

# Non-staining Non-bleed type



Non-staining, non-bleed type

## PENGUIN SEAL

# 2550

1-Component Modified Silicon Sealant



Low modulus JSIA F★★★★



PENGUIN SEAL 2550 type NB

## Non-staining

Clean, safe and easy-to-use.  
**PENGUIN SEAL Non-bleed type sealant from SUNSTAR.**

### Uses



Joint sealing under various paint finish coatings

- Sealing of siding board joints
- Sealing of Autoclaved Lightweight Concrete (ALC) joints
- Sealing of construction joints or crack-inducing joints of reinforced concrete construction

\* Applicable to exposed joints of the above joint sealing.

### Features



Design/performance

- Can be applied under most types of paint and features excellent non-staining and adhesion properties.
- Exhibits almost no wear; for this reason, painting materials applied over joints are less likely to become subject to deformation, etc., and will exhibit high durability.
- Most suitable for joint sealing of ALC and siding boards as it has small internal stress, due to its low modulus.
- Made of modified silicon polymer, it exhibits excellent weather resistance and can be applied to exposed joints.

Clean

Environment

- Uses none of the 13 volatile organic compounds (VOCs) that can cause sick-house syndrome as specified in "Guidelines for Indoor Air Pollution - Guideline values for indoor concentration" by the Ministry of Health, Labor and Welfare.
- A registered product of "F☆☆☆☆" (JSIA-004047) conforming to the voluntary regulating system by the Japan Sealant Industry Association (JSIA).

Peace of mind

Workability

- The unique compounding technology realizes a reduction in strings and drooling, which prevents contamination around joints and achieves a clean finish.

Easy-to-use



## Properties/Performance of 2550 type NB

Item		Result										
Classification by JISA5758 (2004)		F-125P Equivalent to 8020										
Slump (mm)	Vertical	50°C	0									
		5°C	0									
	Horizontal	50°C	0									
		5°C	0									
Elastic restoring force (%)		38										
Tensile property	Elongation at break (%) (23°C/-20°C)	Aluminum plate	390/480									
		Mortar plate	400/420									
Adhesive property after repeating expansion and shrinking	Aluminum plate		No failure									
	Mortar plate		No failure									
Adhesive property after water immersion Elongation at break (%)	Aluminum plate		740									
	Mortar plate		580									
Volume change (%)		4.8										
Shelf life		12 months										
Specific gravity (20°C)		1.48										
Extrusion characteristics (sec.)		5°C	4.5									
Tuck-free time (hours/23°C)		3-5 hrs.										
Internal curing time (day) Complete curing for 5 mm thickness		5°C	8-12									
		23°C	2-4									
Tensile bond strength	Substrate	Treatment condition	Temperature	50% tensile stress (N/mm <sup>2</sup> )	Max tensile stress (N/mm <sup>2</sup> )	Elongation at max load (%)						
							Aluminum plate	After curing	23°C	0.19	0.69	490
								After heating	23°C	0.22	0.89	430
	After water immersion	23°C	0.10	0.44	730							
	Mortar plate	After curing	23°C	0.16	0.66	490						
		After heating	23°C	0.21	0.91	460						
After water immersion		23°C	0.09	0.38	630							

\*Tests for each item are conducted according to JISA1439.  
\*Test results are typical values.

## Primer

Use "Primer US-1" for PENGUIN SEAL 2550 type NB.

### Open time of primer US-1

5°C-20°C	30 mins. - 8 hrs.
20°C-	20 mins. - 8 hrs.

### Approx. usage amount of primer US-1

Non-porous material	180m
Porous material	90m

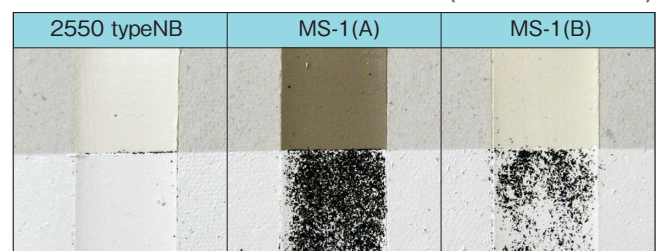
\*Per 500 ml container of US-1

\*Calculated with a joint width of 10 mm x a joint depth 10 mm and a 30% construction loss.

### Precautions when using the primer

- Make sure to use our exclusive primer.
- Do not use a brush used for other primers.
- Re-apply the primer when 8 or more hours have passed following application.
- Clean the joints well and dry the substrate surface before applying the primer.
- Apply a thick layer on a porous surface and a thin and even layer on a smooth surface.
- Ensure that the primer is applied thoroughly without leaving any area unapplied, since the sealant does not adhere without the primer.
- Be careful not to allow the primer to adhere anywhere other than the joining surface.  
In the case that it adheres anywhere other than the joining surface, wipe it away with a solvent-moistened cloth.
- When you open the primer, use it all within the same day. If you cannot use all the primer, transfer the necessary amount to another container.
- The primer is sensitive to the moisture content of the air; place the lid back on the container immediately after use.
- The shelf life of primer US-1 (unopened) is 12 months at room temperature.

### Paint contamination resistance test (volcanic ash test)



Test paint: waterborne synthetic resin emulsion paint, applied without a sealer  
Paint curing: Left for 7 days at 23°C and 14 days at 6°C following application.  
Volcanic ash was sprinkled over the paint after it was left for 3 hours at 23°C.

## Stain resistance and adhesion evaluation of 2550 type NB

Type and name	JASS18, JASS23	Contamination resistance	Adhesion
■ Synthetic resin emulsion coating for exterior walls (for thin coatings)	Resin sand wall coating Exterior thin coating material E	◎	◎
■ Flexible synthetic resin emulsion coating for exterior walls (for thin coatings)	Elastic sand wall coating Flexible exterior thin coating material E	◎	◎
■ Synthetic resin emulsion multilayer coating material	Multilayer coating material E Multilayer coating material E	◎	○
■ Reaction-setting synthetic resin emulsion multilayer coating material	Multilayer coating material RE Multilayer coating material RE	◎	○
■ Synthetic resin emulsion coating material for interior walls (for thick coatings)	Stucco Exterior thick coating material E	◎	◎
■ Cement based coating material for exterior walls (for thick coating)	Cement stucco Exterior thick coating material C	◎	○
■ Waterproof synthetic resin emulsion coating material for exterior walls (for thin coatings)	Single layer elastic Waterproof exterior thin coating material E	◎	◎
■ Waterproof synthetic resin emulsion multilayer coating material	Multilayer elastic Waterproof exterior thin coating material E	◎	◎
■ Acrylic resin enamel paint	Solvent-base acrylic AE	◎	○
■ Acrylic urethane resin enamel paint	Solvent-base urethane ②-UE	◎	◎
■ Acrylic resin emulsion paint	Water-Borne acrylic EP	◎	◎
■ Acrylic urethane emulsion resin coating	Water-borne urethane -	◎	○
■ Two-component turpentine soluble urethane resin enamel coating	- -	◎	◎
■ Flexible synthetic resin emulsion coating for refurbishment	Slight-elastic filler Flexible coating material for refurbishment E	◎	◎

Note) The results may differ by manufacture of finish coating or type of sealer.

Contamination resistance: ◎ No contamination ○ Some contamination (usable with a barrier primer) X Unusable

Adhesion: JISK5600-5-6 Level 0 to 1: ◎ Level 2 to 3: ○ Level 4: △ Level 5: X --: Grids cannot be measured after cutting

## ■Application procedure (Directions for use)

- 1) Remove oil, dust, rust and other contaminants from the application areas and allow them to dry.
- 2) Carefully place masking tape along the joints.
- 3) Apply the exclusive primer thoroughly to the application areas.  
(Dry time: 30 mins. to 8 hours at room temperature)
- 4) Attach the nozzle to the cartridge after breaking the aluminum moisture barrier film at the cartridge tip with the nozzle tip, and cut the nozzle tip to match the joint width.
- 5) Place the cartridge into the cartridge gun, and fill the joint with the sealant (from the joint bottom).
- 6) Flatten the surface with a spatula immediately after filling (within 40 minutes at 23°C)
- 7) After flattening the surface, remove the masking tape quickly and let the sealant cure.  
Do not touch until the sealant has cured. \*Although it depends on the temperature or humidity, the surface of the sealant begins to cure approximately 3 hours after filling (23°C) and the entire sealant cures into a rubbery state in approximately 3 days (23°C).
- 8) When applying a finish coating over the sealant, apply the finish coating the next day (24 hours later) or up to 1 week from sealant application.  
(Apply the finish coating after the sealant surface has cured.)

### [Note]

Although PENGUIN SEAL 2550 Type NB is a non-staining type (non-bleed type) sealant, it may not adhere well or its surface may become sticky depending on the type of paint; check the paint type in advance. In particular, do not use oil-based paints (synthetic resin paints) or phthalate (alkyd resin) paints as they may not dry.

## ■Usage amount guidelines

		Joint width (mm)				
		10	12	15	18	20
Joint depth (mm)	8	3.6	3.0	2.4		
	10	2.9	2.4	1.9	1.6	1.4
	12		2.0	1.6	1.3	1.2

\*Number of meters that can be covered with 1 cartridge (320 ml) (including 10% loss)  
\*For joints with large movements, use the amount for 10 mm x 10 mm sized joints.

## ■Package, color

Product name	Content	Quantity/	Color
PENGUIN SEAL 2550 type NB	Cartridge of 320 ml	A box containing 10 cartridges and 5 nozzles x 2	White Beige Con gray Amber

## ■Primer

Product name	Content	Quantity
Primer US-1	500 ml	10 cans/case

### <Notes>

The information and data contained in this catalogue are based on results of tests carefully conducted by our company. However, the performance and the properties of the product may differ according to materials and application conditions. Carefully consider and check the above before use. The product descriptions contained in this catalogue are subject to change without notice.

## ■Precautions when applying the sealant

- The product described herein has been developed and manufactured for general industry use only. Do not use this product for anything other than its intended purpose.
- The sealant is not applicable to glass materials.
- In wet (damp) conditions, the sealant may swell or may have poor adhesion. Check if the application area is completely dry prior to application.
- Use a cleaner that does not corrode the application surface when cleaning the application area. Do not use alcohol, etc.
- Use the exclusive primer, and make sure that it is thoroughly applied. The primer is sensitive to water; be careful not to let moisture mix with the primer.
- Once opened, use the primer within the same day, to the extent possible
- Ensure that the joint width and depth are adequate.
- If a back-up material is applied, use a bamboo spatula and exercise caution not to create bumps or scratches, as they may cause the sealant to swell.
- Apply masking tape to the very end of the joint. If the sealant is extremely thin, whitening may occur.
- The sealant hardens by reacting with moisture in the air; therefore, use all sealant within the same day after opening, to the extent possible. If the application work must be continued the next day, cover the cartridge opening tightly with aluminum foil or thick packing tape. Remove the sealant remaining in the nozzle with wire, etc. after hardening.
- If a polyurethane sealant and this product (2550 type NB) are applied close to each other in an unhardened state or used simultaneously in a poorly-ventilated place, the polyurethane sealant may not harden. If this product is applied next to a polyurethane sealant, confirm that the polyurethane sealant is completely cured before applying this product. The same applies to urethane-coated waterproof materials.

## ■Precautions when handling the product

- Keep the work area well-ventilated.
- Do not allow the sealant to have contact with skin. Wear a protective mask, protective gloves and safety glasses when handling the sealant.
- Wash your hands and gargle after application of the sealant.
- Note that sealant that has adhered to clothes cannot be removed.
- In the case that the sealant comes into contact with your skin, immediately remove it and wash the skin thoroughly with soap and water. If irritation or rash occurs, consult a doctor.
- In the case that you inhale vapors from the sealant and start feeling ill, rest in a fresh-air area and consult a doctor.
- In the case that the sealant gets into your eyes, rinse them thoroughly with clean water (at least 15 minutes) and consult a doctor immediately.
- In the case that you ingest the sealant, consult a doctor immediately.
- Store the sealant in a cool location out of direct sunlight that has low humidity.
- After use, treat empty containers as industrial waste and entrust them to a waste disposal contractor.

Please be reminded that we will not be responsible for any damages incurred as a result of handling the sealant without following the above precautions.

If you need more details on the sealant, refer to the Material Safety Data Sheet (MSDS).

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### ●Agency

