wall) Where masonry cement mortar wall (waterproof wall) Where POINT washing in the stream of the proposal of the polyurethane is strong of the polyurethane is strong in the polyurethan		Where artificial marble meets tile	SL825(ECO)		
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Where masonry cement mortar wall (waterproof wall) PI 19330(N) Polyurothano		Where PALC meets PALC	PU9330(N) / SL1000 / MS1000	Polyurethane / Silicone / Modified	KP9930
	Roof	New construction joints (concrete or cement mortar)	PU9330(L)	Polyurethane	KP9930
			PU9330(N)	Polyurethane	

^{**} The adhesive power may vary depending on the material to which the product is applied. For accurate information on sealant performance, please contact the technical department of KCC.



^{*} In case the primer recommended in accordance with the standard construction method is not applied, the sealant may not attach to the substrate properly. We advise that you use the recommended primer prior to sealant application.



- ▶ The data provided are based on experiments and practical experience and may differ from the results obtained from the products in question depending on the actual working conditions or improvements made to the quality. Users should conduct an adequate review before using the products.
- ▶ For more information on product safety, refer to the Material Safety Data Sheet (MSDS).

Two-Component SSG

Two-Component SSG KORESEAL SL820

G-25HM

Properties

Curing system

Working time

Mixing ratio

Hardness

Elongation

Packing

Specific gravity

Tensile strength

Color

Appearance(State)



Silicone

Base (Soft paste)

35~45 (Shore A)

1.1 N/mm (ASTM C1135)

Approx. 150 % (ASTM C 1135) Base-Drum, Curing agent-Pail

2-part reaction curing type

Curing agent (Viscous liquid)

20~60 minutes (23 °C, 50 % RH)

Base: Curing agent = 9:1 (by volume)

Base: 1.46 ± 0.1 / Curing agent: 1.02 ± 0.1

Base (White), Curing agent (Black)

KORESEAL SL820 is a two-component reaction cure silicone sealant with excellent adhesion and strength. Boasting outstanding weather resistance and durability, it is suitable for structural glazing which requires sufficient strength and conforms to the requirements of KS G-25HM, ASTM C 1184 and ASTM C 719(Class 25).

Purpose of Use

• Structural sealant glazing (SSG)

Characteristics

- A two-component product, the curing speed of which can be adjusted easily. (However, caution must be taken when the surface temperature of the substrate is 5 °C or below or 40 °C or higher)
- Remains flexible after being cured even at low (-50 °C) and high temperatures (150 °C).
- Exhibits excellent weather resistance, durability and mechanical strength and is suitable for SSG
- Requires the use of a primer.



Secondary Sealing of SSG

Insulating Glass
KORESEAL SL822



KORESEAL SL822 is a two-component reaction cure silicone sealant that boasts excellent adhesion and strength. Designed specifically for structural glazing which requires sufficient strength, this product

conforms to the requirements of KS G-25HM and ASTM C 1184.

Purpose of Use

• Secondary sealing of SSG insulating glass

Characteristics

- A two-component product, the curing speed of which can be adjusted easily.
- Remains flexible after being cured even at low (-50 °C) and high temperatures (150 °C).
- Boasts excellent resistance against ozone and UV radiation.
- Exhibits excellent durability and mechanical strength and is suitable for SSG uses.
- Adheres firmly to glass and aluminum.



Cone-Component SSG KORESEAL SL819

KORESEAL SL819 is a one-component neutral cure silicone sealant that boasts excellent adhesion and strength. Designed specifically for structural glazing which requires sufficient strength, this product conforms to the requirements of KS G-25HM, ASTM C 1184 and ASTM C 719(Class 25).

Purpose of Use

• Structural sealant glazing (SSG)

Characteristics

- A one-component sealant that can be used regardless of seasons (good gun workability) (However, caution must be taken when the surface temperature of the substrate is 5 °C or below or 40 °C or higher)
- Remains flexible after being cured even at low (-50 °C) and high temperatures (150 °C).
- Exhibits excellent weather resistance, durability and mechanical strength and is suitable for SSG uses.



Properties

Property	Result
Туре	Silicone
Curing system	Neutral cure (Alkoxy)
Appearance(State)	Soft paste
Tack free time	Max. 60 minutes (23 °C, 50 % RH)
Color	black , Gray
Specific gravity	1.33 ± 0.1
Hardness	35~45 (Shore A)
Tensile strength	Approx. 1.36 N/mm (ASTM C 1135)
Elongation	Approx. 310 % (ASTM C 1135)
Packing	300 ml Cartridge, 25 Pcs/Box 500 ml Al sausage, 20 Pcs/Box

Properties

Property	Result
Туре	Silicone
Curing system	2-part reaction curing type
Appearance(State)	Bese (Soft paste) Curing agent (Viscous liquid)
Working time	20~60 minutes (23 °C, 50 % RH)
Color	Bese (White), Curing agent (Black)
Mixing ratio	Bese, Curing agent = 9:1 (by volume)
Specific gravity	Base: 1.48 ± 0.1 / Curing agent: 1.03 ± 0.1
Hardness	35~50 (Shore A)
Tensile strength	0.93 N/mm (ASTM C1135)
Elongation	Approx. 150 % (ASTM C 1135)
Packing	Bese-Drum, Curing agent-Pail



SL819

KCC

KORESEAL SL819



- on the actual working conditions or improvements made to the quality. Users should conduct an adequate review before using the products
- ► For more information on product safety, refer to the Material Safety Data Sheet (MSDS).

BIO-KORESEAL SL825 PREMIUM(ECO)

BIO-KORESEAL SL825 PREMIUM(ECO) is a one-component neutral (alkoxy) cure silicone sealant, which turns into a rubber-like material after reacting with the moisture in the air. It has a biological function in that it has excellent anti-bacterial effect.



Silicone

Soft paste

 1.37 ± 0.1

35 (Shore A)

Neutral cure (Alkoxy)

Max. 90 minutes (23 °C, 50 % RH)

Approx. 2.2 N/mm (ASTM D412)

Approx. 600 % (ASTM D412)

300 ml Cartridge, 25 Pcs/Box

Properties

Curing system

Tack free time

Specific gravity

Hardness Tensile strength

Elongation

Packing

Color

Appearance(State)

Purpose of Use

• For sealing the areas around the bathtub and sink (incl. acrylic bathtub)

It conforms to the requirements of KS F-25HM.

Characteristics

- A one-component sealant that can be used regardless of seasons (good gun workability)
- Adheres well to most substrates, but the recommended



- Exhibits excellent anti-mold effects, weather resistance and durability.
- primer should be used in the case of certain substrates as well as concrete, brick and other porous substrates.



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BIO-KORESEAL SL825 (ECO)

BIO-KORESEAL SL825(ECO) is a one-component neutral cure silicone sealant. Developed based on a biotechnological mechanism to prevent mold growth, this product conforms to the requirements of KS F-25LM.

Purpose of Use

- For sealing the areas around the bathtub and sink (cannot be used on acrylic bathtubs)
- Areas vulnerable to mold growth in apartments, houses, restaurants, hotels, public bathhouses, hospitals, food manufacturing plants, pharmaceutical plants, semiconductor assembly plants, etc.

Characteristics

- A one-component sealant that can be used regardless of seasons (good gun workability)
- Remains flexible after being cured even at low (-50 °C) and high temperatures (150 °C).
- Exhibits extremely low degree of shrinkage during curing and boasts excellent weather resistance.
- Displays an excellent anti-bacterial effect even in hot and humid environments.

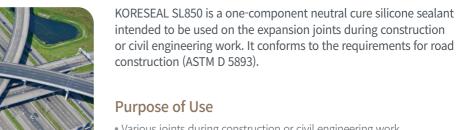


Properties

Property	Result
Туре	Silicone
Curing system	Neutral cure (Oxime)
Appearance(State)	Soft paste
Tack free time	Max. 10 minutes (23 °C, 50 % RH)
Color	White, transparent and others
Specific gravity	1.02 ± 0.1
Hardness	25 (Shore A)
Tensile strength	1.5 N/mm (ASTM C1135)
Elongation	Approx. 500 % (ASTM C 1135)
Packing	300 ml Cartridge, 25 Pcs/Box



Road Construction
KORESEAL SL850



intended to be used on the expansion joints during construction or civil engineering work. It conforms to the requirements for road

- Various joints during construction or civil engineering work
- Contraction and expansion joints on concrete roads

Properties

Property	Result
Туре	Silicone
Curing system	Neutral cure (Oxime)
Appearance(State)	Viscous liquid
Tack free time	Max. 90 minutes (23 °C, 50 % RH)
Color	Gray, Charcoal gray
Specific gravity	1.22 ± 0.1
Hardness	Approx. 25 (Shore C)
Tensile strength	Approx. 0.6 N/mm (ASTM D412)
Elongation	Approx. 1,000 % (ASTM D412)
Packing	Pail (22.1 kg)

Characteristics

- Excellent flowability, UV resistance and weather resistance
- Remains flexible after being cured even at low (-50 °C) and high temperatures (150 °C).
- Excellent adhesion (Primer: KP9930)
- Results in excellent member movement thanks to high elongation rate and resilience.





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- ▶ For more information on product safety, refer to the Material Safety Data Sheet (MSDS).

Silicone for Insulating Glass KORESEAL SL886

G-25HM, L-2003



KORESEAL SL886 is a one-component neutral cure silicone sealant displaying excellence in durability and weather resistance. Developed for the manufacture of insulated glass, this product conforms to the requirements of KS G -25HM and KS L 2003.

Purpose of Use

• Secondary sealing of general insulating glass (Cannot be used on SSG insulated glass)

Properties

Property	Result
Type	Silicone
Curing system	Neutral cure (Oxime)
Appearance(State)	Soft paste
Tack free time	Max. 10 minutes (23 °C, 50 % RH)
Color	Black, White and others
Specific gravity	1.43 ± 0.1
Hardness	30 ± 5 (Shore A)
Tensile strength	Approx. 1.0 N/mm² (ASTM D412)
Elongation	Approx. 400 % (ASTM D412)
Packing	500 ml Al Sausage, 20 Pcs/Box

Characteristics

- A one-component sealant that can be used regardless of seasons. (good gun workability)
- Remains flexible after being cured even at low (-50 °C) and high temperatures (150 °C).
- Adheres firmly to glass and aluminum.
- Boasts excellent resistance against ozone and UV radiation.
- Exhibits excellent durability and mechanical strength.



Weatherseal for Building Exterior HI-KORESEAL SL868

G-25LM, F-25LM

HI-KORESEAL SL868 is a one-component neutral cure silicone sealant designed to exhibit outstanding adhesion, elastic waterproofing and weather resistance on most building materials without the use of a primer. It conforms to the requirements of KS F-25LM, G-25LM and ASTM C 719(Class 50).

Purpose of Use

- Aluminum curtain wall joints (fluorine paint, anodizing)
- Aluminum composite panel joints
- Porcelain panel joints
- Weather sealing

Characteristics

- A one-component sealant that can be used regardless of seasons (good gun workability)
- Remains flexible after being cured even at low (-50 °C) and high temperatures (150 °C).
- Exhibits extremely low degree of shrinkage during curing and boasts excellent weather resistance.
- Adheres well to most substrates, but the recommended primer should be used in the case of certain substrates as well as concrete, brick and other porous substrates.



Properties

Property	Result
Туре	Silicone
Curing system	Neutral cure (Oxime)
Appearance(State)	Soft paste
Tack free time	Max. 10 minutes (23 °C, 50 % RH)
Color	Black, Gray, White and others
Specific gravity	1.38 ± 0.1
Hardness	25 ± 5 (Shore A)
Tensile strength	Approx. 1.0 N/mm² (ASTM C 1135)
Elongation	Approx. 700 % (ASTM C 1135)
Packing	300 ml Cartridge, 25 Pcs/Box 500 ml Al sausage, 20 Pcs/Box

KORESEAL SL886(FC)



Pair-Seal SL886 (FC) is a neutral curing, one-component, quickdrying silicone with excellent weather resistance and durability, and was developed for the production of double-layer glass.

Purpose of Use

• Secondary sealing of general insulating glass (Cannot be used on SSG insulated glass)

Properties

Silicone Curing system Neutral cure (Oxime) Appearance(State) Soft paste Tack free time Max. 10 minutes (23 °C, 50 % RH) Black, White and others 1.51 ± 0.1 Specific gravity 50 ± 5 (Shore A) Approx. 1.9 N/mm (ASTM D412) Tensile strength Approx. 200 % (ASTM D412) Elongation Packing 500 ml Al Sausage, 20 Pcs/Box

Characteristics

• A one-component sealant that can be used regardless of seasons (good gun workability)

- Remains flexible after being cured even at low (-50 °C) and high temperatures (150 °C).
- Adheres firmly to glass and aluminum.
- Boasts excellent resistance against ozone and UV radiation.
- Exhibits excellent durability and mechanical strength and a fast curing time.



SL868

SL868

KCC

HI-KORESEAL



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- ▶ For more information on product safety, refer to the Material Safety Data Sheet (MSDS).

Secondary Sealing of **Insulating Glass**

KORESEAL

KORESEAL SL922 is a two-component reaction cure silicone sealant that adheres well to glass. Designed as a secondary sealant for insulated glass, this product conforms to the requirements of KS G-20HM and KS L 2003.

Purpose of Use

• Secondary sealing of general insulating glass (Cannot be used on SSG insulating glass)

Properties

G-20HM, L-2003

Property	Result
Туре	Silicone
Curing system	2-part reaction curing type
Appearance(State)	Soft paste
Working time	20~60 minutes (23 °C, 50 % RH)
Color	Base (White), Curing agent (Black)
Mixing ratio	Base: Curing agent = 9:1 (by volume)
Specific gravity	Base (1.63±0.1) Curing agent (1.03±0.1)
Hardness	45 ± 5 (Shore A)
Tensile strength	Approx. 0.8 N/mm (ASTM C1135)
Elongation	Approx. 70 % (ASTM C1135)
Packing	Part A - Drum, Part B - Pail

Characteristics

- A two-component product, the curing speed of which can be adjusted easily.
- Remains flexible after being cured even at low (-50 °C) and high temperatures (150 °C).
- Boasts excellent resistance against ozone and UV radiation.
- Adheres firmly to glass and aluminum.



KORESEAL SL907 PREMIUM

G-30SHM, G-30SLM

KORESEAL SL907 PREMIUM is a one-component neutral cure silicone sealant. Developed for PVC and Al window glazing, this product confirms to the requirements of KS G-30SHM.

Purpose of Use

- Multi purpose for construction join
- For glazing window glass

Characteristics

- A one-component sealant that can be used regardless of seasons (good gun workability).
- Remains flexible after being cured even at low (-50 °C) and high temperatures (150 °C).
- Exhibits excellent weather resistance and adhesion.



Properties

Property	Result
Туре	Silicone
Curing system	Neutral cure (Oxime)
Appearance(State)	Soft paste
Tack free time	Max. 10 minutes (23 °C, 50 % RH)
Color	White, Gray, Black, Transparent and others
Specific gravity	1.43 \pm 0.1 (Transparent 1.00 \pm 0.1)
Hardness	30 ± 5 (Shore A) (Transparent 15 \pm 5 (Shore A))
Tensile strength	Approx. 1.0 N/mm (ASTM D412)
Elongation	Approx. 450 % (ASTM D412) (Transparent Approx. 700 %)
Packing	300 ml Cartridge, 25 Pcs/Box

Sencondary Sealing of

Sencondary Sealing of Insulationg Glass KORESEAL SL922(LV)

Koresil SL922(LV) is a neutral curing, two-component silicone sealant. It has excellent adhesion to glass and is suitable for use in

KS L2003 laminated glass sealing durability test standards.

the production of laminated glass. It is a product that satisfies the

Properties

Curing system

Working time

Mixing ratio

Tensile strength

Hardness

Packing

Appearance(State) Soft paste



Silicone

Neutral cure (Oxime)

20~80 minutes (23 °C, 50 % RH)

Approx. 0.7 N/mm (ASTM D412)

Part A - Drum, Part B - Pail

Base (White), Curing agent (Black)

Base: Curing agent = 9:1 (by volume)

Purpose of Use

• Secondary sealing of general insulating glass (Cannot be used on SSG insulating glass)

Characteristics

- Excellent adhesion to glass and aluminum.
- Two-component product, easy to control curing time.
- Maintains flexibility even at low temperatures (-50 °C) and high temperatures (150 °C) after curing.





KORESEAL SL907 PREMIUM

23

SEALANT PRODUCTS



- ▶ The data provided are based on experiments and practical experience and may differ from the results obtained from the products in question depending on the actual working conditions or improvements made to the quality. Users should conduct an adequate review before using the products.
- ▶ For more information on product safety, refer to the Material Safety Data Sheet (MSDS).

Multi-Purpose Non-Staining Sealant for

GREEN-KORESEAL SL2000

F- 25HM



GREEN-KORESEAL SL2000 is a one-component neutral cure silicone sealant that exhibits excellent adhesion to most building exterior materials without the use of a primer. As a non-staining sealant that can be used around joints, it conforms to the requirements of KS F-25HM and G-25HM.

Purpose of Use

- For sealing aluminum panel and composite panel joints
- For porous stone panels

Properties

Property	Result
Туре	Silicone
Curing system	Neutral cure (Oxime)
Appearance(State)	Soft paste
Tack free time	Max. 30 minutes (23 °C, 50 % RH)
Color	Black, Gray, White and others
Specific gravity	1.41 ± 0.1
Tensile strength	Approx. 1.2 N/mm (ASTM D412)
Elongation	Approx. 400 % (ASTM D412)
Packing	500 ml Al Sausage, 20 Pcs/Box

Characteristics

- A one-component sealant that can be used regardless of seasons. (good gun workability)
- Exhibits excellent weather resistance and durability and is non-staining.
- Adheres well to most substrates, but the recommended primer should be used in the case of certain substrates as well as concrete, brick and other porous substrates.



Sealing Windows Perimeter KORESEAL SL1000

F-25LM

KORESEAL SL1000 is a one-component neutral cure sealant that exhibits excellent adhesion and weather resistance and creates a strong elastic barrier when used on most building materials, without the need for a primer. It has been specifically developed for use around windows, and it conforms to the requirements of KS F-25LM.

Purpose of Use

- For sealing movement joints around windows of residential buildings
- Joints between windows and the wall (PVC + CON'C or AL + CON'C)



Characteristics

- A one-component sealant that can be used regardless of seasons. (good gun workability)
- Remains flexible after being cured even at low (-50 °C) and high temperatures
- Exhibits excellent safety against temperature changes due to high elongation rate and resilience.
- Adheres well to most substrates, but the recommended primer should be used in the case of certain substrates as well as concrete, brick and other porous substrates.

Properties

Property	Result
Туре	Silicone
Curing system	Neutral cure (Oxime)
Appearance(State)	Soft paste
Tack free time	Max. 10 minutes (23 °C, 50 % RH)
Color	Black, Gray, White and others
Specific gravity	1.38 ± 0.1
Hardness	25 ± 5 (Shore A)
Tensile strength	Approx. 1.0 N/mm (ASTM D412)
Elongation	Approx. 650 % (ASTM D412)
Packing	500 ml Al sausage, 20 Pcs/Box

F- 25HM, G- 25HM



Property	Result
Туре	Silicone
Curing system	Neutral cure (Oxime)
Appearance(State)	Soft paste
Tack free time	Max. 30 minutes (23 °C, 50 % RH)
Color	Black, Gray, White and others
Specific gravity	1.28 ± 0.1
Hardness	30 ± 5 (Shore A)
Tensile strength	Approx. 1.3 N/mm² (ASTM D412)
Elongation	Approx. 450 % (ASTM D412)
Packing	300 ml Cartridge, 25 Pcs/Box 500 ml Al sausage, 20 Pcs/Box

Properties

CLEAN-KORESEAL SL999 is a one-component neutral cure silicone sealant that exhibits excellent adhesion to most building exterior materials without the use of a primer. As a non-staining sealant that can be used around joints, it conforms to the requirements of ASTM C 1248(non-staining) and KS F-25HM, G-25HM and ASTM C 719(Class 25).

Purpose of Use

- For stone panel joints
- For sealing aluminum panel and composite panel joints

Characteristics

- Non-Staining
- A one-component sealant that can be used regardless of seasons. (good gun workability)
- Remains flexible after being cured even at low (-50 °C) and high temperatures (150 °C).
- Adheres well to most substrates, but the recommended primer should be used in the case of certain substrates as well as concrete, brick and other porous substrates.



SL999

KCC



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- ▶ For more information on product safety, refer to the Material Safety Data Sheet (MSDS).

Modified silicone for

KORESEAL MS1000

F-25LM



Properties

Property	Result
Туре	Silicone
Curing System	Neutral Curing Type
Viscosity	Soft Paste
Working time	120 min.(23 °C, 50 %RH)
Color	White
Specific Gravity	1.53 ± 0.1
Tensile Strength	approx. 1.3 N/mm²
Elongation	approx. 350 % \pm 100 % (ASTM D412)
Packaging	300 ml cartridge, 25ea/Box
	500 ml sausage, 20ea/Box
Shelf Life	12 months

KORESEAL MS1000 is a one-component modified silicone sealant. It shows excellent adhesion to most building exterior materials without primer coating. In particular, it is a KS F-25LM certified product that can be painted on the sealant surface.

Purpose of Use

- For crack repair and window surrounds
- For porous stone panel joints

Characteristics

- Excellent durability, weather resistance, and non-polluting performance.
- Can be painted on the sealant surface.
- One-component product that can be used regardless of the season (Excellent discharge workability).



KORESEAL GP Sealant

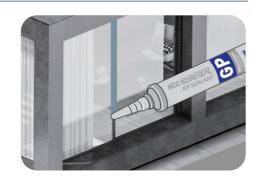
GP Sealant is one-part, neutral curing silicone sealant for many applications. It has outstanding adhesion to a wide range of construction materials.



- Multi-purpose
- Glazing and gap filling
- Sealing of exterior/interior joints

Characteristics

- Sealing and gap filling to most construction materials including concrete, bricks, aluminium, glass, ceramics and other materials.
- Excellent weathersealing and adhesion.
- Easy to use at various working conditions.



Properties

Property	Result
Туре	Silicone
Curing system	Neutral cure (Oxime)
Appearance(State)	Soft paste
Tack free time	Max. 20 mins
Color	White, Grey, Black, Transparent and Others
Specific gravity	1.43 ± 0.1
Hardness	30 ± 5 (Shore A)
Tensile strength	Approx. 1.0 N/mm² (ASTM D412)
Elongation	Approx. 450 % (ASTM D412)
Packing	280 ml PE Cartridge, 25pcs / Box

Construction and

Construction and Civil Engineering Work KORESEAL PS9210 (L)



Polysulfide

Soft paste

Min. 5 (Shore A)

Pail

2-part reaction curing type

Max. 3 hours (23 °C, 50 % RH)

Part A: Part B = 1:1 (by weight)

Approx. 0.2 N/mm (ASTM C1135)

Approx. 500 % (ASTM C1135)

Part A (White), Part B (Gray)

Properties

Curing system

Color

Mixing ratio

Hardness

Elongation Packing

Appearance(State)

As a two-component sealant with polysulfide resin as the binder, KORESEAL PS9210(L) is used on airport runways as it exhibits excellent resistance against aircraft fuel. It conforms to the requirements of the US federal standards (SS-S-200E).

Purpose of Use

- Concrete ground joints on airport runways
- Concrete joints in construction and civil engineering work

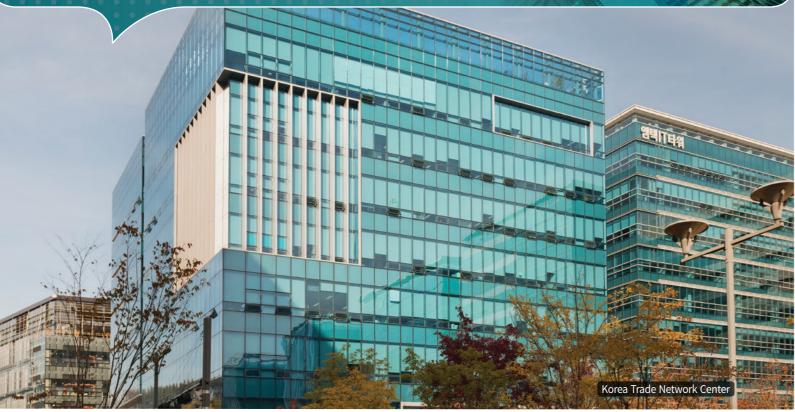
Characteristics

- Exhibits excellent resistance against fuel.
- Exhibits excellent workability as the main agent and curing agent mix well together.
- Primer: KP9050





KORESEAL GP SEALANT



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- ▶ For more information on product safety, refer to the Material Safety Data Sheet (MSDS).

Polysulfide Sealant for Insulating Glass

Bullium 6

PS9220(HL)

As a two-component sealant with polysulfide resin as the binder, KORESEAL PS9220(HL) is designed to be used in secondary sealing of insulating glass. It conforms to the requirements of KS G-20HM.

Purpose of Use

• Secondary sealing of general insulating glass (cannot be used on SSG insulating glass)



- Exhibits excellent adhesion to glass and aluminum.
- Cures completely regardless of the season.
- Boasts outstanding elasticity and thus results in ease of movement of the window and excellent tension absorption.
- Associated with very low dispersion of water vapor.
- Good resistance against UV radiation and water.



Properties

Property	Result
Гуре	Polysulfide
Curing system	2-part reaction curing type
Appearance(State)	Soft paste
Working time	30 ~ 90 minutes (23 °C, 50 % RH)
Color	Part A (Ivory), Part B (Black)
Mixing ratio	Part A: Part B = 10:1 (by weight)
Specific gravity	Part A(1.69 \pm 0.1), Part B(1.63 \pm 0.1)
Hardness	30 ~ 40 (Shore A)
Tensile strength	$0.6 \sim 1.0 \text{ N/mm} \text{ (ASTM C1135)}$
Elongation	100 ~ 200 % (ASTM C1135)
Packing	Part A - Drum, Part B - Pail

Construction and

Construction and Civil Engineering Work KORESEAL PU9330 (N)

F-25LM



Properties

Property	Result
Туре	Polyurethane
Curing system	2-part reaction curing type
Appearance(State)	Soft paste
Working time	Winter 2 ~ 6 hours (35 °C) Summer 3 ~ 8 hours (35 °C)
Color	Part A (Yellowish trnsparent), Part B (White, Gray)
Mixing ratio	Part A: Part B = 1:5 (by weight)
Specific gravity	Part A (1.03 \pm 0.1), Part B (1.75 \pm 0.1)
Hardness	25 ± 5 (Shore A)
Tensile strength	0.8 ~ 1.2 N/mm (ASTM C1135)
Elongation	400 ~ 600 % (ASTM C1135)
Packing	Part A - Can, Part B - Pail

KORESEAL PU9330(N) is a two-component polyurethane sealant consisting of an isocyanate (-NCO)-based main agent and a curing agent containing active hydrogen. Used on various building joints and windows, it conforms to the requirements of KS F-25LM.

Purpose of Use

• Joints around windows and various types of joints in construction and civil engineering work

Characteristics

- Can be applied paint for the purpose of enhancing durability and exterior performance after caulking.
- May undergo discoloration or have residual tackiness due to product characteristics.
- Exhibits excellent workability, with the main agent and the curing agent mixing well.
- Exhibits excellent safety against temperature changes due to high elongation rate and resilience.
- Primer: KP9930



Construction and

Construction and Civil Engineering Work KORESEAL PU9330 (L)

Properties

Property	Result
Туре	Polyurethane
Curing system	2-part reaction curing type
Appearance(State)	Soft paste
Working time	2 ~ 6 hours (23 °C, 50 % RH)
Color	Part A (Yellowish trnsparent), Part B (Gray)
Mixing ratio	Part A: Part B = 1:3 (by weight)
Specific gravity	Part A (1.03 \pm 0.1), Part B (1.58 \pm 0.1)
Hardness	20 ± 10 (Shore A)
Tensile strength	$0.6 \sim 1.0 \; \text{N/mm}^2 \; \text{(ASTM C1135)}$
Elongation	700 ~ 800 % (ASTM C1135)
Packing	Part A - Can, Part B - Pail

KORESEAL PU9330(L) is a two-component polyurethane sealant consisting of an isocyanate (-NCO)-based main agent and a curing agent containing active hydrogen. It is used on the joints on concrete roads.

Purpose of Use

· Contracting and expanding joints on concrete roads

Characteristics

- Used on smooth surfaces and inclines with a slope of no more than 15°.
- May undergo discoloration or have residual tackiness due to product characteristics.
- Exhibits excellent workability, with the main agent and the curing agent mixing well.
- Exhibits excellent safety against temperature changes due to high elongation rate and resilience.
- Primer: KP9930





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- ▶ For more information on product safety, refer to the Material Safety Data Sheet (MSDS).

Industrial Use KORESEAL PU9323

Water-Based Acrylic

Sealant for Fireproofing FIRE-KORESEAL SW9535A

F-12.5E

Properties



Purpose of Use

• For sealing gaps in drywalls (fire resistance and soundproofing) of large buildings

FIRE-KORESEAL SW9535A is a fireproofing sealant used on gaps in drywalls (fire resistance and soundproofing) of large buildings as well as cables and ducts. It is an outstanding product that has passed the 2-hour fire resistance requirement of FILK FS012.

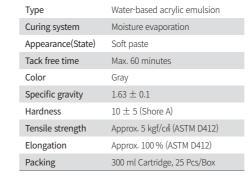
- Used on cables, pipe, ducts and other parts that penetrate walls, etc.
- Sealing fire protection areas inside buildings

Characteristics

- Easy to use as a one-component, water-soluble product.
- Exhibits excellent sealing performance resulting in exceptional gas-tightness.
- Excellent fire resistance performance (2 hours).
- With adhesion performance, it produces excellent soundproofing and watertightness effects.
- Does not produce any corrosive byproducts or byproducts that are harmful to the human body.
- FILK certification: 2 hours, F, T grades (based on FS012)







KORESEAL WL9530

KORESEAL WL9530 is an acrylic sealant used to seal joints and seams in walls, ceilings, around windows, between walls, etc. in hospitals, schools, offices, factories, etc. for a soundproofing effect. It conforms to the requirements of KS F-12.5E.

Purpose of Use

- Gypsum partition joints in buildings
- Various types of joints and cracks

Characteristics

- Possible to paint the surface afterwards. (The color may come out differently depending on the absorption rate and concealment.)
- As a water-based sealant, so there is no toxicity caused by solvent steam.



KCC



Automotive Repair or

- For car manufacture and repair
- For sealing welds, rivet connections, and overlapping joints

KORESEAL PU9323 is a one-component modified silicone

Characterized by fast curing and high elasticity it has been

sealant with modofied silicone polymer as the binder.

specifically developed for automotive repair.

• For container manufacture and repair

Characteristics

- A one-component sealant that can be used regardless of easons. (good gun workability)
- Exhibits excellent weather and heat resistance.
- Paintable.



Properties

Property	Result
Type	Water-based acrylic emulsion
Curing system	Moisture evaporation
Appearance(State)	Soft paste
Tack free time	Max. 60 (min)
Color	White, Gray
Specific gravity	1.6 ± 0.1
Hardness	35 ± 5 (Shore A)
Tensile strength	Approx. 2 kgf/cm² (ASTM D412)
Elongation	Approx. 100 % (ASTM D412)
Packing	300 ml Cartridge, 25 Pcs/Box



KORESEAL WL9530



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- ▶ For more information on product safety, refer to the Material Safety Data Sheet (MSDS).

One-Component

FIRE-KORESEAL QS119R

G-25HM, F-25HM



Properties

Property	Result
Туре	Silicone
Curing system	Neutral cure (Alkoxy)
Appearance(State)	Soft paste
Tack free time	Max. 60 minutes (23 °C, 50 % RH)
Color	Black, Gray
Specific gravity	1.43 ± 0.1
Hardness	35 ± 5 (Shore A)
Tensile strength	Approx. 2.0 N/mm (ASTM D412)
Elongation	Approx. 500 % (ASTM D412)
Packing	300 ml Cartridge, 25 Pcs/Box

FIRE-KORESEAL QS119R is one-component sealant used for fire protection that is used in relatively narrow penetration areas such as cables, pipes and ducts so as to prevent the rapid spared of fire and toxic gas. It exhibits excellent durability and heat and cold resistance, and it is designed to display outstanding waterproofing, moisture-proofing and soundproofing effects. It conforms to KS G-25HM and F-25HM as well as FILK.

Purpose of Use

- For sealing various joints in fire protection areas
- For fireproofing and dustproofing computer control rooms, computer rooms, etc.
- For fireproofing and waterproofing areas that are vulnerable to water (containing electronic/electric equipment)
- For fireproofing power utilities such as power plants, transformer rooms, etc.
- Fire protection areas of large buildings such as hospitals, hotels and airports
- Communication-related equipment such as cable terminals, etc. in the computer room or communication room
- Fireproofed glass system for balcony extension

Characteristics

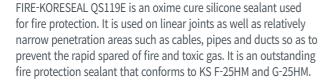
- Exhibits an outstanding fireproofing performance (stops fire).
- A one-component sealant that is easy to work with and use.
- Exhibits exceptional durability and outstanding sealing effect even after prolonged expansion and contraction.
- FILK Certification: 3 hours, F, T grades (based on FS012)





One-Component Fireproofing Sealant

FIRE-KORESEAL



Purpose of Use

- For sealing various joints inside and outside the fire protection areas of buildings
- For sealing fire protection areas where the use of indoor ecofriendly members (low TVOC) are required.
- For sealing joints that need to be resistant against fire such as smoke tubes, off-gas ducts, drywalls, cable trays, etc.
- For finishing power facilities such as power plants and substation rooms
- For fireproofing and waterproofing areas containing electric/electronic equipment and other types of equipment vulnerable to water

Characteristics

- Exhibits an outstanding fireproofing performance (stops fire).
- A one-component sealant that is easy to work with and use.
- Exhibits exceptional durability and outstanding sealing effect even after prolonged expansion and contraction.
- MOLIT Vertical Wall Linear Joint A-2 (MOLIT Notice No. 2018-772)



Properties

Property	Result
Туре	Silicone
Curing system	Neutral cure (Oxime)
Appearance(State)	Soft paste
Tack free time	Max. 30 minutes (23 °C, 50 % RH)
Color	Black, Gray
Specific gravity	1.50 ± 0.1
Hardness	35 ± 5 (Shore A)
Tensile strength	Approx. 1.0 N/mm (ASTM D412)
Elongation	Approx. 300 % (ASTM D412)
Packing	300 ml Cartridge, 25 Pcs/Box

Two-Component

Fireproofing Sealant FIRE-KORESEAL QS119F



Properties

Property	Result
Туре	Silicone
Curing type	2-part reaction curing type
Appearance(State)	Viscous liquid
Viscosity	Part A - 8 Pa · s / Part B - 8 Pa · s
Color	Part A (Black) / Part B (Gray)
Mixing ratio	Part A: Part B = 1:1 (by volume)
Specific gravity	Part A - 1.1 \pm 0.1 / Part B - 1.1 \pm 0.1
Expansion rate	Approx. 250 %
Cell structure	Closed Cell
Packing	Pail

Purpose of Use

- Inter-floor fire protection
- Cable tray or curtain wall opening
- Communication equipment circuits and ducts
- Piping and other penetration areas

Characteristics

- Exhibits excellent fireproofing performance.
- Boasts outstanding volume expansion capacity.
- Does an excellent job stopping the spread of toxic gas.
- Easy to use for repair, etc.
- Boasts exceptional durability and maintains elasticity permanently to absorb vibration
- FILK Certification: 2 hours, F, T grades (based on FS012)



FIRE-KORESEAL QS119E

QS119E

KCC

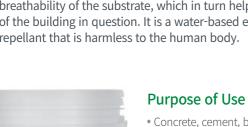


- ▶ The data provided are based on experiments and practical experience and may differ from the results obtained from the products in question depending on the actual working conditions or improvements made to the quality. Users should conduct an adequate review before using the products.
- ▶ For more information on product safety, refer to the Material Safety Data Sheet (MSDS).

Water-Based Silicone Water Repellant

Water-Based Silicone Water Repellant KCC WATER-SEAL \$1200Z

KCC WATER-SEAL SI1200Z is an off-white water-based silicone water repellant in the form of emulsion. Silicone compound reacts on the substrate to form a semi-permanent water repellant layer on the surface thereby preventing damage and contamination resulting from penetration of water and basic ions. Also, it helps maintain the breathability of the substrate, which in turn helps prolong the lifespan of the building in question. It is a water-based emulsion-type water repellant that is harmless to the human body.



KCC WATER-SEAL SI1200Z

- Concrete, cement, bricks and stone materials
- Porous buildings into which water can penetrate

Characteristics

- This is a water-based eco-friendly product.
- Results in excellent water repellant performance on the applied surface.
- Exhibits superb breathability

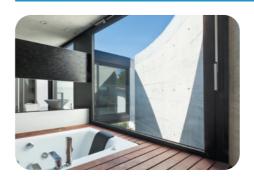


Properties

Property	Result
Туре	Silicone emulsion
Curing system	Moisture evaporation
Viscosity	1~30 cPs.(Low viscosity fluid)
Color	Milky-white
Active content	7 %
Solvent	Water
Packing	Pail

One-Component Polyurethane Foam

KORESEAL-FORM PU40



Properties

Property	Result
Working temperature	5 ~ 30 °C
Tack free time	10 ~ 15 min. (20 °C, 60 % RH)
Cutting time	40 ~ 60 min. (20 °C, 60 % RH)
Elapse time for complete hardening	24 hr. (20 °C, 60 % RH)
Heat resistant emperature after gardening)	-30 ~ 80 °C
Combustibility fire class	DIN 4102 B3
Packing	750 ml

This is a one-component polyurethane foam which is hardened by the humidity in the air when it is sprayed from the can. Its expanding capability and adhesiveness are excellent to fill various gaps, empty space and crack and its quality is outstanding in terms of its properties such as thermo-keeping, insulation and sound proof.

Purpose of Use

- Excellent insulation performance, prevention of the spread of vibrations and noise, and excellent adhesion
- Low absorption rate, excellent resistance against moisture penetration, and outstanding compressive strength
- Eco-friendly product that does not contain any chlorofluorocarbons (CFCs)
- Excellent resistance against corrosion caused by water, petroleum, oils, acid, solvents and microorganisms

Characteristics

- Density: 17 ~ 25 kg/°C
- Thermal conductivity: 0.02 ~ 0.04 W/m.k (at 20 °C)
- Water absorption : 1.0 ~ 2.0 g / 100 °C
- Yield: Max. 40 L
- Shelf life: 12 months (at 20 °C)



One-Component Polyurethane

KORESEAL-FORM PU65



Properties

Property	Result
Working temperature	5 ~ 30 °C
Tack free time	10 ~ 15 min. (20 °C, 60 % RH)
Cutting time	40 ~ 60 min. (20 °C, 60 % RH)
Elapse time for complete hardening	24 hr. (20 °C, 60 % RH)
Heat resistant temperature (after gardening)	-30 ~ 80 °C
Combustibility fire class	DIN 4102 B2
Packing	750 ml

Purpose of Use

- Work performance with maximum 60 % more volume than normal form
- Can produce up to 65 L of foam from a single can (at 20 °C, 60 % RH)
- A flame retardant product that satisfies the requirements of DIN 4102 Fire Class B2 (Germany)

Characteristics

- Density: 17 ~ 25 kg/°C
- Thermal conductivity: 0.02 ~ 0.04 W/m.k (at 20 °C)
- Water absorption : 1.0 ~ 2.0 g / 100 °C
- Yield: Max. 65 L
- Shelf life: 18 months (at 20 °C)











SEALANT

A sealant, which is used for the purpose of achieving water- and air-tightness of various types of joints, should satisfy the following three requirements:

- 1. Maintain water and air-tightness as its basic performance.
- 2. After completely cured, sealant should neither crack or detach from joint (must be elastic and flexible enough to accommodate joint movement).
- 3. Exhibit excellent durability.



TECHNICAL INFORMATION

- 35 SSG Method?
- 36 KORESEAL's Standard Methods 39 and Procedures
- 37 Precautions During Use and Handling
- 8 Calculation of Sealant Usage
- 39 KS (KS F 4910: Sealants for sealing and glazing in buildings)
- 40 List of References

KORESEAL SEALANT Data Sheet

About the Structural Sealant Glazing (SSG) Method

The structural sealant glazing (SSG) method refers to the sheet glass curtain wall method that involves finishing the external wall with reflective glass, etc. using silicone sealant to prevent external exposure of the metal frame. It was introduced after the development of lock strip gasket glazing in the United States in 1946. In this method, the Alframe (Mullion), vision glass, structural sealant and accessories are applied in combination, and it is classified into two methods: two-side support method and four-side support method.

Considerations for SSG

1) The importance of structural strength (modulus)

When the wind pressure against a high-rise building is strong, there may be excess strain on the glass due to the modulus of the sealant, and this can have an effect on the bending or flexural strength of the glass. This is why sealants of medium or low modulus should not be used. When a sealant with a design strength of 1.4 kgf/cm is applied, the strain must be maintained at no more than 25 %.

2) Safety Factor

The safety factor is an important element that determines the extent to which the sealant can withstand the external pressure in a glass structure. The design safety factor of sealants should be at least 5:1.

Structural Glazing System

1) The force to structurally maintain the mullions between glass and metal

As it can be seen in the pull-off test prescribed in ASTM D412, KSF 4910, etc., the modulus and maximum tensile strength of the sealant used are very crucial, and they serve as the basis for assessing whether the sealant has the strength to withstand external pressure.

2) Calculation of the structural bite

As the most meaningful factor in this method, this refers to the length at which the glass and frame are maintained. The length varies depending on the wind pressure, size and weight of the glass, design, etc.

3) Review of the glue line thickness

The thickness of the sealant should be at least 6mm minimum.

4) Sealant color

Black and gray sealants are mainly used in order to protect the surfaces of building materials against UV radiation.

5) Design review

There is a need to review the design for using a sealant for the purpose of SSG work together with the silicone sealant supplier.

- 6) Silicone sealant for SSG
- 1) For structural use: SL819 (one-component) / SL820 (two-component) 2) For secondary sealing of insulated glass: SL822
- 3) Weather seal: SL868 / SL999 (non-staining)

7) Detailed diagram of the horizontal surface of SSG work

- ① Structural silicone sealant (SL819/SL820)
- ② Weather seal silicone sealant (SL999/SL868)
- 3 Glue line thickness
- 4 Structural bite
- (5) Transom fin
- 6 Backup material
- 7 Glas
- ® Secondary sealing material for insulated glass (SL822)

KCC Structural Bite Calculation Service

- 1) Calculation of the depth (S/B) and width (G/T) required for structural sealant application
- 2) Calculation of the depth (D) required for the application of a secondary sealant for insulated glass
- 3) Calculation of the depth (D) and width (B) required for weather seal application

Standard Methods and Procedures for Construction Sealants

01. Surface

- Remove any residues from joints such as dust, oil, moisture, and polishing residues.
- Clean any contaminated areas with a solvent using a cloth. Make sure to use a clean cloth to wipe off the adherend that has solvent. Do not use detergent or water to wash it off. If there is a risk of dissolving the surface to which the sealant will be applied, use isopropyl alcohol. (Use xylene or toluene as a solvent. Do not use petroleum, light oil, or gasoline.)
 - In the case of porous materials, clean by grinding or cutting blast, and then remove any residual foreign matter using clean compressed air or vacuum cleaner. Be sure to use the sealant on a clean and dry surface.
 - If the adherend is contaminated by other sources of contamination such as dust or rain water, surface treatment must be performed again. Most of the cleaning solvents are highly flammable, and thus there is a need to take the necessary precautions in a well-ventilated area.

02. Back-up Material Insertion

- Use a material that does not absorb water such as polyethylene (closed cell type).
- In principle, the back-up material should be 3 to 4 mm thicker than the actual joint (width-wise), but prior approval
- When inserting the back-up material, be careful not to damage the back-up material surface and edges, and adjust the sealant to ensure an appropriate shape factor (depth/width).
- Practice caution, as foaming may occur when using a damaged back-up material.
- Except in special cases, a round back-up material should be used, in principle. If a back-up material cannot be used, use bond breaker tape.
- Back-up materials should be installed only in the area that is worked on that day.

03. Masking

- To prevent contamination or damage around the area of sealant application, attach tape to both sides of the joint, and use a product that does not leave any adhesive residues once the masking tape is removed.
- Masking tape should be used only on the area that is worked on that day.

04. Primer Application

- Before applying the sealant, check and confirm its adhesion with the adherend through the adhesion test. We recommend suitable primers based on the results of performing an adhesion test on the sealant and the materials used at the project site.
- To ensure proper adhesion between the sealant and adherend, make sure to apply the recommended KORESEAL primer evenly with a brush. (Coating amount: 0.3kg/m2) Be careful not to apply primer to the back-up material. (Using excess primer may lead to loss of adhesive strength, so apply it with care. If excessively applied, a white film will form on the surface, which may cause adhesion failure. So make sure to clean the surface before proceeding.) Be careful not to apply the primer on areas other than the adherend (Norton tape, etc.).
- Most primers are highly flammable, and thus there is a need to take the necessary precautions in a well-ventilated area.

05. Sealant Filling

- After applying the primer, the area in question should be filled with the sealant as soon as possible after the specified drying time (30 minutes) has elapsed.
- Filling should start from the intersections or edges of the joints, and it should be performed meticulously covering every corner to prevent any gaps or air bubbles. Avoid any intersections or corners when finishing the filling process.
- Be careful not to let any air bubbles enter the joints.

06. Surface **Finishing** (Tooling)

- Perform tooling immediately after the caulking work before the sealant hardens.
- Prepare a spatula that fits the width of the joint in question, and use it to push against the surface of the sealant at a specified angle.
- Use the spatula to push the sealant several times at an intersection or corner.
- Removal
- **07.** Masking Tape Remove the masking tape immediately after tooling. Make sure the area around it is clean and uniform.
- 08. Cleaning
- Be careful not to affect the adherend and sealant when cleaning the surrounding area after completing the work.

09. Curing

• During curing, the area to which the sealant has been applied should be protected from dust and other forms of contamination. Do not touch it until it is completely cured, and be careful not to apply any physical impact. (Caution: The sealant and adherend must be fixed in place to prevent movement until the sealant is completely cured.)

Precautions During Use and Handling

! Caution

- Keep out of reach of children. The contents may have an adverse impact on health such as headache, dizziness, and dermatitis. Be careful not to ingest the product, inhale its vapor, or come into direct contact with it.
- Do not store or use the product near fire or flame.
- Make sure to ventilate the area sufficiently when using or drying the product in an enclosed place.
- Use of the product for purposes other than the specified is strictly prohibited.
- Be careful not to cause any physical impact on the container.
- During transportation and storage, store it in a dry and cool place (5~25 °C) that does not receive any direct sunlight to prevent deterioration. Containers must be kept sealed, and the product remaining after use should be stored in the same way. (When water gets in, it will become gel-like and cannot be used.)
- Avoid using the product on rainy days, days with high humidity (over 85%), and cold days (below 5 °C), as the product will not exhibit its normal properties. (Cracks and adhesion failures among other problems may occur, so please contact our research department
- Determining the width and depth of the joint is very important when it comes to using a sealant for the purpose of adhesion, and it is not desirable for the joint to be too shallow or deep. (Recommended joint specification – Width: Depth = 2:1, the width of the adherend needs to be at least 6 mm. Otherwise, adhesion failure may occur depending on the substrate and construction condition.) - For inquiries on adequate joint shape and related matters, please contact our technical department.
- Do not use on adherends whose temperature is above 50 °C.
- The curing speed may vary depending on the amount applied.
- o If the adherend is contaminated, the adhesive strength may become reduced. So wipe off the surface with a cleaning agent to
- The specified drying time must be observed, as it has a decisive effect on sealant performance.
- Yellowing may occur in case of prolonged exposure to UV radiation.
- Do not mix this product with other products (solvent, thinner, etc.).
- Do not use silicone sealant for non-polluting fluorine or self-cleaning glass materials.
- Wear gloves and protective goggles when handling the product.
- Damaged back-up material may lead to formation of air bubbles on the surface and inside of the sealant, which will likely degrade
- In the case of a structure whose back surface is not sealed, swelling and air bubbles may occur on the sealant surface due to joint movement, inflow of external air, etc. So be sure to use it on a sealed structure.
- In case of large movements in the joint during the initial curing process of the sealant after application, surface wrinkles may occur as the sealant hardens. So make sure to apply the sealant when there is minimal temperature variation causing contraction and expansion of the material.
- Wash the exposed areas of the body after completing the work.
- Make sure to dispose of the product through a waste disposal company designated by the Ministry of Environment.
- Our sealants are chemical products, and they may deteriorate in case of prolonged storage. So make sure to use it before the expiration date.
- * The color, volume, date of manufacture, and lot number are indicated separately on each product.
- * For other inquiries, please visit our website or contact our customer service center for more information.
- * If there is any problem with the product you have purchased from us, we will provide compensation in accordance with the damage compensation regulations announced by the Ministry of Economy and Finance.

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Calculation of Sealant Usage

Joint Size (mm)	Sealant Usag	e Per Meter (M)
Width • Depth	Amount of sealant per M (L)	Number of sealing M per cartridge (300ml)
3 × 3	0.009	34.4
4 × 4	0.016	19.4
5 × 5	0.025	12.4
6 × 6	0.036	8.6
8 × 8	0.064	4.8
10 × 5	0.05	6.2
10 × 10	0.1	3.1
15 × 10	0.15	2.1
15 × 15	0.23	1.3
20 × 10	0.2	1.5
20 × 15	0.3	1
20 × 20	0.4	0.7
30 × 10	0.3	1
30 × 15	0.45	0.7
30 × 20	0.6	0.5
40 × 10	0.4	0.8
40 × 20	0.8	0.4
40 × 30	1.2	0.3
50 × 10	0.5	0.6
50 × 20	1	0.3
50 × 30	1.5	0.2

KS (KS F 4910: Sealants for sealing and glazing in buildings)

1. Types of Sealants



2. Sealant Performance

1) G Type Grades

Characteristics		Grades					Test Method			
Characteristics			25LM	25HM	20LM	20HM	30SLM	30SHM	KS F 2621	
Posistance	e to flow (mm)	Horizontally		3 and under					4.1(2)	
Nesistarice	to now (min)	Vertically			3 and	under			4.1(-)	
Elastic rec	overy (%)				60 and	d over			4.2(2)	
The ratio of elongation % (3)		200 (200 (M100) 160 (M60)							
Tensile properties	secant tensile modulu	23 °C	0.4 and under	More than 0.4	0.4 and under	More than 0.4	0.4 and under	More than 0.4	an 0.4 4.3 (2)	
F - F	(N/mm²)	-20 °C	0.6 and under	More than 0.6	0.6 and under	More than 0.6	0.6 and under	More than 0.6		
Tensile pro	Tensile properties at maintained extension		Should not undergo failure (5)					4.4(2)		
Adhesion/coh	nesion properties at variab	le temperatures	Should not undergo failure (6)					4.5(2)		
Adhesion/cohesion properties after exposure to heat and artificial light and to water			Should not undergo failure (5)				4.7(2)			
Adhesion/cohesion properties at maintained extension after water immersion Should not			hould not und	dergo failure (5)		4.8(2)			
Resistance to compression (N/mm²)			Report the test results			4.9(2)				
Loss of volume (%)			10 and under			4.11(2)				

2) F Type Grades

Characteristics			Grades					Test Method		
		25LM	25HM	20LM	20HM	12.5E	12.5P	7.5	KS F 2621	
Resistance to flow (mm)			3 and under						4.1(2)	
Nesistarice	to now (mm)	Vertically		3 and under						4.1(2)
Elastic rec	overy (%)		70 an	d over	60 an	d over	40 and over	Under 40	-	4.2 (2)
	The ratio of elonga	tion % (3)	200	(M100)	160	(M60)		-		
Tensile properties	Tensile secant tensile modulus 23 °C		0.4 and under	More than 0.4 (4)	0.4 and under	More than 0.4 (4)			4.3 (2)	
properties	(N/mm²)	-20 °C	0.6 and under	More than 0.6 (4)	0.6 and under	More than 0.6 (4)		· ·		1.5 ()
	Elongation at break % (6)		- 100 and over 20 and over				20 and over			
Tensile pro	perties at maintained	dextension	Should not undergo failure (5)					-	4.4 (2)	
Adhesion/coh	esion properties at variabl	e temperatures	Should not undergo failure (6)					-	4.5 (2)	
Adhesion/cohesion properties		-				Should not und	dergo failure (4)	4.7 (2)		
Adhesion/cohesion properties at maintained extension after water immersion Should not undergo failure (5)					4.8 (2)					
Elongation at break after water immersion (7)		-			100 and over	20 and over	4.9 (2)			
Loss of vol	ume			10 and under 25 and under		r	4.11 (2)			

List of References

Construction Project	Country / Region	Area of Use	KCC SEALANT
Hanoi Lotte Mall	Hanoi / Vietnam	Structural Glazing Weatherseal	SL820 / SL819 / SL999 / SL868
Samsung R&D Campus	Hanoi / Vietnam	Structural Glazing Weatherseal	SL820 / SL819 / SL999 / SL868
Westlake Iconic Tower	Hanoi / Vietnam	Structural Glazing Weatherseal	SL820 / SL819 / SL999 / SL868
Starlake City (B3CC1)	Hanoi / Viet Nam	Structural Glazing Weatherseal	SL868 / SL999 / SL820 / SL819
Lotter Center	Hanoi / Vietnam	Structural Glazing Weatherseal	SL819 / SL820 / SL822 / SL868
Keangnam Hanoi Landmark Tower	Hanoi / Vietnam	Structural Glazing Weatherseal	SL819 / SL820 / SL999 / SL868
Vietnam Handico Tower	Hanoi / Vietnam	Structural Glazing Weatherseal	SL820 / SL999
LG Display Plant	Haiphong / Vietnam	Weatherseal	SL868
The Graces Tower	HCM / Vietnam	Structural Glazing Weatherseal	SL820 / SL2000 / SL907 / SL868
The 67 Tower	HCM / Vietnam	Structural Glazing Weatherseal	SL820 / SL2000 / SL907 Premium / SL868
Troung DH Kinh Te	HCM / Vietnam	Weatherseal	SL1000
Diamond Riverside	HCM / Vietnam	General Glazing	SL907 Premium
CITI Esto	HCM / Vietnam	General Glazing	SL907 Premium
MIZUKI PARK	HCM / Vietnam	General Glazing	SL907 Premium
SAFIRA KHANG DIEN	HCM / Vietnam	General Glazing	SL907 Premium
Xi Grand Court	HCM / Vietnam	General Glazing	SL907 Premium
DAA Builing	HCM / Vietnam	Structural Glazing Weatherseal	SL819 / SL868
Samsung Electronics / Samsung Display II	HCM / Vietnam	Weatherseal	SL999
Gigamall Thu Duc	HCM / Vietnam	Structural Glazing Weatherseal	SL1000 / SL907P / SL907
SAMSUNG Electronics HCMC CE Complex	HCM / Vietnam	Structural Glazing Weatherseal	SL999 / PU9330 / SL907
DONGTAM's Headquarter Builing	Long An Province / Vietnam	Structural Glazing Weatherseal	SL819 / SL868
Vung Tau Melody	Vung Tau / Vietnam	General Glazing	SL907 Premium
Tan An City Building	Tan An City / Vietnam	Structural Glazing Weatherseal	SL819 / SL868
SAMSUNG Electronics Xian FAB 2	Xian / China	General Glazing	PU9330(N) / KP9930 / SL907 Premium
Daewoo Amara Hotel	Yanggon / Myanmar	Structural Glazing Weatherseal	SL819 / SL820 / SL822 / SL999
Bando-Ubora	Dubai / UAE	Structural Glazing Weatherseal	SL819 / SL820 / SL999
Renaissance Tower	Istanbul / Türkiye	Structural Glazing IG	SL822
Regnum Tower	Istanbul / Türkiye	Structural Glazing IG	SL822
The eighth cassation court in the city of Kemerovo	Kemerovo / Russia	Weatherseal	SL1000 / SL868
Khoroshevskaya gymnasium (Khoroshkola)	Moscow / Russia	Weatherseal	SL868
Multifunctional residential complex AQUATORIA	Moscow / Russia	Structural Glazing Weatherseal	SL1000 / SL868 / SL819 / SL999AK
VTB Arena Park	Moscow / Russia	Weatherseal	SL868 / SL999AK
ParcOne Tower	Seoul / Korea	Structural Glazing Weatherseal	SL819 / SL820 / SL868 / SL999
LCT Tower	Busan / Korea	Structural Glazing Weatherseal	SL819 / SL820 / SL868 / SL999
Samsung Yongsan Raemian Tower	Seoul / Korea	Structural Glazing Weatherseal	SL819 / SL820 / SL822 / SL999 / SL868

Construction Project	Country / Region	Area of Use	KCC SEALANT
BIFC	Busan / Korea	Structural Glazing Weatherseal	SL819 / SL820 / SL999
Gwanghwamun D Tower	Seoul / Korea	Structural Glazing Weatherseal	SL820 / SL868 / SL999
The SaRang Community Church	Seoul / Korea	Structural Glazing Weatherseal	SL819 / SL868 / SL999
Haeundae Doosan We've The Zenith	Busan / Korea	Structural Glazing Weatherseal	SL819 / SL820 / SL822 / SL868
Kumho Asiana HQ	Seoul / Korea	Structural Glazing Weatherseal	SL820 / SL868 / SL999
Star City	Seoul / Korea	Structural Glazing Weatherseal	SL819 / SL820 / SL999
The# Firstworld	Incheon / Korea	Structural Glazing Weatherseal	SL819 / SL820 / SL999
Raemian Cælĭtus	Seoul / Korea	Structural Glazing Weatherseal	SL820 / SL868 / SL999 / SL1000
GFC (Gangnam Finance Center)	Seoul / Korea	Structural Glazing Weatherseal	SL820 / SL999
SIFC HOTEL(Conrad Seoul)	Seoul / Korea	Structural Glazing Weatherseal	SL820 / SL868 / SL999
O'biz Tower	Anyang / Korea	Structural Glazing Weatherseal	SL819 / SL999
Incheon Airport Terminal 1	Incheon / Korea	Structural Glazing Weatherseal	SL819 / SL820 / SL999
Incheon Airport Terminal 2	Incheon / Korea	Structural Glazing Weatherseal	SL819 / SL820 / SL999
New Global City 26th Street Builing	New Global City / Philippines	Structural Glazing Weatherseal	SL819 / SL868
NET LIMA	New Global City / Philippines	Structural Glazing Weatherseal	SL819 / SL868
Foreigner's Rent House	New Global City / Philippines	Structural Glazing Weatherseal	SL819 / SL868
ATENEO De Manila University Dormitory	Manilla / Philippines	Structural Glazing Weatherseal	SL819 / SL868
Century Glass Center	Manilla / Philippines	Structural Glazing Weatherseal	SL819 / SL999
SIBA's New Builing	Istanbul / Türkiye	Structural Glazing Weatherseal	SL819 / SL820
GEVAHIR Shopping Center	Istanbul / Türkiye	Structural Glazing Weatherseal	SL819
ISTINYE PARK	Istanbul / Türkiye	Structural Glazing Weatherseal	SL819 / SL820
Marmara Shopping Center	Istanbul / Türkiye	Structural Glazing	SL820
Jason Window Building	Perth / Australia	Structural Glazing	SL819 / SL820
Perth Multi-Purpose Building	Perth / Australia	Structural Glazing	SL820 / SL822
T&C Shopping Center	Melbourne / Australia	Structural Glazing	SL819
SIMON Building	Sydney / Australia	Structural Glazing	SL819
AEON Mall BSD City	Tangerang / Indonesia	Structural Glazing Weatherseal	SL819 / SL999
Jakarta NTT builiding	Jakarta / Indonesia	Structural Glazing Weatherseal	SL819 / SL822
The Reiz Condo Medan	Medan / Indonesia	Structural Glazing Weatherseal	SL819 / SL999
PALM SPRING RESIDENCES (Condonminium)	Bintulu / Malaysia	Structural Glazing	SL819
Commerce Square	Bintulu / Malaysia	Structural Glazing	SL819
KPJ Selangor (Hospital)	Shah Alam / Malaysia	Structural Glazing	SL819
The Landmark (Integrated Development)	Klang / Malaysia	Structural Glazing	SL819
Sunway Pyramid Extension	Sunway / Malaysia	Structural Glazing	SL819
Menaiktaraf Jeti Dan Bangunan Terminal	Pulau Langkawi, Kedah / Malaysia	Structural Glazing	SL819

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List of References - Weather Sealing

Construction Project	Location	Construction Firm	Area of Use	Product Used
Hyundai Heavy Industries Office Building	Gangnam-gu, Seoul	Hyundai Heavy Industries	Stone material and weather sealing	Non-polluting SL999
HDC Hyundai Development Company Office Building	Gangnam-gu, Seoul	HDC Hyundai Development Company	Exterior panel and weather sealing	Non-polluting SL999
Techno Mart-21	Gwangjin-gu, Seoul	Hyundai E&C	Exterior panel and weather sealing	Non-polluting SL999
Hyundai Department Store Cheonho Branch	Gangdong-gu, Seoul	HDC Hyundai Development Company	Stone material and weather sealing	Non-polluting SL999
Incheon International Airport (Yeongjongdo)	Yeongjongdo, Incheon	Hanjin Consortium	Exterior panel and weather sealing	Non-polluting SL999
Mok-dong Samsung Chereville II	Yangcheon-gu, Seoul	Samsung C&T Corp.	Weather seal	KORESEAL SL868
Haeundae Centum City	Haeundae-gu, Busan	POSCO Development	Weather seal	KORESEAL SL868
Haeundae Bene City	Haeundae-gu, Busan	Hyundai E&C	Weather seal	KORESEAL SL868
Yeouido Daewoo Trump World II	Yeongdeungpo-gu, Seoul	Daewoo E&C	Weather seal	KORESEAL SL868
Pyeongcheon Hyosung Intellian	Dongan-gu, Anyang	Hyosung E&C	Weather seal	KORESEAL SL868
Sung Won Sante View in Deungchon-dong	Gangseo-gu, Seoul	Sung Won Corp.	AL panel	KORESEAL SL868
Military Mutual Aid Association Hall in Dogok-dong	Gangnam-gu, Seoul	Hyundai E&C	AL panel	KORESEAL SL868
Auxiliary facilities of Incheon International Airport	Yeongjongdo, Incheon	Kumho Consortium	AL panel	KORESEAL SL868
Samsung Lacville in Ilsan	Goyang, Gyeonggi-do	Samsung Heavy Industries	Weather seal	KORESEAL SL868
Keungil Tower	Gangnam-gu, Seoul	Samsung Construction	AL-curtain wall	KORESEAL SL868
Korea Technology Finance Corporation (Kibo) Office Building	Yuseong-gu, Daejeon	Daewoo E&C	Weather seal	KORESEAL SL868
KOPEC Information Center	Yongin, Gyeonggi-do	Hanjin Construction	Weather seal	KORESEAL SL868
Midopa Department Store	Dobong-gu, Seoul	Midopa Construction	Weather seal	KORESEAL SL868
Cheil Sports Building	Songpa-gu, Seoul	Korea Development	Weather seal	KORESEAL SL868
Yangdong zones 4 and 5	Jung-gu, Seoul	Daewoo E&C	Weather seal	KORESEAL SL868
Wonbang Building	Gangnam-gu, Seoul	Doosan E&C	Weather seal	KORESEAL SL868
Hanshin Securities Gangdong Building	Songpa-gu, Seoul	Samgyeong Construction	Weather seal	KORESEAL SL868
Boram Securities Office Building	Yeongdeungpo-gu, Seoul	KOLON E&C	Weather seal	KORESEAL SL868
Aju Corporation Office Building	Seocho-gu, Seoul	Doosan E&C	Alpolic panel	KORESEAL SL868
Samsung Lions Sports Center	Seocho-gu, Seoul	Samsung Construction	Alucobond panel	KORESEAL SL868
Ace Techno Twin Tower	Guro-gu, Seoul	Ace Construction	AL sheet	KORESEAL SL868
Shinwon Plaza	Ansan, Gyeonggi-do	Shinwon Construction	AL-curtain wall	KORESEAL SL868

List of References - Glass glazing / Windows / Antibacterial

Construction Project	Location	Construction Firm	Area of Use	Product Used
Songdo American Town IPARK residential-commercial complex	Incheon Yeonsu-gu	Hyundai Development Company	Glass glazing	SL907 Premium
Giheung Station Park Purzio new construction	Gyeonggi-do Yongin-si	Daewoo Construction	Glass glazing	SL907 Premium
Hillstate Riverpark residential-commercial complex	Gwangsan-gu Gwangju-si	Hyundai Construction	Glass glazing	SL907 Premium
Godeok 3rd Complex Arteon new construction	Seoul Gangdong-gu	Hyundai Construction	Glass glazing	SL907 Premium
Bangok-dong 4-1 living area P3 M3BL new construction	Sejong-si Bangok-dong	Hyundai Construction	Glass glazing	SL907 Premium
Mapo West River Taeyoung Dessian new construction	Seoul Mapo-gu	POSCO Construction	Glass glazing	SL907 Premium
Cheongdam-dong Deokyeong Building new construction	Seoul Gangnam-gu	Taeyoung Construction	Glass glazing	SL907 Premium
Yeongjong Unseo Station Solium Centum Sky new construction	Incheon-si Jung-gu	Kiwoom Construction	Glass glazing	SL907 Premium
Jungheung S-Class residential-commercial complex	Gyeonggi-do Suwon-si	Cheongdo Construction	Glass glazing	SL907 Premium
Juan Jiwell Estate new construction	Incheon-si Nam-gu	Jungheung Construction	Glass glazing	SL907 Premium

Construction Project	Location	Construction Firm	Area of Use	Product Use
The Highest site	Sejong-si Dajeong-dong	Shinyoung Construction	Glass glazing	SL907 Premium
Gamgye Hillstate 2nd	Gyeongnam Changwon-si	Kumho Construction	Glass glazing	SL907 Premium
Sindongtan SK VIEW 3rd	Gyeonggi Hwaseong-si	Hyundai Construction	Glass glazing	SL907 Premium
aon Private	Gyeonggi Namyangju-si	SK Construction	Glass glazing	SL907 Premium
Suyeong SK VIEW	Busan Suyeong-gu	Laon Construction	Glass glazing	SL907 Premium
Suwon Venture Valley 2	Gyeonggi Suwon-si	SK Construction	Glass glazing	SL907 Premium
Gyeryong Halla Vivaldi The Central	Chungcheongnam-do Gyeryong-si	Daerim Industrial	Window surrounds	SL1000
Hildesheim Officetel	Chungcheongbuk-do Cheongju-si	Gyeryong Halla Construction	Window surrounds	SL1000
Gwangju Chowol Station Halla Vivaldi	Gyeonggi-do Gwangju-si	Won Construction	Window surrounds	SL1000
Cheongsu Administrative Town Geumho Eoullim	Cheonan-si, Chungcheongnam-do	Halla Construction	Window surrounds	SL1000
Jngcheon Treemage	Yeosu-si, Jeollanam-do	Kumho Construction	Window surrounds	SL1000
Truel Eco City Apartment	Seo-gu, Incheon	Doosan Construction	Window surrounds	SL1000
Moa Miraedo Central City 1st	Wanju-gun, Jeollabuk-do	Ilsung Construction	Window surrounds	SL1000
Opera Double W Apartment	Buk-gu, Daegu	Moa Construction	Window surrounds	SL1000
Siheung Geumgang Pentarium Ocean Bay Apartment	Siheung-si, Gyeonggi-do	IS Dongseo	Window surrounds	SL1000
Gwangju Gyerim I-Park SK View	Dong-gu, Gwangju-si	Geumgang Housing	Window surrounds	SL1000
DMC River City Zai	Goyang-si, Gyeonggi-do	Hyundai Development Company	Window surrounds	SL1000
Vonju Innovation City Jeil Punggyeongchae Centum Forest	Wonju-si, Gangwon-do	GS Construction	Window surrounds	SL1000
North Hyundai Apartment	Nowon-gu, Seoul	Jeil Construction	Window surrounds	SL1000
/emiji Urban Core Officetel	Guro-gu, Seoul	Hyundai Industrial	Window surrounds	SL1000
.H Pangyo Valley Forest Zai	Seongnam-si, Gyeonggi-do	Geumseong Baekjo	Bathroom / Kitchen	SL825(ECO)
Bangbae Grand Zai	Seocho-gu, Seoul	GS Construction	Bathroom / Kitchen	SL825(ECO)
Hyundai Apartment Complex APT	Songpa-gu, Seoul	GS Construction	Bathroom / Kitchen	SL825(ECO)
Namsong Tower	Hanam-si, Gyeonggi-do	Kangsam Construction	Bathroom / Kitchen	SL825(ECO)
Pyeongtaek US Military Family Accommodation	Pyeongtaek-si, Gyeonggi-do	GL Construction	Bathroom / Kitchen	SL825(ECO)
an Gangdong Comhomestay	Gangdong-gu, Seoul	Daewoo Construction	Bathroom / Kitchen	SL825(ECO)
e-Convenient World Yeosu The First APT	Yeosu-si, Jeollanam-do	Sidae Construction	Bathroom / Kitchen	SL825(ECO)
Gyeongbuk New Town Happy Housing	Yecheon-gun, Gyeongsangbuk-do	Daerim Construction	Bathroom / Kitchen	SL825(ECO)
Chuncheon Central Park Purzio	Chuncheon-si, Gangwon-do	Hanbaek Construction	Bathroom / Kitchen	SL825(ECO)
^o urzio Clater	Yeoju-si, Gyeonggi-do	Daewoo Construction	Bathroom / Kitchen	SL825(ECO)
Dietre The First APT	Paju-si, Gyeonggi-do	Daewoo Construction	Bathroom / Kitchen	SL825(ECO)
Daegu International High School	Buk-gu, Daegu	Daebang Construction	Bathroom / Kitchen	SL825(ECO)
e-Convenient World Bupyeong Station Urban Luce	Bupyeong-gu, Incheon	Seohyeon Construction	Bathroom / Kitchen	SL825 Premium(EC
Shinyoung Handul Water Light City Jiwell City Central Purzio	Asan-si, Chungcheongnam-do	DL Construction	Bathroom / Kitchen	SL825 Premium(EC
City Advanced Namhae Onet Apartment	Gwangju-si Nam-gu	Daewoo Construction	Bathroom / Kitchen	SL825 Premium(EC
Hoban Summit Grand Mark	Asan-si, Chungcheongnam-do	Namhae Construction	Bathroom / Kitchen	SL825 Premium(EC
Siheung Janghyeon Seohee Star Hills	Siheung-si, Gyeonggi-do	Hoban Construction	Bathroom / Kitchen	SL825 Premium(EC
Sindaebang Gyeongnam Earthville Apartment	Dongjak-gu, Seoul	Seohee Construction	Bathroom / Kitchen	SL825 Premium(EC
			D. I. Juni I	CL 025 D /EC
Busan Ocean City Purzio	Yeongdo-gu, Busan	Gyeongnam Enterprise	Bathroom / Kitchen	SL825 Premium(EC

List of References - Fire / Civil Engineering

Construction Project	Location	Construction Firm	Area of Use	Product Used
Jukdong Geumseongbaekjo Yemiji APT	Daejeon Metropolitan City Yuseong-gu	Geumseong Baekjo Housing	Joint sealing of fire zones	QS119R
National Seoul Hospital and Affiliated Facilities Expansion	Seoul Metropolitan City Gwangjin-gu	Hanjin Heavy Industries	Joint sealing of fire zones	QS119R
CJ OnlyOne R&D Center	Gyeonggi-do Suwon-si	CJ Construction	Joint sealing of fire zones	QS119R
Protec Building (Pyeongchon Smart Square)	Gyeonggi-do Anyang-si	KCC Construction	Joint sealing of fire zones	QS119R
Health Insurance Assessment New Building	Gangwon-do Wonju-si	Namyang Construction	Joint sealing of fire zones	QS119R
Pangyo Techno Valley R&D Center	Gyeonggi-do Seongnam-si	Daerim Industrial	Joint sealing of fire zones	QS119R
Police University Relocation Project	Chungcheongnam-do Asan-si	Daerim Industrial	Joint sealing of fire zones	QS119R
2nd Lotte World Tower	Seoul Metropolitan City Songpa-gu	Lotte Construction	Joint sealing of fire zones	QS119R
Hanul Nuclear Power Plant	Gyeongsangbuk-do Uljin-gun	Dau Construction	Joint sealing of fire zones	QS119R
Yeonsan Lotte Castle Gold Forest	Busan Metropolitan City Yeonje-gu	Lotte Construction	Joint sealing of fire zones	QS119R
Landmark City Central The Sharp	Incheon Metropolitan City Yeonsu-gu	Shinwoo Construction	Joint sealing of fire zones	QS119R
Comodo Tower	Gyeonggi-do Bucheon-si	KD Construction	Joint sealing of fire zones	QS119R
Joowol Gold Class	Gwangju Metropolitan City Nam-gu	Bogwang Construction	Joint sealing of fire zones	QS119R
Seocho Seoryong Building	Seoul Metropolitan City Seocho-gu	Howtech Construction	Joint sealing of fire zones	QS119R
Nonhyeon Youth Housing APT	Seoul Metropolitan City Gangnam-gu	Hyerim Construction	Joint sealing of fire zones	QS119R
Pangyo Tech One Tower	Gyeonggi-do Seongnam-si	Jaesan Construction	Joint sealing of fire zones	QS119E
Grand Ambassador Hotel	Seoul Metropolitan City Jung-gu	Ssangyong Construction	Joint sealing of fire zones	OS119E
LH Trilochae	Chungcheongbuk-do Cheongju-si	DL Construction	Joint sealing of fire zones	QS119E
Sinchon Severance Hospital	Seodaemun-gu	Samsung C&T	Joint sealing of fire zones	QS119E
Dain Royal Palace	Gyeongsangnam-do Changwon-si	Dain Construction	Joint sealing of fire zones	QS119E
Goyang Jichuk LH 8th Complex APT	Gyeonggi-do Goyang-si	Daebo Construction	Joint sealing of fire zones	QS119E
Libero Officetel	Gyeonggi-do Ansan-si	Dong-A Construction	Joint sealing of fire zones	QS119E
Gangseo LG Science Park	Seoul Metropolitan City Gangseo-gu	GS Construction	Joint sealing of fire zones	QS119E
Suwon Geosan Apartment Commercial Area	Gyeonggi-do Suwon-si	Geosan Development	Joint sealing of fire zones	QS119E
Sokcho Marina Bay	Gangwon-do Sokcho-si	Dongwoo Development	Joint sealing of fire zones	QS119E
Dongtan M Tower	Gyeonggi-do Hwaseong-si	Changsung Construction	Joint sealing of fire zones	QS119E
US 8th Army Vehicle Maintenance Facility	Gyeonggi-do Pyeongtaek-si	Daewoo Construction	Joint sealing of fire zones	SW9535A
National Seoul Hospital a	Seoul Metropolitan City Gwangjin-gu	Hanjin Heavy Industries	Joint sealing of fire zones	SW9535A
CJ OnlyOne R&D Center	Gyeonggi-do Suwon-si	CJ Construction	Joint sealing of fire zones	SW9535A
Pyeongtaek US military base on-site facility	Gyeonggi-do Pyeongtaek-si	Daerim Industrial	Joint sealing of fire zones	SW9535A
Raemian Blesstige	Seoul Metropolitan City Gangnam-gu	Samsung C&T	Joint sealing of fire zones	SW9535A
Naegok-dong Sound Museum	Seoul Metropolitan City Seocho-gu	KCC Construction	Joint sealing of fire zones	SW9535A
Daejeon-Jinju Expressway	Daejeon-Jinju	Ssangyong Construction	Highway CON'C JOINT	PU9330(L)
Jungang Expressway	Gangwon-Gyeongbuk	Others	Highway CON'C JOINT	PU9330(L)
Muan Airport	Jeonnam Muan	Hyundai Construction	Runway CON'C JOINT	PU9330(L)
Ulsan Airport	Ulsan Metropolitan City	Others	Runway CON'C JOINT	PU9330(L)
Gimpo Airport	Gyeonggi-do Gimpo-si	Kumho Construction	Runway CON'C JOINT	PU9330(L)
Osan Air Base main runway resurfacing project	Gyeonggi-do Pyeongtaek City	Hanjin Construction	Highway CON'C JOINT	SL850
Masan Jinjeon 1 national road	Gyeongnam Changwon City	Hanjin Construction	Highway CON'C JOINT	SL850
Pyeongtaek Lake crosswalk	Gyeonggi-do Pyeongtaek City	Hyundai Engineering	Highway CON'C JOINT	SL850
Boryeong-Cheongyang 2nd section	Chungnam Boryeong City	Busan Regional Land Management Office	Highway CON'C JOINT	SL850
Palyong Tunnel private investment	Gyeongnam Changwon City		Highway CON'C JOINT	SL850
, ,	, , ,	Pyeongtaek City	• ,	
Busan outer ring road 11, 12 sections	Gyeongnam Gimhae City	Daejeon Regional Land Management Office	Highway CON'C JOINT	SL850
Hadong-Wansa road	Gyeongnam Hadong County	Palyong Tunnel Private Road	Highway CON'C JOINT	SL850
US base Chilgok CAMP CARROL internal facility	Gyeongbuk Chilgok	Kumho Construction, Taeyoung Construction	Highway CON'C JOINT	SL850
Hadong IC 2 national road	Gyeongnam Hadong	Kukdong Construction	Highway CON'C JOINT	SL850
Busan outer ring road 9th section	Gyeongnam Gimhae City	Daebo Construction	Highway CON'C JOINT	SL850
Gangchon-Changchon national road	Gangwon-do Chuncheon City	GS Construction	Highway CON'C JOINT	SL850
Provincial road 451 Jirmaejae tunnel	Gangwon-do Hongcheon	Daerim Industrial	Highway CON'C JOINT	SL850
Unyang-Yeongcheon expressway 1st section	Gyeongbuk Gyeongsan City	Kumho Construction	Highway CON'C JOINT	SL850

List of References - Other

Construction Project	Location	Construction Firm	Area of Use	Product Used
Daejeon Government Complex III	Hyundai E&C, etc.	Hyundai E&C, etc.	Stone material and window areas	KORESEAL MS9420
EXPO Resources Utilization Pavilion	Shinsegi Construction	Shinsegi Construction	Stone material and window areas	KORESEAL MS9420
Daewoo institute for Advanced Engineering	Daewoo	Daewoo	Stone material and window areas	KORESEAL MS9420
Korea Aerospace Research Institute	Hanil Development	Hanil Development	Stone material and window areas	KORESEAL MS9420
Dong-A Building	Hwasung Industrial	Hwasung Industrial	Stone material and window areas	KORESEAL MS9420
Seongwon B/D	Daelim Industrial	Daelim Industrial	Stone material and window areas	KORESEAL MS9420
POSCO Office Building	Samsung Construction	Samsung Construction	GPC and window areas	KORESEAL MS9420
Mapo Dongkuk B/D	Dongkuk Industries	Dongkuk Industries	GPC and window areas	KORESEAL MS9420
Bank of Korea Jeonju Branch	Kumgang	Kumgang	GPC and window areas	KORESEAL MS9420
Gangseo Telephone Office	Hanbo Construction	Hanbo Construction	GPC and window areas	KORESEAL MS9420
Intercontinental Hotel	Hyundai E&C	Hyundai E&C	GPC and window areas	KORESEAL MS9420
Korea Minting, Security Printing and ID Card Operating Corporation	Miryoong Construction	Miryoong Construction	GPC and window areas	KORESEAL MS9420
Presbyterian Women's Mission Center	Halla Corp.	Halla Corp.	GPC and window areas	KORESEAL MS9420
Trade Center	Daewoo	Daewoo	GPC and window areas	KORESEAL MS9420
Hyundai Securities Head Office Building	Hyundai E&C	Hyundai E&C	GPC and window areas	KORESEAL MS9420
Hyundai Securities Sanggye-dong Branch	Hyundai E&C	Hyundai E&C	GPC and window areas	KORESEAL MS9420
Gunsan KBS	Kunyoung E&C	Kunyoung E&C	GPC and window areas	KORESEAL MS9420
Securities Supervisory Board Office	Dongbu Corp.	Dongbu Corp.	GPC and window areas	KORESEAL MS9420
Daehan Investment Trust Management	Dongbu Corp.	Dongbu Corp.	GPC and window areas	KORESEAL MS9420
Asan Hospital	Hyundai E&C	Hyundai E&C	PC and window areas	KORESEAL MS9420
Korea Yakult Office Building	Dongbu Corp.	Dongbu Corp.	Stone material and window areas	KORESEAL MS9420
Construction Guarantee	Junghan Engineering Construction	Junghan Engineering Construction	Stone material and window areas	KORESEAL MS9420
Electric Construction Guarantee	Doosan E&C	Doosan E&C		KORESEAL MS9420
Occupational Safety and Health Research Institute	Another King	Another King	Stone material and window areas	KORESEAL MS9420
Gwacheon Citizens' Hall	Taeyoung	Taeyoung	Stone material and window areas	KORESEAL MS9420
Taeyoung Office Building	Taeyoung	Taeyoung	Stone material and window areas	KORESEAL MS9420
Petroleum Development Center	KOLON E&C	KOLON E&C	Stone material and window areas	KORESEAL MS9420
Korea Consumer Agency	Sungjee	Sungjee	Stone material and window areas	KORESEAL MS9420
Busan City Hall	Samsung C&T Corp.	Samsung C&T Corp.	Stone material and window areas	KORESEAL MS9420
KOPED Research Center in Yongi	Hanjin Construction	Hanjin Construction	Stone material and window areas	KORESEAL MS9420
Cheongsong Pumping-up Electric Power Station	Samsung C&T Corp.	Samsung C&T Corp.	Dam con'c expansion joint	KORESEAL PS9210
ncheon International Airport	Halla Corp.	Halla Corp.	Drainage con'c expansion joint	KORESEAL PS9210
Uljin Power Plant units 5 and 6	Hyundai Heavy Industries	Hyundai Heavy Industries	Water intake/drainage con'c joint	
Tamjin Dam	Shinsung	Shinsung	Dam con'c expansion joint	KORESEAL PS9210
Buan Dam	Kumgang APT	Kumgang APT	Dam con'c expansion joint	KORESEAL PS9210
Namgang Dam	Sambu	Sambu	Dam con'c expansion joint	KORESEAL PS9210
Miryang Dam	Hyundai E&C	Hyundai E&C	Dam con'c expansion joint	KORESEAL PS9210
Hongbok Dam in Uijeongbu	Jeong-A Industry	Jeong-A Industry	Dam con'c expansion joint	KORESEAL PS9210
Gumi Sewage Treatment Plant	Hyundai Heavy Industries	Hyundai Heavy Industries	Water intake/drainage con'c joint	
Dongducheon Sewage Treatment Plant	Kuk Dong E&C	Kuk Dong E&C	Water intake/drainage con'c joint	
Mungyeong Sewage Treatment Plant	Taeyoung	Taeyoung	Water intake/drainage con'c joint	
Suyeong Sewage Treatment Plant	Taeyoung	Taeyoung	Water intake/drainage con'c joint	
Yeongjongdo New Port Apron for Maintenance	Kumho E&C	Kumho E&C	Airport runway con'c joints	PU9335
Uljin Airport	Halla Corp.	Halla Corp.	Airport runway con'c joints	PU9335
Muan Airport	Kumho E&C	Kumho E&C	Airport runway con'c joints	PU9335
Osan Air Field	Kuk Dong E&C	Kuk Dong E&C	Airport runway con'c joints	PU9335
			porcraning corregonits	. 55555
Cheongju Air Field	Samhwa Construction	Samhwa Construction	Airport runway con'c joints	PU9330(L)

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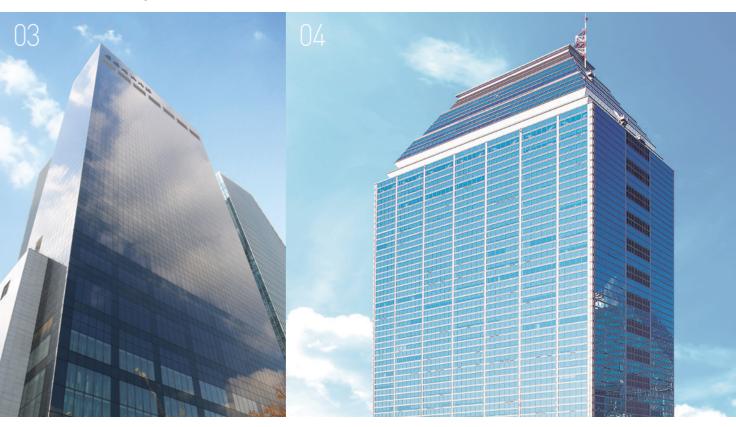




01. Seoul Yeouido Parc1 – Product Used: SL999, SL868, SL820



- 02. Sarang Church Product Used: SL819 / SL999
- 03. SIFC Hotel Building Product Used: SL820 / SL868 / SL999
- 04. Star Tower in Yeoksam-dong Product Used: SL999 and SL 820





- 01. Hanyang Obiz Tower Product Used: SL819 / SL999
- 02. Kumho Asiana Tower Product Used: SL820 / SL868 / SL999
- 03. Gwanghwamun D Tower Product Used: SL820 / SL868 / SL999





04. Suwon I'PARK City Complex II - Product Used: SL868